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The China Business Review



NORMALIZATION

SPECIAL MESSAGE TO NATIONAL COUNCIL MEMBERS

A new era in US-China trade has opened with President Carter's decision to establish diplomatic relations with the People's Republic of China.

Even before this historic decision was announced, all indications pointed to a record-breaking 1978 two-way trade with China in excess of one billion dollars.

Now, with the removal of the political roadblock which has inhibited a more rapid expansion of US-China trade, the United States is in a position to compete more effectively for a larger share of China's rapidly expanding world trade.

The normalization of relations between Washington and Peking will also facilitate the resolution of other problems which have slowed the development of US-China trade. I refer, of course, to such matters as the frozen assets and private claims issue, ExImBank financing for US exports to China and the negotiation of Most-Favored-Nation tariff status with China.

Hopefully, these will be among the matters discussed in Peking by Secretaries Blumenthal and Kreps, who are expected to visit China within the next few months.

In assessing the impact of the President's action on US trade with all parts of China, including Taiwan, it is worth noting comments made by both President Carter and Deputy Premier Teng Hsiao-ping. The President stated that the US will maintain its current commercial relations with Taiwan through non-governmental means. Deputy Premier Teng, in a recent interview with an American correspondent, reportedly said that China wanted to retain the higher Taiwanese standard of living and that American trade and investment in Taiwan would continue following normalization of relations. This, of course, has been the experience of Japan and other nations following the termination of diplomatic relations with Taiwan.

In brief, there should be no obstacle to the continuation of mutually beneficial trade between the US and all parts of China.

I am sure I reflect the sentiments of all National Council members in expressing the belief that the establishment of diplomatic relations between the US and China will contribute, not only to expanded trade between our two countries, but to the enhancement of world peace. In cooperation with our Chinese trading partners we pledge our best efforts to these ends.



Christopher H. Phillips
President



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The National Council for United States-China Trade is grateful to His Excellency Huang Chen, formerly Chief of the Liaison Office of The People's Republic of China in Washington, for the calligraphy on the front cover of the China Business Review.

China Trade Events

MONTREAL, CANADA, November 14, 1978

The Canada-China Trade Council held its initial Board of Directors meeting to establish the structure and objectives of the organization. The first general meeting of the new council, which was incorporated in June 1978, is to be held before the end of the year. For further information, contact William I. Coleman, Executive Director, Box 816, Manitoba, Canada R3C 2P5, phone (204) 949-3432, telex 07-57801.

BERMUDA, January 3-7, 1979

Sponsored by the University of California at Los Angeles, over 50 China specialists from the government, private, and academic sectors will meet to review the state-of-the-art of PRC technology and the implications of China's modernization program for US technology. Participants include the National Council's Nicholas H. Ludlow, director of Publications and Research.

MINNEAPOLIS, MINNESOTA, January 10, 1979

National Council Vice President Stanley Young will address a conference on Doing Business With China, sponsored jointly by the Department of Commerce and the Minneapolis World Trade Council. For further information, contact Bill Clarke at (202) 377-4681.

HOUSTON, TEXAS, January 25-26, 1979

Rice University's Office of Special Programs and Continuing Studies will hold a conference entitled "The January Briefing—The People's Republic of China" at the Shamrock-Hilton. For further details, contact Mrs. Flournoy Manzo at (713) 527-8101, ext. 3793.

WASHINGTON, DC, January 31, 1979

The Federal Bar Association's International Procurement Committee is sponsoring a luncheon seminar on legal aspects of trading with China. Featured speaker will be Eugene Theroux, an attorney with Baker & McKenzie. For further information, contact Harry Gaberman at (202) 638-0252.

NEW YORK CITY, February 15-16, 1979

Sponsored by the American Management Association, a two-day, in-depth seminar will be held on "Doing Business with the People's Republic of China." Among other speakers will be Eugene Theroux, of Baker & McKenzie. To register, call the direct registration line at (212) 246-0800. The conference will be held at AMA headquarters at 135 West 50th Street, New York City. For additional information, contact John Cunningham at (212) 586-8100.

CHICAGO, ILLINOIS, March 27-28, 1979

"Taking Your Business to China—Perspectives and Practical Points," a pragmatic "how-to" conference including

case studies of companies which have successfully entered the Chinese market, will be held at the Drake Hotel.

The conference is sponsored by four McGraw-Hill publications: *Coal Age*, *Engineering*, *News Record*, *33 Metal Producing*, and *Engineering/Mining Journal*. For more information, write McGraw-Hill Conference and Exposition Center, Room 3677, 1221 Avenue of the Americas, New York, New York 10020 or call (212) 997-4930.

WASHINGTON, DC, April 5-6, 1979

Cosponsored by the American Bar Association and the Licensing Executives Society, a conference will be held on "Current International Legal Aspects of Licensing and Intellectual Property." Eugene Theroux of Baker & McKenzie will discuss China's current modernization program, while other speakers will address the conference on licensing technology to the PRC and the development of reciprocal trademark registration with China. The conference will be staged at the Hyatt Regency in Washington. For additional details, contact co-chairman of the conference James Houck, at (216) 696-3939.

LONDON, ENGLAND, Spring 1979

Business Perspectives will stage its second conference on Prospects for Sino-British Trade in early 1979. Speakers will include Nicholas H. Ludlow, the National Council's director of Publications and Research. For further information write to Mrs. Helen Sasson at Business Perspectives, 11 Alexander Place, London SW7 2SG, England.

YOUR MEN IN PEKING

The US Liaison Office staff in Peking will be happy to assist you; please feel free to call them when you are in China's capital.

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CHINA WIRE

An Executive Briefing on Major Trends in the China Business

THE TIME IS NOW: With China in the midst of the biggest buying spree in its 29-year history, the time has come for the US Government to remove remaining obstacles to US-China trade. In the White House, National Security Council member John Renner is preparing an Administration policy paper on ways of improving US-China trade. He will be working on the order in which the Administration should address issues from frozen assets to MFN for China.

MOVEMENT ON CLAIMS: The US Government is moving forward again on PRC frozen assets, following five years of inaction since Kissinger reached a verbal agreement to resolve the claims/assets issue in Paris in 1973. (See p. 35).

MEANWHILE, US CONGRESS REVAMPS EXIMBANK BILL FOR CHINA: Rep. Les AuCoin (D-Ore.) has rewritten his bill to extend ExImBank credits to China, at what some members of the US banking community would call the eleventh hour. The Chinese have shown clear preference for dollar transactions, but unless government guarantees are made available for US banks, China will turn to the Eurodollar market, as it already has, with the signing of a \$1.2 billion loan with 7 UK banks. The loans are 85% guaranteed by the UK's Export Credit Guarantee Department (ECGD). (See p. 33).

RED CARPET TREATMENT FOR FOREIGN INVESTORS: Hand in hand with the announcement that the PRC will allow 49% foreign ownership in industrial and hotel projects in China, came word that commercial patent and property laws would be established early next year to protect the investments of China's new joint venture partners. In addition, other foreign trade organizations and probably companies reportedly will be joining Japanese firms in setting up Peking offices. (See p. 61).

PEKING: STRUCTURES IN FLUX: Industrial ministries are taking the lead in signing both purchase and sales contracts. China's newest foreign trading corporation, EQUIPEX, has dual responsibilities to the Ministry of Foreign Trade and the First Ministry of Machine Building, representing production. The other FTCs, with CHINATEX in the lead, will follow suit. Chinese officials are describing the emerging relationship as "joint ventures" between FTCs and the ministries. (See pp. 33, 56).

PRCLO: NEW RESPONSIBILITIES: Staff at the PRC Liaison Office in Washington, DC, is being augmented almost daily. In addition, a buying team and a traveling buyer from MACHIMPEX used PRCLO as their home base for talks with companies in November and December; the independent MACHIMPEX rep signed over 200 contracts.

FTC BRANCHES—CARVING OUT THEIR OWN TERRITORIES: Part of the general decentralizing trend seen

in China today is the division of product responsibilities among head offices and branches of FTCs. CHINATEX is spearheading the new system. Peking now handles only the sale of cotton grey goods, cotton piece goods, and raw silk, while all other products are handled by CHINATEX branches. The latest breakdown: Woolen goods and cashmere—Shanghai, Tientsin, Kwangtung branches; Silk goods—Shanghai, Kwangtung, Nanking, Tientsin, Dairen, Tsingtao branches; Cotton piece goods—Shanghai; Apparel—all apparel branches.

US-CHINA TRADE: RIDING HIGH: US Government trade analysts are now predicting that bilateral 1978 trade will be worth \$1.3 billion if agricultural shipments are made on schedule. The latest estimates for US-China trade in 1979 are \$1.2 billion in US exports, \$400 million for imports from the PRC. Contracts signed in 1978 by the PRC world-wide now total more than \$27 billion; pending are at least an additional \$30 billion.

CHINA GIVES HARD FIGURES ON PRODUCTION, FOR A CHANGE: In meetings with US Secretary of Agriculture Bob Bergland and others, Chinese leaders have pledged to be more open about figures on Chinese production, a departure from previous practice of giving percentages only. Recent PRC reports on industrial output for 1978 have provided figures on volume for cargo flow through China's ports (250 million tons by late November) and chemical fertilizer production (44 million tons).

MORE MULTINATIONAL SHOWS: Planned for 1979 are multinational exhibitions of construction equipment and possibly mining, following the smashing success of China's first such show, on agricultural equipment, in October.

CABINET TRIPS TO CHINA: New prospects for US-China business were opened up by trips by US cabinet secretaries Schlesinger and Bergland. The latest as this issue went to press: China is seeking US assistance on 9 hydro projects; four dams on the Yangtze River (30,000 MW, 10,000 MW, 6,000 MW, and 3,000 MW); a 1,600 MW project at Lung Men on the Yellow River; a 3,000 MW dam on the Pearl River; and three other projects on the Brahmaputra River and the Mekong. US assistance is sought also in the development of a high voltage transmission system. (See p. 45 ff.).

JOINT VENTURES IN OIL—JAPAN WINS FIRST ROUND: The Japan National Oil Corporation has signed the first joint venture for oil development in the southern Pohai region; an estimated 2,600 wells will be drilled over the first five years of the contract, at a cost of \$10 billion, according to Japanese sources. The contract is a no-risk proposition for the Japanese. Other companies may join JNOC including JAPEX, Aramco, Mitsui, and Mitsubishi. The Japanese are also discussing a risk contract for the Nanhai onshore field in Kwangtung. (See p. 76).

COUNCIL DELEGATION MEETS WITH KU MU: The PRC is now courting US business by playing up delegation visits and US equipment imports in the media. In Peking the National Council's construction equipment delegation was given royal treatment: a meeting with Vice Premier Ku Mu, Minister of the State Capital Construction Commission, was covered in People's Daily.

CHINA: SELECTED ECONOMIC INDICATORS THROUGH 1977

KEY INDICATORS	1952	1957	1965	1970	1971	1972	1973	1974	1975	1976	1977
GNP (bil 1977 US \$)	92	128	174	244	261	273	308	320	342	342	373
Population, midyear (mil persons)	570	640	754	847	867	886	906	924	943	962	983
Per capita GNP (1977 US \$)	162	201	231	288	301	308	340	346	362	355	379
Industrial production index (1957 = 100)	48	100	199	316	349	385	436	455	502	502	...
Producer goods index (1957 = 100)	39	100	211	350	407	452	513	536	602	...	...
AGRICULTURE											
Agricultural production index (1957 = 100)	84	100	104	127	130	126	142	146	148	148	149
Total grain (mil metric tons)	161	191	194	243	246	240	266	275	284	285	285
Cotton (mil metric tons)	1.3	1.6	1.9	2.0	2.2	2.1	2.5	2.5	2.3	2.3	2.0
Hogs (mil head)	90	115	168	226	251	261	...	261	...	...	280
INDUSTRY											
Machinery index (1957 = 100)	33	100	257	586	711	795	930	992	1,156	...	...
Electric generators (mil kW)	Negl.	0.3	0.8	2.3	2.9	3.6	4.3	5.1	6.0	6.6	...
Machine tools (th units)	13.7	28.3	45.0	70.0	75.0	75.0	80.0	85.0	90.0	85.0	...
Tractors (th 15-hp units)	0	0	23.9	79.0	114.6	136.0	166.0	150.0	180.0	190.9	221.8
Trucks (th units)	0	7.5	30.0	70.0	86.0	100.0	110.0	121.0	133.0	135.0	150.0
Locomotives (units)	20	167	50	435	455	475	495	505	530	530	555
Freight cars (th units)	5.8	7.3	6.6	12.0	14.0	15.0	16.0	16.8	18.5	19.0	21.0
Merchant ships (th metric tons)	6.1	46.4	50.6	121.5	148.0	164.6	209.4	288.4	313.6	318.8	...
Other producer goods index (1957 = 100)	41	100	200	294	336	371	415	429	472	...	...
Electric power (bil kWh)	7.3	19.3	42.0	72.0	86.0	93.0	101.0	108.0	121.0	128.0	141.0
Coal (mil metric tons)	66.5	130.7	240.0	338.0	365.0	389.0	411.0	417.0	480.0	463.0	519.0
Crude oil (mil metric tons)	0.4	1.5	11.0	28.2	36.7	43.1	54.8	65.8	74.3	83.6	90.3
Crude steel (mil metric tons)	1.3	5.4	12.2	17.8	21.0	23.0	25.5	23.8	25.0	21.3	24.0
Chemical fertilizer (mil metric tons)	0.2	0.8	7.6	14.0	16.8	19.8	24.8	24.9	28.8	...	38.0
Cement (mil metric tons)	2.9	6.9	16.3	26.6	31.0	38.1	41.0	37.3	47.1	49.3	56.2
Timber (mil m ³)	11.2	27.9	27.2	29.9	30.7	33.2	34.2	35.2	36.2	36.7	37.2
Paper (mil metric tons)	0.6	1.2	3.6	5.0	5.1	5.6	6.0	6.5	6.9	7.0	7.1
Consumer goods index (1957 = 100)	60	100	183	272	272	295	334	347	368	...	...
Cotton cloth (bil linear meters)	3.8	5.0	6.4	7.5	7.2	7.3	7.6	7.6	7.6	...	...
Wool cloth (mil linear meters)	4.2	18.2	...	...	...	...	...	65.2	...	...	...
Processed sugar (mil metric tons)	0.5	0.9	1.5	1.8	1.9	1.9	2.2	2.2	2.3	...	...
Bicycles (mil units)	0.1	0.8	1.8	3.6	4.0	4.3	4.9	5.2	5.5	...	...
FOREIGN TRADE											
Foreign trade (bil current US \$)	1.9	3.1	3.9	4.3	4.8	6.0	10.3	14.1	14.6	13.3	15.2
Exports, f.o.b.	0.9	1.6	2.0	2.1	2.5	3.2	5.1	6.7	7.2	7.3	8.1
Imports, c.i.f.	1.0	1.4	1.8	2.2	2.3	2.8	5.2	7.4	7.4	6.0	7.1

Source: National Foreign Assessment Center. Data as of October 1978.

Note: JETRO reports China's total imports in 1977 to have been about \$6.445 billion, exports \$7.844 billion, and two-way trade \$14.289 billion.

MAKING IT LOOK EASY

High Voltage Engineering Corp. Makes Sale of High Energy Physics Equipment to China

With China's drive to achieve the "four modernizations" going full-blast, companies are experiencing the rewards—and the frustrations—of selling to buyers who want more than they bargain for.

A case in point is that of High Voltage Engineering Corporation (HVEC). A sales team from the Burlington, Massachusetts-based firm came away from Peking in mid-November with a contract in hand for a \$5.2 million nuclear particle accelerator. Their story illustrates the practical use to which TECHIMPORT is putting scientific end-users whose long-pent-up enthusiasm is now being released at full intensity on foreign high-technology vendors.

How the Chinese Selected HVEC

Three years ago, when the scientific establishment was still under the shadow of the Gang of Four, the Atomic Energy Institute of the Chinese Academy of Sciences (CAS) began its correspondence with HVEC. One of the company's founders back in 1946, Robert Van de Graaff, a figure famous even to the isolated Chinese, was a luminary of modern physics. The company discovered that this fact gave it an immediate "in" with CAS before and after the negotiations.

"To the Chinese, meeting a live, touchable person who had been an associate of Van de Graaff's for 25 years was like having a page out of a history book come to life. It was an enormous help in bringing the contract home," says Denis Robinson, chairman of HVEC and leader of the negotiating team.

There was no hint of commercial discussions until early 1978 when TECHIMPORT invited a company representative to Peking for preliminary talks. The

follow-up, however, was swift and highly focused. In July 1978, a 10-man delegation from TECHIMPORT visited company facilities in Massachusetts as well as those of the company's chief competitor. Then, in August, the invitation came to send a team to discuss the possible installation of an HVEC machine.

Negotiating the Contract

The team that HVEC sent in response to the telex from the Chinese corporation represented its top capabilities on the engineering and corporate levels for the machine in which the Chinese indicated primary interest, the company's model HI-13 Tandem Accelerator. The group included Robinson, an engineer physicist out of MIT and the University of London, HVEC's chief officer responsible for Asia, Latin America, and Africa sales, and three engineers.

In three-and-a-half weeks of sessions that evolved gradually from the purely technical to closely fought commercial talks, the HVEC team met with the Chinese 35 times. Sitting across the table from the company party were usually 15–22 Chinese from CAS and TECHIMPORT.

"I have never spent so much time with any customer," says Robinson. The scientists sitting in on the talks treated HVEC with a continual and escalating barrage of questions. Recalls Robinson, "We believed halfway through the month that we would be unable to sign the contract because the scientists kept asking for improved versions and changes. They wanted us to make the 1978 machine into a model for 1980."

The TECHIMPORT officials who were directly responsible for getting the optimum terms on the contract deployed their scientific partners skillfully. The numerical imbalance between the two teams, bolstered by the persistent technical querying from the scientists, gradually wore the American party's resistance down.

Twice, according to Robinson, the HVEC team was ready to pack its bags, and only once were they thinking of strategy when they told the Chinese so. The initial trend of discussions towards more and more advanced models of the accelerator led the HVEC group to believe that the Chinese had not, in fact, revealed the full extent of their buying plans. After two-and-a-half weeks Robinson let two of his engineers go home to show the Chinese that they had completed their contribution to the technical content of the contract.

The second time that Robinson threatened to leave, the Chinese were spurred to action and within a few days announced that they had accepted HVEC's terms on purchase of the HI-13. Only a few of the frills that had taken days of the company's time went into the final contract. Letting the scientists lead the discussion into tangential areas to TECHIMPORT's leading objective had been for the scientists' benefit only, HVEC believed. On the Chinese

side, the major interest was in purchasing the basic machine and the necessary services only.

The negotiations which were originally expected to take two weeks ended up lasting 32 days. Up to the last minute the Chinese side stalled for time in order to absorb the maximum possible technical benefits from the encounter. It would take two days for the contract to be typed up, the Chinese told HVEC when the last detail of the contract terms had been settled. Would they be available to meet a second party of end-users interested in their equipment? And so, during this last two days in China, the three remaining HVEC representatives met with 20 more scientists to begin preliminary discussions on a second purchase.

Adding to the electric atmosphere of the discussions was the extraordinary movement through Peking of delegations coming to buy and sell, lured by reports of Peking's new emancipated outlook on foreign trade. An estimated 15-20 delegations are visiting TECHIMPORT daily, according to Robinson, and the corridors and elevators of the corporation offices are "jam-packed." In each of TECHIMPORT's conference rooms, foreign traders sit opposite three times the number of Chinese.

While the Chinese pressed for more detailed technical information, Robinson and his party waited and waited in the Peking Hotel. Other companies showed less ability to cope with the Chinese onslaught; another group negotiating alongside HVEC to sell equipment and related services ran for cover after a few weeks, dropping the contract neatly into TECHIMPORT's lap at outrageous terms. "They expose you to long-winded things until your time runs out and you're ripe for the plucking," explains Robinson.

Bringing the Contract Home: Another Threshold Crossed in Sino-US Scientific Cooperation

Despite the grueling experience of the negotiations, HVEC is pleased with the final results. In addition to the first \$5.2 million contract, the company anticipates another \$800,000 worth of business in spare parts and accessories. The end-users HVEC met just before its departure have made it known that they are "leaning to the HVEC camp" in choosing their own piece of equipment. All in all, Robinson admits, the investment of time and money by his company was moderate in relation to the immediate and potential returns.

HVEC's HI-13 Tandem Accelerator, a nuclear particle accelerator similar to those which the corporation sold in 1978 to Nigeria and to Italy, will be used for study of nuclear physics in various fields of fundamental research and solid state physics. The equipment includes an injector with separate sources for light ions, heavy ions, and pulsed beams. The

accelerator will incorporate the patented Laddertron charging system for highly stable operation.

For HVEC, a company with approximately \$50 million annual sales volume, the sale represents a 10 percent chunk of its expected 1978 income. In addition, the company officials are well aware that the sale symbolizes the crossing of a new threshold in Sino-US scientific exchange. It is one of the largest non-military sensitive sales of high technology to China since RCA, with former president Nixon's assistance, sold two ground satellite stations to China in 1972. The contract has already been given the green light by the Office of Export Control Administration and other US export officials.

Terms of payment for the accelerator are in the conventional progressive form. The Chinese will put down 15 percent after assurance is received from the US government that the contracted equipment is not subject to US or COCOM export controls, with additional installments at 6-month intervals and the last two 5 percent payments after sight demonstration and a 12-month performance evaluation period.

The technical association between HVEC and the Chinese Academy of Sciences is expected to last a minimum of three-and-a-half years. The accelerator, weighing 150 tons, will be shipped over a 30-month period in three shipments—one by air and two by surface means. Following arrival of the equipment on site at the Atomic Energy Institute's research facilities, 30 miles outside Peking, engineers from HVEC will be assigned on two-month rotations to supervise the mechanical, electrical, electronic, and vacuum stages of installation. The Chinese are building the housing tank of the accelerator on their own, with the aid of HVEC blueprints. The entire process of installation of the machine will take about one year.

When the HI-13 starts up, it may not be the highest-powered nuclear research instrument in China but it will increase the research capabilities of the Atomic Energy Institute by a factor of at least 10. A tandem-type electrostatic generator, the HI-13 can develop beams of protons up to 26 million electronvolts (MeV). The comparable machine known to be in use by the institute, a 1959 vintage Van de Graaff generator, has a 2.5 MeV capacity.

Meanwhile, US trade officials in Peking have learned that China's domestically operated projects in high energy physics are ballooning as rapidly as its import plans. A program to build a 30-billion-electronvolt proton synchrotron has been upped in pitch to 30 trillion electronvolts, or gigavolts (GeV), according to reliable sources. Exceeded in size only by the proton synchrotron at the Fermi National Accelerator Laboratory in Illinois, which is currently hosting a 12-man study team from the CAS Institute of High Energy Physics, the synchrotron will be among the world's largest when completed.—ET 光



Petroleum scientific research team tries out NASA moon buggy.

Council Activities

As China continues to surge ahead with its purchases of foreign equipment and its search for advanced Western technology, the Council is moving fast to keep pace. In order to better serve member companies, the Translation Services Department will become a separate, independent entity, still closely allied with the Council. In addition, a Special Assistant to Council President Christopher H. Phillips has been appointed, and a new Delegations Department mandated. In the past few months, the Council has sent two major delegations to China and has hosted a number of others. More are in store for the first half of next year.

NEW SPECIAL ASSISTANT TO COUNCIL PRESIDENT

John R. (Jack) Dewenter joined the National Council on December 11 in the newly-created position of Special Assistant to the President. A retired naval officer with extensive management experience, Dewenter will be primarily responsible for assisting Council President Christopher H. Phillips with the management and planning activities of the Council.

Dewenter, 51, was senior representative of the US Defense Department in Hong Kong from 1975 until his retirement from the Navy earlier this year at the

rank of captain. Prior to that he was for three years the senior military officer assigned to the Department of State, where he planned and participated in international negotiations regarding US military operations, basing, and assistance abroad. In 1971-1972 he was a fellow with the Council on Foreign Relations and authored an article for the quarterly, *Foreign Affairs*. He is fluent in Chinese.

BOARD OF DIRECTORS APPROVES TRANSLATION DEPARTMENT SPIN-OFF

Directors of the National Council, at their annual meeting in Washington on November 30, decided that the Council's Translation Services Department should become an independent entity, though it will continue to work very closely with the Council and member firms.

Li May Phipps, director of Translation Services since the Council's inception in 1973, will be president of the new organization, to be called the National Council for US-China Trade Translation Services, Inc. Ms. Phipps said the new arrangement should enable her and her staff to provide greater assistance to the Council and member firms. The new corporation will continue to provide a discount to all member firms.

Ms. Phipps said the new firm will also seek outside business from firms and organizations that are not Council members. The firm will remain in its present headquarters: 1050 17th Street, NW, Suite 670, Washington, DC 20036, phone (202) 659-1456. Translation Services currently has a full-time staff of six, though Ms. Phipps said she would be seeking additional staff to cope with the tremendous volume of translation work demanded by the current level of US-China trade. The new firm will be officially established in late January.

DUES INCREASE

In approving the Council's 1979 budget, the board also agreed to a 30 percent dues increase for all member firms other than affiliated importing companies. They have already received two increases since the Council's formation, and will continue to pay dues of \$350. Corporations with sales or gross income equal to or greater than \$50 million will be assessed \$3,750, while those in the \$20-50 million range will be assessed \$1,500. The annual dues for firms with sales or gross income less than \$20 million will be \$750.

1979 CHINA VISIT FOR BOARD OF DIRECTORS

The board announced that it will send a mission to China during the first two weeks of June 1979 for discussions on trade with the China Council for Promotion of International Trade and other organizations, ministries, and corporations within China. The board previously traveled to China in 1973 and 1976, while the CCPIT sent delegations to the US in 1975 and 1977. The National Council hosted both of those delegations, just as the CCPIT hosted the Council on its two board missions to China.

COUNCIL ANNOUNCES CREATION OF DELEGATIONS DEPARTMENT

Christopher H. Phillips, president of the National Council, announced in December the creation of a new Delegations Department that will come into existence officially on February 1. The department will coordinate all delegations handled by the Council to and from China. The Council sent six delegations to China in 1978 and hosted 12 Chinese groups in the US. The Council expects that it will handle an even greater number of delegations in 1979.

Co-directors of the new department will be Stephanie Green and Richard Glover. Stephanie Green joined the National Council in September 1975. The author of many articles in *The China Business Review*, she has been deputy editor of the magazine. Ms. Green has escorted two US delegations to China and two Chinese missions around the US, all in the petroleum field. Richard Glover joined the Council in June 1978 as delegations coordinator, a position now absorbed into the new department. He has escorted five Chinese delegations around the US, including a synthetic fiber group and a mining and metallurgy mission.

COUNCIL ADDS THREE NEW COMMITTEES

Reflecting the growing demand from member firms, the National Council has added three new exporter services committees: Telecommunications and Electronics; Transportation; and Banking and Finance. The transportation and banking committees held their first meetings in New York on December 8, while the telecommunications group conducted its first meeting in Washington on December 12.

The Council's petroleum committee met in Houston

on November 16, at which time it decided to split into two committees, petroleum production and petroleum processing. The division came about simply because the committee has grown too large, with more than 100 members. The agricultural machinery group met in Washington on November 29, while the construction and mining committees held a joint meeting in Chicago in mid-October.

The National Council now has a total of 12 exporter committees: Agriculture (includes agricultural chemicals and animal husbandry); Agricultural Machinery; Banking and Finance; Construction Machinery and Equipment; Exhibitions; Mining (including mining and processing subcommittees); Packaging Machinery; Petroleum Production; Petroleum Processing; Pharmaceuticals and Medical Devices; Telecommunications and Electronics; and Transportation.

The National Council's Importer Steering Committee has five subcommittees: Chemicals; Foodstuffs, Native Produce; Handicrafts and Light Industry; Minerals and Metals; and Textiles.

NEXT ANNUAL MEETING

The National Council's 1979 annual meeting will be held on May 17 at the Mayflower Hotel in Washington, DC.

COUNCIL TO COSPONSOR LEGAL SEMINAR

The National Council will cosponsor a seminar on legal aspects of doing business with China in New York City next September or October. The Practicing Law Institute will be the other cosponsor for the event, which will be co-chaired by Howard M. Holtzmann of the Institute and Walter Sterling Surrey, the National Council's legal counsel and a member of its board of directors.

CONSTRUCTION DELEGATION ARRIVES IN PEKING

A National Council delegation of 28 construction equipment experts arrived in Peking on December 1 to present a series of technical seminars to construction industry personnel from all over China. The delegation, hosted by CCPIT, planned to follow its week-long presentation of all-day seminars in Peking with visits to construction sites in the south of China, including railway and road construction sites, site preparation of large dams and open pit mines, major trenching jobs, and manufacturing facilities for equipment of the type represented by the delegation. The Chinese expressed special interest in such topics as excavation and trenching, earthmoving systems, component technology and application technology.

The delegation received an enthusiastic response from the Chinese. At a welcoming banquet in Peking, CCPIT Vice Chairman Li Chuan told the group that China is ready to discuss cooperation arrangements and encouraged them to ask about joint ventures and building factories inside China.

Companies participating in the delegation were JI Case; Caterpillar Tractor Company; Clark International; John Deere & Co.; FMC Corp.; Harnischfeger International; International Harvester; Rockwell International; Terex Division of GM; and WABCO.

CHINESE PETROLEUM RESEARCH DELEGATION VISITS US

The Council hosted a 13-member delegation from the Petroleum Exploration and Development Scientific and Research Institute for five weeks beginning October 14. The institute engages in high-level research for the Ministry of Petroleum and supervises the work of oil and gas field institutes at Taching, Shengli, Yumen, and Chengtu.

The delegation expressed particular interest in reservoir engineering and management, particularly the techniques used to exploit low permeability reservoirs; remote sensing, especially with LANDSAT photos; sedimentary modeling through the use of physical and mathematical techniques to recreate original depositional environment of sediments; management techniques; core analysis; laboratory equipment; and computers, but only the largest and most advanced systems available. Although this was primarily a research delegation, it did buy some small equipment, including lab instruments, reagents, and voltmeters.

The delegation's primary accomplishments were the establishment and furtherance of already existing contacts with industry, government, (especially the US Geological Survey), and the universities. The meetings with academic officials were intended to lay the groundwork for scholarly and student exchanges. The mission also succeeded in giving the delegates, who had visited France before coming to the US, an opportunity to apprise themselves of the latest developments in petroleum exploration and development research.

Companies and universities visited by the delegation included Phillips Petroleum, Core Laboratories, Exxon, Mobil, Texaco, IBM, Union Oil, Stanford, the University of Oklahoma, the University of Texas, Dresser, Grug, and Texas International. The delegation was escorted by Jeffrey Schultz, Norman Getsinger, and Stephanie Green.

TEA AND CARPET DELEGATIONS

The Council also hosted two importer delegations in the final months of the year. A tea delegation arrived October 29 for six weeks of market investigation in tea, cocoa, and coffee processing and packaging operations. The delegation was led by Chang Shih-cheng, deputy manager of the tea department of CHINATUHSU. Stephen Watson escorted the delegation.

A carpet delegation from CHINATUSHU arrived November 19 and spent a month visiting carpet manufacturing and importing companies in nine cities. The delegation was led by Mr. Jen Yu-heng, deputy man-

ager of the Animal Byproducts Division. The group was hosted by the National Council and Council members Charles Rostov, of Trans-Ocean Import Company, and Paul Speltz, of WJS, Inc.

The National Council will host a timber-processing survey group in January and a nonferrous metals and mining delegation next spring. (See Importer's Notes for importer delegations that will be coming to the US in 1979.) 完

TRADEMARK NEWS: OVER 70 US MARKS REGISTERED IN CHINA

During his visit to China in September, National Council President Christopher H. Phillips was told that over 40 American companies have registered over 70 US trademarks in the PRC since notification that this was possible in March of this year.

Meanwhile, the answer to a question that has been puzzling trademark attorneys here was answered in a letter to the Council from the CCPIT, indicating that it is not necessary to establish use of a mark in China for foreign applicants. The text of the letter follows—

China Council for the Promotion
of International Trade
Trademark Registration Agency

Peking, China.

Telegraphic Address: COMTRADE PEKING

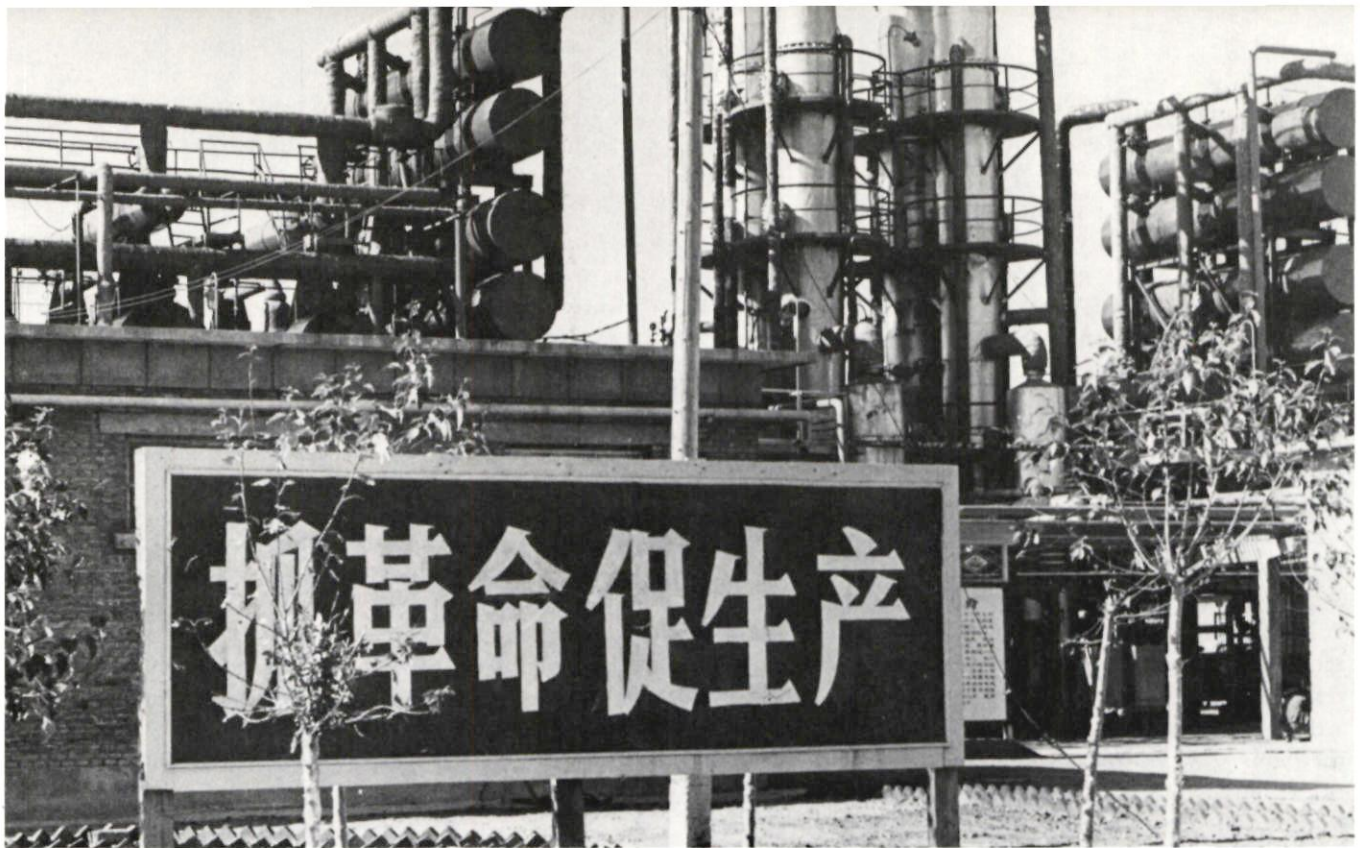
September 18, 1978

Mr. Walter Sterling Surrey
The National Council for US-China Trade
1050 Seventeenth Street, N.W.
Washington, D.C. 20036
U.S.A.

Dear Mr Surrey:

Your cable of August 4, 1978 has been received. We would advise you that Article 11(3) of our Regulations Governing Trademarks providing that a registered trademark can be cancelled when it has ceased to be used for one year without approval of the competent authorities, is not applicable to foreign trademark applicants. The term of validity of the trademark registration in the name of foreign enterprises is ten years no matter whether it is used or not and its renewal is also effective for ten years.

Trademark Registration Agency



"Grasp revolution and promote production" says sign in front of ammonia concentrator at Taching's La Ma Dian No. 2 Multi-Purpose Pump Station.

TACHING/POHAI JOURNAL

Stephanie R. Green

"Find Taching beneath Taching, find Taching outside Taching."

The National Council's second petroleum equipment mission to China in September 1978, sponsored by the Council's Petroleum Industry Committee (CBR 5:5), had unusually good opportunities to see the efforts China is making to explore "beneath Taching"—"deep" drilling at and around China's largest oilfield, and "outside Taching"—exploration drilling offshore in the Pohai Gulf. Members of the delegation were the first Americans to spend a night on a Chinese offshore drilling rig. The group's three-week tour also included a week of technical seminars in Talien (Dairen) presented to engineers from all over the PRC and visits to Talien's oil port and the Talien shipyard, where two Chinese jackups are under construction. The following story describes what the group found. (A note of thanks is extended to J. Ray Pace of Baker World Trade for his comments on the compiled information.)

TACHING

Taching, or "Great Celebration" Oilfield, supplied over half of China's total yearly production in 1977. Located in desolate Heilungkiang Province in the far northeast of China, where winter temperatures plunge to -45° F, the selection of Taching oilfield as the model for emulation by all Chinese industry reflects the hard work and intense dedication which went into its development. The motto "In industry learn from Taching" takes on a special meaning when one is actually there.

Events have proven that there certainly was cause for "great celebration" when Chinese workers first struck oil on the eve of China's National Day, 1959, the anniversary of the nation's founding. Since then the field, located in the northern half of the Sungliao Basin, has grown into a massive complex consisting of 600,000 residents distributed among four enormous people's communes. 130,000 are in oil-related work, while the other workers tend the fields and provide

labor for other services. Between 20 and 30 percent of the oil workers are women.

The Sungliao Basin covers about 260,000 sq. km., while the Taching oilfield itself occupies a region approximately 60 miles north to south and 40 miles east to west. The September 1 issue of the *Peking Review* pointed out that in 1949 all China's oil fields had only 8 drilling rigs and 50 wells. Today a three-dimensional model of Taching on display in an oilfield museum shows that this oilfield alone has at least 1,900-2,000 wells, but the delegation was told by escorts that the figure may now actually be as high as 8,000-10,000. The Taching area is a broad plain marked by many marshy areas and lakes. Geologically it is made up of many shallow, 4,000-foot thin, lens-type reservoirs, in fine-grained consolidated sandstone strata separated by shale layers.

Organization

Taching operates on a multi-tiered management system, the details of which are not always clear. The Party Committee of Heilungkiang Province and the Ministry of Petroleum in Peking share responsibility for the broad administration of the oilfield. The body with real operational control, however, is the Taching

Revolutionary Committee, which reports to these entities. All three of these organizations are bound by strong links: both the Heilungkiang Party Committee and the Taching Revolutionary Committee are chaired by Chen Lieh-min, who is also a Vice Minister of Petroleum.

The Revolutionary Committee has eleven vice chairmen, six of whom are in oil production. (See chart below.) They oversee 34 separate departments, all known as "headquarters," including 7 geographically divided oil production headquarters, as well as headquarters covering prospecting and exploration, drilling, downhole wells, gas transport, the General Petrochemical Works, the prestigious Northeast Petroleum College, and other non-oil functions such as hospitals, financial departments, and postal services.

Oil Production Headquarters

The Taching field consists of a main production area surrounded by about ten smaller fields stretching in all directions except the north, although, as noted below, a completely separate field far to the northeast is currently in the initial stages of development. The main Taching field is divided into four major sub-regions, which are administered as seven distinct geo-

TACHING OIL FIELD REVOLUTIONARY COMMITTEE OFFICERS

Names (Romanization)	Names (Chinese)	Department or Other Position
	Chairman	
Chen Lieh-min	陈烈民	Chairman, Taching Party Committee Vice Minister of Petroleum
	Vice Chairmen	
Chin Yu-sun	金毓荪	Production
Ma Te-jen	马德仁	Production
Chang Li-chung	张立中	Production
Pai Shih-kui	白士辉	Production
Yang Wan-li	杨万里	Production
Wang Chin-wu	王执吾	Production
Lin Pang-lin	刘帮林	Agriculture
Tien Ke	田 革	Agriculture
Hao Wan-chun	郝万春	Reception Administration
Tsui Hai-tien	崔海天	Capital Construction
Hsu Yen-ling	徐彦玲	Education and Health

graphical units whose designation is based on the time period when each unit was developed.

The oldest section, opened in 1960 with help from the Russians just before they withdrew, is in the center of the field. South and north of the oldest section are Sections 2 and 3, respectively, which began operations in 1965. The three sections together are known as Sha Erh Tu. Section 4, located next to Section 2 and opened in 1967, and Section 5 in the far south, which went into production in 1970, together make up Hsinshugang. Section 6, or La Ma Dian, is on the western side of the field and was the last to open—in 1973.

Section 7, in the southwest, is the new field on which the attention of Taching workers is currently focused. Now under construction, it is not scheduled to begin operations until next year. Called Pu Tao Hua, or "Grape Flower," this section was discovered in 1960, but was not developed because of its remoteness and the difficulty of transport to the area. Now connected by pipeline to the rest of Taching, this new region is expected to contribute significantly toward the goal of maintaining overall Taching production at current levels.

Delegation Visits

Because Taching is hailed as China's model for heavy industry, large numbers of visitors, both Chinese and foreign, are brought there to see Chinese achievement at its finest. Shengli, China's second largest field toured by last year's Council petroleum equipment delegation, and other oil fields, have far fewer visitors. The 3,000 Chinese who visit Taching each day are billeted in rows and rows of tent-like barracks, while nearby the many foreign visitors are housed in a spartan, but comfortable concrete guesthouse run by the China International Travel Service. A new and larger hotel now under construction is scheduled for completion next year.

The bulk of all visitors are taken on a standard tour of certain rigs, wells, pump stations, the Underground Palace (a geological museum) and other facilities, most of which are located in Section 6. The delegation was taken to a number of these standard sites, but also had the opportunity to see other operations, including spontaneous stops along the road. In the course of several tightly scheduled days, members saw three drill-

ing rigs, a drill tool manufacturing and repair workshop, a metering station, a multi-purpose pump station, an underground pump station, two wells, a beam pump, a fracturing operation, the geological museum, and (for a few) the refinery.

Exploration

Exploration, or finding more Tachings even in Taching, is a high priority. In the entire Sungliao Basin, according to charts at the Underground Palace, 1,112 "shallow" exploratory wells were drilled in the 20-year period from 1956 to 76, and 255 "deep" wells. Exploratory efforts are well underway in areas to the west, south, and east of the present major producing field. The delegation was told of a new field about 300 km. northeast of Taching, where the Chinese are currently drilling near the 6,000-meter level. A Rumanian type F-320 rig is in use in that area.

Drilling

While Taching workers have drilled a dry well down to 6,000 meters, the average depth of wells in the field, according to our guides, is 1,200 meters. Production to date has been at these relatively shallow depths—200 to 2,000 meters in the older sections of the field. The new area in the southwest, the "Grape Flower" section, where current exploratory efforts are going on, apparently contains oil at a depth of 3,000–3,500 meters and over, and oil has reportedly been found at that depth. No deep production has been found in the older portions of the field.

Two strings of casing are used in each Taching well: 11 $\frac{5}{8}$ -inch for surface casing, and 7-inch or 5 $\frac{1}{2}$ -inch for oilstring casing. Most wells use 5 $\frac{1}{2}$ -inch string. Typical tubing for completions is 2 $\frac{7}{8}$ -inch, used also for water injection wells. Packers are sometimes used in oil wells, but more often in water injection wells.

Most drill pipe used at Taching is imported from West Germany. Only some injection wells have coated tubing to prevent rust. The wells must be cleaned of paraffin every three to five days unless chemical additives are used; then wells must only be scraped every two months. As with Shengli, repair and maintenance work is not given a high priority. Inactive workover rigs were seen, as well as idle drilling rigs.

Rigs. The delegation made visits to two wildcat loca-

SEVEN OIL PRODUCTION HEADQUARTERS OF TACHING

Section No.	Name	Date Opened	Region
1	Sha Erh Tu	1960	Center
2	Sha Erh Tu	1965	South of 1
3	Sha Erh Tu	1965	North of 1
4	Hsinshugang	1967	South (next to 2)
5	Hsinshugang	1970	Far South
6	La Ma Dian	1973	Far South
7	Pu Tao Hua	Projected 1979	Southwest



Generator station at La Ma Dian pump station.

tions using Taching Type 1-130 rigs (designating hoisting capacity of 130 metric tons). Both are similar to Rumanian rigs. The first was a model operation—Drill Team No. 32619 which was formed in March, 1976. On the day of our tour, September 22, the crew had reached a depth of 3,338 meters, and was aiming for a goal of 4,000 meters by National Day on October 1.

The rig has three Model 180 1,000 h.p., 12-V diesel engines, manufactured in Shanghai in 1977, one of which was operating during the visit. Also seen were two 600 h.p. mud pumps and dual single-screen shakers. Very little blowout-prevention equipment was in evidence, the only such equipment being a Rumanian copy of an earlier-model Shaffer BOP which had one ram-type preventer. Delegation members saw some tri-cone bits lying around, but no foreign bits. Several joints of drill pipe were added to the drill string during our visit. The average time for a connection was quite long—4½ minutes.

The next day the delegation visited another Taching Type 1-130 rig—No. 310—which had been drilling since March and had reached a depth of 3,300 meters. No oil or gas had been discovered, and the crew was waiting for word to change locations. This rig also has three 12-cylinder engines of 1,000 h.p. each, a single ram-type BOP, two mud pumps, and two single-screen shale shakers. The group also stopped briefly to look at a demonstration jackknife derrick, Type C-1500, which can drill to 1,500 meters.

Drill Tool Workshop. On the itinerary was a tour of Taching's only drill bit plant, manned by 347 workers. The operation contains four production workshops: coring bit repair, drag bit production,

drill tool production and repair, and a supply team. The shop manufactures drag bits, hard-faced metal alloy bits, and artificial diamond drag bits. Taching workers use drag bits to a depth of 2,000 meters, and then employ Chinese- or US-made rock bits. The plant operates on a 24-hour schedule, with three 8-hour shifts.

Production

No information was made available to the group on total Taching Oilfield production. Recent US government estimates, however, put output at almost 900,000 b/d—more than double the size of the next largest field, Shengli, which is estimated at about 360,000 b/d.

Production, according to delegation observers, is from a series of non-marine, thin, lenticular sands distributed over a very general arch. Cross sections seen by the group showed that a single well may penetrate 10 to 12 sands. These sands are quite shallow, only going down to about 4,000 feet.

The delegation was told, and could observe, that the field is in a mature producing stage. The main goal at Taching, as stated at the Underground Palace geological museum which we visited, is to keep production at a stable level for the rest of the eight-year economic plan, as well as to search for and develop another field in the area.

A chart at the Underground Palace placed the 1976 production at 51.8 times that of 1960, the year the field opened, and another showed the crude production curve at almost level for 1975–78. This confirms recent Western estimates that Taching's production has been falling off since 1972.

Experts in the group felt that current production goals could not be attained if only secondary and tertiary recovery methods are employed; the task of development of new areas is vital to Taching's maintaining its contribution to China's total oil production. In addition, group members saw that some production wells in the three oldest sections (Sha Erh Tu) have been closed down, and that in Section 6 (La Ma Dian) many beam pumps were not in operation (although this could be due to the necessity for repair).

From the beginning, water injection has been used to maintain necessary well pressure and to insure production increases. Indeed, about one-third to one-half of Taching's wells are water injectors. The Chinese method of injection is to inject into multiple lenses using a single tubing string, rather than practicing selective lens injection with multiple pipes. The single string technique maximizes present output and conserves use of imported steel drill pipe, but in the long run decreases ultimate recovery.

Injection wells at Taching are arranged in rows, often between rows of production wells. Water injection rose after 1973, but leveled off again in 1976. The large amount of water injected increases the water content of the crude oil produced. The delegation was told

that average water content per unit of crude was between 10 and 20 percent, but this was probably too conservative a figure. Delegation members estimated that water content in the older areas of the field was probably greater than 50 percent, and in the newer areas about 25 percent.

According to briefings, the gas/oil ratio could be calculated at 208 cubic feet per barrel of crude—a fairly low ratio.

Most wells at Taching are flowing wells. All, it was said, are equipped with packers, although the type used appeared not to be as sophisticated as those in the US.

Flowing Well. Well No. 617, a showplace installation in the central section, has a work team headed by a young woman. It was first visited by a National Council delegation in October, 1976, when a Board of Directors group was taken to Taching. The well began production on National Day, 1960. In 1976, National Council visitors were told that accumulated 16-year production was 360,000 tons with a daily output of more than 70 tons. In 1978, our delegation was informed that the 18-year output had risen 420,000 tons, with a corresponding daily output increase to 80 tons.

As with most wells at Taching, the machinery is housed inside white-painted protective enclosures. The site boasts a unique two-pipe Christmas tree designed and manufactured in Taching, as well as an entire display of Christmas trees, ranging from a Russian model to a fully Chinese model.

Tubing strings in the well penetrate to depths of 933 meters and 964 meters. The tubing employed is 1.5 inches, with 5.5-inch casing 1,053 meters deep.

Beam Pump. Included in the visits was a beam pump, Model CYJ-5-2712, built in 1974 in Lanchou, many of which were seen in the field. Installed at a depth of 1,200 meters, the pump has a 60-inch stroke and was operating at 12 strokes per minute. The pump was placed on a thick concrete base, similar to the boxing-in of the wellhead apparatus observed at Shengli by last year's petroleum delegation.

Multi-Purpose Pump Station. The delegation visited La Ma Dian No. 2 Multi-Purpose Pump Station, one of the largest stations of this type at Taching. It processes 26,000 tons of oil per day to send on to the Talien Oil Port—16,000 tons from 295 production wells which send their production to 25 metering stations, which in turn funnel into the pump station, as well as 10,000 tons from another nearby pump station. At 26,000 tons per day, the total crude pumped to Talien in 1978 should reach 9.49 million tons a year, which is 18 percent more than China exported to Japan, the Philippines, and Rumania in 1978. The capacity available will be sufficient to handle the volume of oil needed by Japan through 1981 under the present terms of the Sino-Japanese trade agreement. (See *CBR* 5.5, p. 38.)

The station, outfitted entirely with domestically

manufactured equipment including centrifugal multi-stage injection pumps, produces four standard products: purified oil, purified water, natural gas, and light oil. Oil from the 25 metering stations is sent through the separators, and then channeled to water settling tanks, where water content is reduced from 35 percent to 10 percent. After being stabilized in additional settling tanks called "buffer" tanks, the oil is heated to 50–60° C and passed through chemical-electric heater-treaters, where the water content is further decreased from 10 percent to 0.2 percent. Finally, the oil is sent by pipeline to Talien Oil Port.

The other separated materials, water and gas, are also treated. Both fresh and waste water are pumped to the injection station, and then to metering stations with a discharge pressure of 140 kg./sq. cm. Gas from the metering stations and separators is compressed at 15 kg./sq. cm. and sent to the Taching Fertilizer Plant at Wolintun. Light oil produced is used for heating homes in Taching.

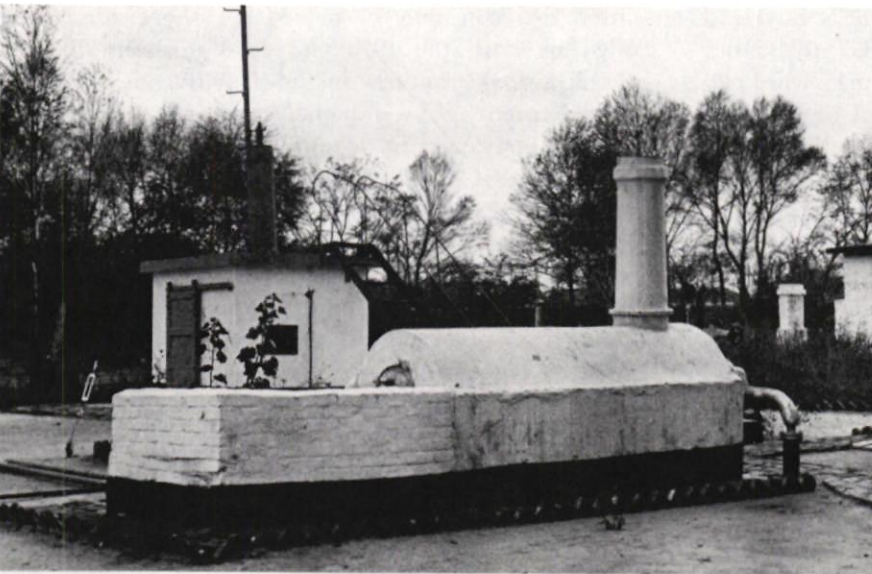
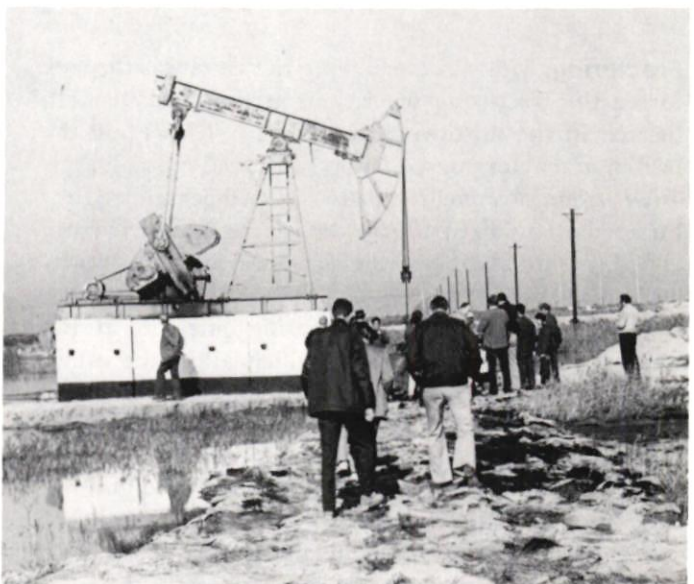
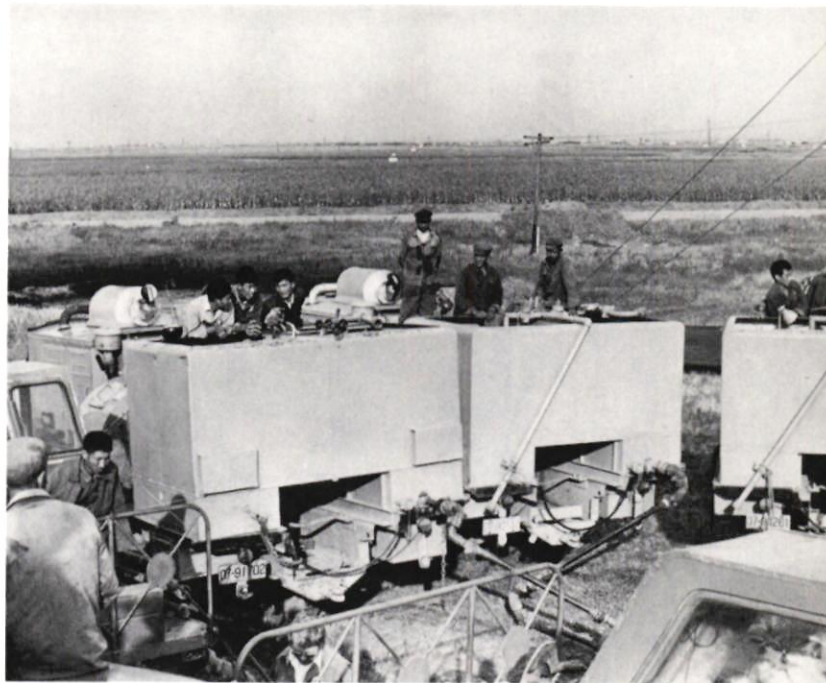
While at the pump station, the delegation was told that the solidification point of Taching crude is 27° C and the paraffin pour point is 38° C. The average age 20 years, are in charge.

Metering Station. La Ma Dian No. 35 Metering Station, also on the list of regular tours of the oilfield, was visited by China's Chairman Hua Kuo-feng in April, 1977. This facility, with 12 oil wells and 7 water wells, is like those which send oil to the multi-purpose pump station just described. Using two large separators, the station separates gas and oil and distributes water sent by larger stations for injection.

The showplace installation produces 800 tons of oil and separates out 240 tons of water per day. 1,900 tons of water per day is passed into seven injection wells. Gas production is 35,000 cubic meters. Both 2-inch and 2.5-inch pipelines feed into the station. The 12 wells are each 1,200 meters deep. Five young women, average age 20 years, are in charge.

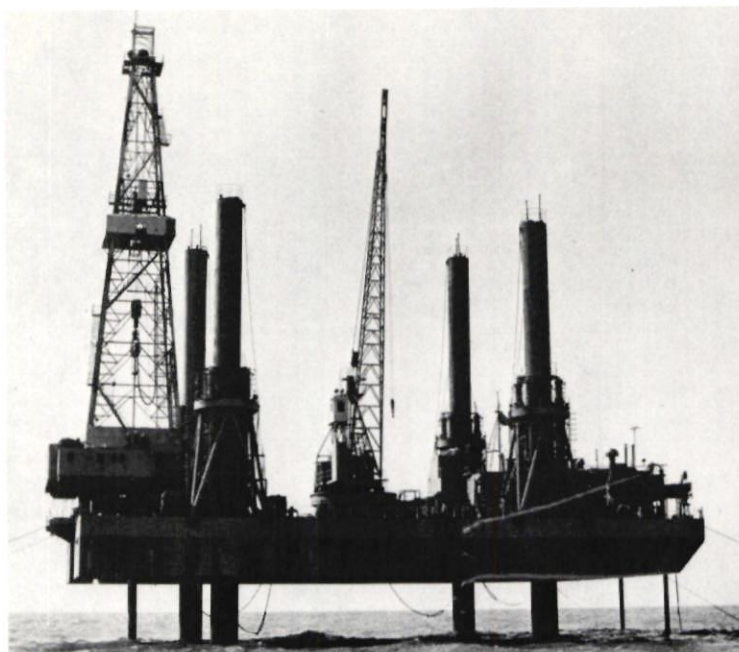
Underground Pump Station. Billed as an underground facility, this pump station on our itinerary was actually only half underground. Reason for digging down: "more convenient," explained our briefer, who said that such digging allowed the number of workers to be reduced from 80 to 18. (Delegation members did not quite understand how this was accomplished.) Originally designed to process 11,000 tons of oil and water per day, the installation has raised its total output to 18,000 tons per day, a figure which remains constant in winter as well as summer.

Crude oil from 41 wells and 4 pump stations is gathered by the station; the crude oil has a 55 percent water content. The wells together produce 1,500 metric tons of oil per day. The 212 pieces of equipment at the facility include three 2,000-cubic-meter oil tanks, eight oil heaters, seven sets of dehydrators, and several multistage centrifugal pumps.



TACHING OILFIELD TOUR

Clockwise from top left: Taching Type I-130 drilling rig; fracturing job; pumping well astride cement base; enclosed wellhead house and oil heater; Taching roughneck.



Chinese-made *Pohai I* visited by US group (left); deck of *Pohai I* with Koomey BOP control pipe in foreground.

Fracturing. Most unique among the visits was the trek to see the fracturing operations at the No. 301 well, located in the northwestern Section 6. Clearly off the beaten track for most visitors, the well was also far away from any main roads. The delegation's bus bumped along dirt paths to the site, and on departure ended up in a cabbage field before finding its way back to the road.

Fracturing, a procedure creating pressure in the well in order to cause cracks which allow the oil to flow upward more easily, should make it possible for the Chinese to produce 30 tons more per day from the No. 301 well. In use at the site were 7 diesel-powered pump trucks, 10 tank trucks containing gelled water and 2 sand trucks. A large amount of the equipment was foreign-made, including pumps from Rumania, pump trucks by Tatra of Czechoslovakia and Skoda of Poland, tank trucks by Hino of Japan, and a French Unic dump truck with Bennes Marrel truck bed. The Polish pump trucks were efficient replicas of older Halliburton models. Chinese-manufactured equipment included four Yellow River pump trucks.

At the time of the group's arrival, the fracturing job was just at its start. Workers said the operation would take about 2½ hours. They were using 150 cubic meters of gelled water for pumping into the hole, and 50 cubic meters of sand. The oil layers would be fractured by 300-400 atmospheres of pressure.

Refining

Taching Refinery. Several members of the delegation opted to visit Taching's refinery, located at Lung Feng, on the eastern edge of the field. The National Council's Directors delegation also visited this plant

in October 1976. According to reports of both delegations, the Taching Refinery raised its annual crude oil capacity from 1 million tons in 1960, its first year of operation, to 5 million tons in 1976, a figure which has not increased in the last two years.

Petrochemical facilities were built in 1970. Chinese-made equipment is now used for the production of 50,000 to 60,000 metric tons of ammonia per year and 100,000 to 110,000 metric tons of ammonium nitrate. Recently some American equipment has been imported which adds production of 300,000 metric tons per year of ammonia and 480,000 of urea. Some Soviet and British equipment was also seen in the pump stations and blower house.

There are 49 varieties of products produced by Taching's refinery, the principal ones being gasoline, kerosene, diesel oil, paraffin oil, and residual oil. The latter two consume 70 percent of the crude. Compiled by both the 1976 and 1978 missions, the list of additional products includes nylon, an orlon-like fiber, benzene, coke, toluene, xylene, and base products for pharmaceuticals and insecticides. Most of the production is targeted for domestic use, but coke residue is exported to Japan and paraffin to 50 countries.

The works has over 10,000 workers, a total which has remained constant for the past two years. Salaries range from about 40 yuan per month to 100 yuan, with an average of 50-60 yuan. As with all industry across China, there is now a bonus system of 5 yuan or 9 yuan per month to encourage higher productivity. The refinery guide admitted that management expertise was lacking, standards are not up to world levels, and pollution and other environmental hazards present a problem.

POHAI GULF

In the last six months China's offshore oil potential has become a focus of world interest as the PRC has welcomed foreign companies to make proposals for coproduction of offshore resources. From the US, at least ten oil companies, including Exxon, Pennzoil, Union, Phillips, Mobil, and Amoco, have made the trip to Peking for discussions. European companies, too, including British and French, have been asked to make proposals. Japan has signed a contract for development of the southern part of the Pohai Gulf, and has conducted discussions on the offshore Pearl River area. Most of these areas may well be given to nearby Japan because shallow regions such as these do not require a level of technological capability greater than Japan's.

The Chinese have also discussed development of the Pohai area with more technologically advanced US companies. In addition, they arranged for the 12 petroleum equipment firms in the delegation to have the opportunity to see drilling and production facilities in what is called the Pohai Oilfield.

On September 25, the delegation traveled from Tientsin to Tangku, (Hsinkang Harbor), where it boarded a Japanese-made supply boat, the *Binghai 211*, for the seven-hour, 70-nautical-mile trip to the Shijiutuo area of the gulf. Our destination: the *Pohai I*, China's first domestically designed and manufactured jackup drilling rig, circa 1972. The rig is 200 nautical miles north of Shengli Oilfield in Shantung Province.

On our way out of Hsinkang Harbor, we passed the headquarters and support facilities for Pohai Gulf exploration and production operations, which in-

clude some newly constructed buildings, three 200-ton coring barges, and one large crane barge. Tankers were seen at several docks, although delegation members were told Hsinkang is not an oil loading and unloading port. Our Chinese escorts said that "several thousand" workers are involved in PRC offshore exploration efforts.

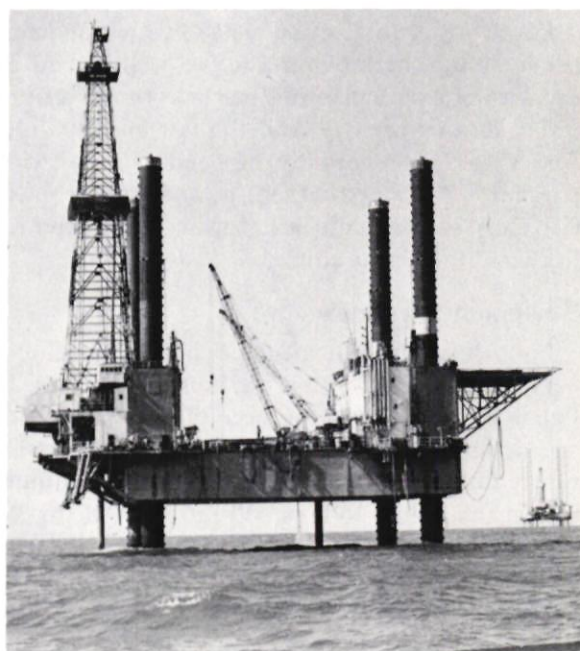
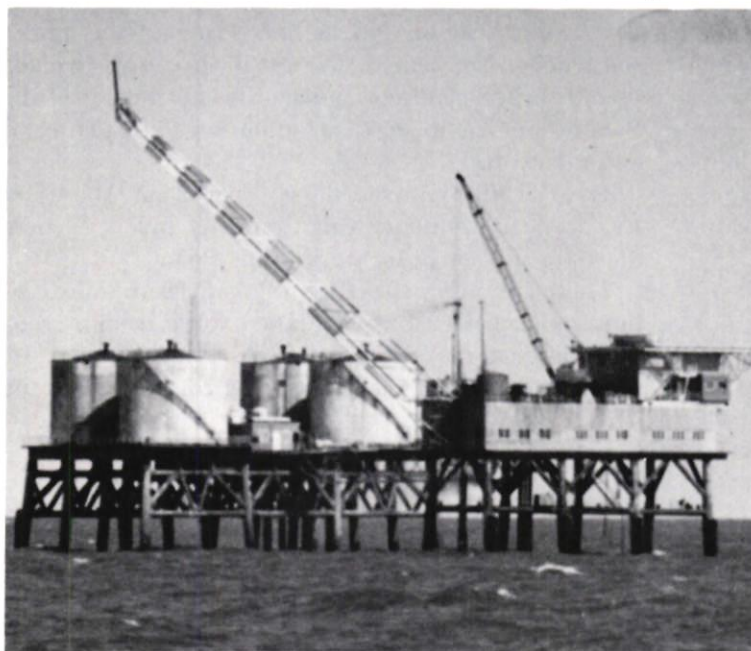
Geological Overview

During the boat ride, the delegation was briefed by geology engineer Chou Wei-tai. Some of the information given appeared contradictory. The Pohai has a total area of 75,000 sq. km., and a shallow water depth of less than 70 meters. There are 13 major geologic structures and 14 oil depressions, the latter with an overall area of 44,000 sq. km., including both limestone and sandstone formations. Exploration began in 1965, and gravity, magnetic, and seismic surveys have been run, leading to the discovery of two major oil-producing areas, each apparently containing two fields. The southwestern areas, called Chi Nan and Cheng Pei, appear to be extensions of the Takang and Shengli fields, respectively.

The Chinese have completed 82 prospecting wells, including 36 directional wells and 46 vertical wells, but only 22 of these have oil in commercially viable quantities. Production capacity on some existing wells is over 100 tons each per day, although two can produce over 1,000 tons per day. The potential output of four production platforms mentioned is 200,000 tons per year. The deepest well in the Pohai is 4,024 meters, but most wells are about 3,000 meters in depth.

The Shijiutuo area, it was discovered independently, contains two fields, the second 20 miles beyond the

Chinese-made production platform in Pohai Gulf with addition under construction (left); foreign-made *Pohai II*, in foreground, and *Pohai IV*, in back, both located in Pohai Gulf.



Robert W. Scott

CHINA'S OFFSHORE RIGS, DECEMBER 1978

Chinese Name	Type and Manufacturer	Remarks
POHAI GULF		
Pohai I	Jackup, China, Talien Shipyard	Completed 1972. Drills in up to 130 ft. water, to depths of up to 10,000 ft. Can drill 4 wells per year.
Pohai II	Jackup, Japan Drilling Co.	Purchased 1972. Drills in up to 175 ft. water, to depths of 15,000 ft. Formerly named <i>Fuji</i> .
Pohai III	Jackup, China	In operation, dimensions probably similar to <i>Pohai I</i> .
Pohai IV	Jackup, Hitachi, Japan for Robray. Robin Loh Shipyard, Singapore	Purchased 1975, delivered 1977. Drills in up to 300 ft. water, to depths of 25,000 ft. Reportedly drilled only 3 wells in 14 months, 1977-1978.
Pohai V	Jackup, Robray. Robin Loh Shipyard, Singapore	Purchased 1975. Drills in up to 300 ft. water, to depths of 25,000 ft. Previous reports have identified this rig as the <i>Nanhai II</i> , located in South China Sea.
Unknown	Jackup, Bethlehem Singapore (70% Bethlehem Steel of US, 30% Development Bank of Singapore)	Purchased April 1978, to become operative by 1980. Can drill in up to 250 ft. water.
Unknown	Jackup, Marathon LeTourneau Co. (US) as its Singapore Shipyard	Purchased May 1978, to become operative March 1980. Drills in up to 250 ft. water.
Unknown	Jackup, Marathon LeTourneau Co. (US) as its Singapore Shipyard	Purchased May 1978, to become operative March 1980. Drills in up to 250 ft. water.
Unknown, Possibly Pinhai I or II	Fixed drilling platform, Mitsubishi, Japan	Purchased 1973, believed to have been delivered 1975. Operable in up to 20 meters (65 ft. water). Two of 5 operating drilling platforms are known to be called <i>Pinhai I</i> and <i>Pinhai II</i> .

area we visited. Overall, Shijiutuo is probably the only field currently producing, with production from limestone. It has a total of 16 wells, five with commercial production. The most productive well has an output capacity of over 1,000 tons per day, three can produce over 300 tons per day, and the last over 100 tons per day. Crude is reportedly of good quality, with low paraffin, 0.3-0.5 percent sulfur, and specific gravity of 0.8. Only small quantities of water have been present in the oil thus far produced.

Equipment Overview

Following the geological briefing, delegation members were briefed about drilling equipment in the Pohai by equipment engineer Hsiao Hei-shu, one of the designers of the *Pohai I*. There are ten rigs currently in operation in the Pohai, including four jackups in the Shijiutuo area. Within sight of the *Pohai I* are the *Pohai II*, a Hitachi-made rig from Japan formerly known as *Fuji*, and the *Pohai IV*, a Hitachi-Loh rig built for Robray Drilling Co., each of which, the delegation observed, was drilling a single well.

There was also a Chinese production platform, which contained three wells and a storage platform with four 2,000 bbl. tanks on top. A new structure was under construction on which a National Supply rig will be placed. In the southern and southwestern fields of the Pohai there are six rigs, including five fixed platforms and a jackup.

Two jackups purchased this year from Marathon LeTourneau Manufacturing Company and Bethlehem Steel are also slated for work in the Pohai.

There are no pipelines from Pohai rigs to shore. Oil must be transported using a hose hooked from production platform tanks to a tanker. As a stopgap measure, an offshore loading facility is being constructed at the Talien Shipyard.

Pohai I

Built at the Talien Shipyard, the *Pohai I* is outfitted almost entirely with Chinese-manufactured equipment. The only US equipment aboard is an NL Shaffer double ram-type blowout preventer and a Stewart & Stevenson Koomey BOP control system.

CHINA'S OFFSHORE RIGS, DECEMBER 1978

Chinese Name	Type and Manufacturer	Remarks
Unknown, Possibly <i>Pinhai I or II</i>	Fixed drilling platform, Mitsubishi-Japan Oil Development Co.	Delivered 1973.
Unknown, Possibly <i>Pinhai I or II</i>	Fixed drilling platform, Mitsubishi-Japan Oil Development Co.	Delivered 1973.
Unknown, Possibly <i>Pinhai I or II</i>	Two fixed drilling platforms.	Operative 1978, probably of Chinese or Rumanian origin.
Unknown	Fixed drilling platform, National Supply, US	Purchased November 1977, being assembled 1978 for 1979 delivery. Drills up to 20,000 ft. holes.
Unknown	Fixed drilling platform, National Supply, US	Purchased November 1977, to be delivered by 1980. Drills up to 20,000 ft. holes.

SOUTH CHINA SEA

<i>Nanhai I</i>	Jackup, Robray, Singapore (Robin Loh)	Purchased 1975, delivered 1977. Drills in up to 300 ft. water, to depths of 25,000 ft. Experienced operational difficulties, 1977. Located near Hainan Island.
Unknown	Semisubmersible, Fred Olsen, Norway (formerly <i>Borgny Dolphin</i>)	Aker-3 type rig purchased September 1977. Drills in up to 1,000 ft. water, to depths of 20,000 ft. Near Hainan Island.
Unknown	Jackup, Hitachi, Japan	Purchased June 1978, to become operational October 1979. Can drill in 300 ft. water. Near Hainan Island.
Unknown	Jackup, Hitachi, Japan	Purchased June 1978, to become operational January 1980. Some reports suggest the rig may be delivered to Pohai Gulf. Now near Hainan Island.
<i>Kantan I</i>	Catamaran drillship, Shanghai, China	Near Shanghai.
<i>Kantan II</i>	Catamaran drillship, China.	Near Hainan Island.

The rig, headed by Brigade Leader Yang Shu-rong, is 32 meters wide, 60.8 meters long, and usually 5 meters above water level. The four tubular steel legs have a length of 73 meters and a diameter of 2.5 meters. Each leg has four hydraulic cylinders with 400-ton capacity. The jacking system seems similar to a De Long design. The platform weighs 4,600 tons, and has a total lifting capacity of 6,400 tons. The rig generators are powered by two 1,500 h.p., 75 rpm diesel engines, and the drawworks by two 500 h.p. AC electric motors.

The rig has a design capacity of 3,600 meters. It drilled its first well in 1973, and reportedly has the capacity to drill four directional wells. At the time of the visit, it was located in 40 meters of water. It had been drilling one vertical well, Well No. 19, for 23 days, or since the beginning of September, and had reached a 3,100 meter depth. The goal was to finish the last 500 meters by mid-October. During our 17-hour stay, the crew drilled continuously and used about 60 feet of drill pipe, which meant the goal would probably be achieved.

There were 24,000 lbs. on the bit, at 48 rpm, with 1,400 psi mud pressure. At that time, the crew was using a Hughes 9 $\frac{7}{8}$ -inch J33 bit. (Generally, bits are used for 150 hours; the record was 350 hours.) Mud pumps were operating at 60 strokes per minute. The mud system consists of twin duplex mud pumps, about 700 h.p. each, a conventional shale shaker, and desander.

The delegation visited several facilities below deck including transformer room, electric supply control room, generator room, boiler room, and two pump rooms.

The *Pohai I* was designed for a crew of 78, but the present number of workers is 87, because, said our hosts, "the equipment on this rig is somewhat backward." There are no women workers at the present time, although several women worked on the rig in 1976. Crew members spend 30 days on duty and 10 days onshore, with one-quarter resting on shore at a time. There are three eight-hour shifts and food is free. As in the US, food on offshore rigs tends to be better than that for onshore workers.

The average salary is 75 RMB (about \$45 per month), with a high of just over 100 RMB (\$60 per month) and a low of 64 RMB (\$38 per month). Drillers earn 80 RMB, while roughnecks make 64 RMB.

After the delegation boarded the rig, a tremendous wind blew up, making it impossible for the boat to return to the side of the platform. The group, along with escorts from the boat and from the Tientsin branch of the China Council for the Promotion of International Trade (CCPIT), had to remain on board until morning. The crew showed the typical Chinese sense of hospitality, providing the group with dinner and breakfast, and displacing workers to put up the visitors in available sleeping quarters, which are mostly six bunks to a room. The next morning, at about 10 A.M., the wind died down, and the unexpected overnight guests were able to depart.

TALIEN'S CONSTRUCTION AND TRANSPORTATION FACILITIES

During the week of technical seminars given to Chinese engineers in Talien, the delegation was escorted to two oil-related installations in the greater Talien area.

Talien Shipyard. The Talien Shipyard, originally built in 1898 by the Russians and again controlled by them from 1945 through 1955, first built oil construction facilities in 1968. Initially, the size of tankers built was 15,000 tons but the yard has expanded to handle the construction of 24,000-ton and 50,000-ton models. Along with the Chiangnan Shipyard in Shanghai, it has become one of China's biggest builders of platforms for offshore rigs. In addition, it is currently constructing a Chinese-design single-point mooring system. The shipyard employs 16,000 workers and staff.

Two jackup rigs are presently under construction, one in the eastern shipyard, which we visited, and one

in the western shipyard. Both are similar to the *Pohai I* design. The Chinese stated that the rig the group saw will cost about 30 million RMB (\$18 million). Begun in 1974, it should be completed by the end of this year. The length, including a helicopter pad, is 76 meters, and the width is 34 meters. Drawworks capacity is estimated at 16,000–17,000 feet. Three mud pumps of about 900 h.p. each, larger than those on the *Pohai I*, have been put in. The rig is installing a Koomey blowout preventer control system. It will operate in 40 meters of water.

After the visit, delegation members commented that the rig looked quite good, but in terms of efficiency is at least 15 or 20 years behind US models.

Talien Oil Port (Hsinkang). Actually called "New Port" in Chinese, the Talien oil port is the newest addition to one of China's oldest coastal trade centers. The oil port, however, has been constructed about 40 miles from Dairen's original operations, which now handle only commodities shipments.

The oil port was completed in May 1976, after 17 months of construction. An underground 28-inch pipeline from Taching feeds crude oil to Talien, part of which is transported to other points along the Chinese coast. The rest, reportedly 15 million tons worth, is exported to Japan, Hong Kong, the Philippines, and Rumania. Only three other ports in China are fed by oil pipeline: Chinghuangtao, Tsingtao, and Nanking.

Despite the pipeline, train cars seen during the delegation's rail journey from Harbin to Taching suggested that a large amount of the oilfield's crude and refined products are also still being transported by rail.

In all, the Talien terminal handles 110 million barrels of crude per year. It has 13 storage tanks capable of storing 350,000 metric tons of crude at one time. There are four 720 mm. (28-inch) lines of oil to the loading wharf, and one line for polluted water, 20,000 tons of which is recycled each day. Two tankers can be loaded at the available berths, one of 50,000-ton and one of 100,000-ton size. Five loading arms have been constructed, and gravity-charged pumps are used.

CONCLUSION

A senior Chinese official recently visiting a foreign country was asked how much oil China really has. His response: "We don't know. Can you tell us?" China's new approach to the development of the PRC oil industry includes judicious use of foreign companies or their technology in the grand plan to increase China's petroleum and industrial output at a time when the country's largest oilfield appears to be at the top of its production curve.

The new phase of the PRC's oil development is beginning with goodwill, cordiality, and interest on Chinese and US sides. The future should see cooperation between China and the US of a sort that is both unprecedented and exciting to contemplate. 完

Oil pipelines and tanker being loaded at Talien's oil port.





Textile Hall at Canton Fair: Scene of closely-fought battles on textiles buyback.

CANTON 44 BEYOND EXPECTATIONS

John Kamm

Last spring's Fair seemed to herald a new era of flexibility and willingness on the part of the Chinese to adapt to international market needs. This fall's event confirmed that it all had not been a brief mirage. Not only did total Sino-US trade at the 44th CECF (Chinese Export Commodities Fair) far surpass that of earlier years, but the Chinese bought more from US companies than they sold. Talk of cooperation agreements occurred in most discussion rooms. Although the Ministry of Foreign Trade has thus far made no move to set up a separate organization to coordinate cooperation trade, some Chinese officials indicated their desire for such an entity. And close on the heels of the startling Intercontinental Hotel deal, the Chinese said they were seeking American companies to help erect and outfit "several" 1,000 bed hospitals.

The old hand sank deeply into the plush but slightly worn couch of the National Council's suite in the seedy elegance of the Tung Fang's old wing, took a long draft on his gin and tonic and mused. "What's new at the Fair? Oh,

there's more flexibility—terms are easier, pricing more understandable, business quicker.

"All the stories we'd read and rumors we'd heard before the Fair . . . you know, joint ventures, swaps, barter and the like . . . true, every one of them. And business? It'll be big, for sure," the wizened trader continued.

"But I see something else as well. I see changes *inside* the Chinese traders in the delegations. I've heard that corporation personnel will be tested on their knowledge of both the commodity they're handling and current international trade practices prior to the next Fair. Everybody's working hard to avoid relegation!"

Everywhere changes, so many that, while many of the old appearances remained, the veteran Fair-goer felt somehow out of place. Air flights to Canton—a 25-minute hop from Hong Kong—and, at the Fair's end, a hovercraft service from Whampoa down to the British-administered territory (as the euphemism goes), and back. Foreign office machinery at the Fair—Japanese photocopiers (at a most reasonable .08 and .15 RMB for small and large copies, respectively), Italian typewriters—and in the hotels, German tape

punchers. Hot dogs and hamburgers could be found in the Tung Fang's new "coffee shop" and there was even talk of dances for the foreigners at the coming spring Fair. "Will these newcomers ever really know the way things used to be?" wondered one veteran.

US Sales Outstrip Purchases

As for business, for the most part it was up. Sino-US trade at the Canton Fair hit a whopping \$142 million, a cool 80 percent higher than any previous volume at the biannual ritual of the trade. For the first time, US sales, estimated by the National Council to have reached nearly \$82 million, topped purchases, a respectable \$60 million. All this with a corps of 600, mostly professional American businessmen and women, well below the 750 who attended the previous autumn Fair. Approximately 340 US companies were represented at the 44th CECF.

Commenting on the surge in purchases made at the Fair, the CECF's Deputy Secretary General remarked, "We conclude both import and export business at the Canton Fair. In the past, we placed emphasis on exports, but now we recognize that imports are also very important."

Other countries did well, though few matched the US in the magnitude of their growth. Observers in Hong Kong figure that the delegations reached the trade fair targets, estimated at 30 percent growth in exports, 50 percent growth in imports over volumes achieved in the spring. A spokesman for the Japan International Trade Promotion Association revealed that the previous record volume between Japanese and Chinese corporations at a Canton Fair, an estimated \$400 million, was shattered on November 4, a full ten trading days before the Fair's close. A German specialist placed two-way Sino-German trade—excluding the still-to-be-concluded chemical and steel business—at 180–200 million Deutschmarks (\$94–104 million). And, of course, a CECF official revealed to foreign correspondents, on the day of the Fair's closing, that the 44th CECF had indeed been a "record Fair."

New Organization, Incentives Change the Picture

Following trends established at the previous Fair, organizational changes were unveiled and new, more flexible trading practices were adopted. A new FTC, the China National Machinery and Equipment Export Corporation, handling exports of machinery under the control of the First Ministry of Machine Building, made its commercial debut at the fall Fair, signaling closer structural links between producing ministries and the trading arms of the Ministry of Foreign Trade. The Deputy Director of the CCPIT's Publicity Department, the CECF's top spokesman for the droves of foreign correspondents invited to the Fair, stressed that, for the first time, representatives of producer corporations previously in the shadows sat in on and actively participated in business talks with foreign firms.

Commenting on the establishment of 26 export factories and a specialized garment corporation in Shanghai on October 30, the New China News Agency reported: "These 26 factories and special corporation were originally units with comparatively big export volumes whose technical and managerial foundations were strong. To encourage the corporation and the factories to produce more and better quality export products, to meet shipping deadlines and honor contracts, the Shanghai Municipal Textiles Bureau

and the Foreign Trade Bureau have authorized cadres (from these enterprises) to sit together with foreign trade departments, meet foreign merchants, and take part in business talks. In this way, after the foreign trade contract is signed, production can be organized straightaway."

Interprovincial rivalries, manifested in numerous instances of competition between foreign trade bureaus and corporations of Shanghai, Tientsin, Nanking, Talien, Foochow, and Canton, were more visible, and tensions—if not open conflict—between subordinate branches and the head office in Peking became apparent. Most aggressive of all localities was Canton, whose administration took advantage of its playing host to the Fair to aggressively solicit foreign proposals covering a wide range of industrial areas including power supply, hotels and tourist facilities, civil construction, electronics, textiles, and even fisheries, to name but a few. Some of the heaviest competition could be witnessed on CHINATEX's sweaters hall, where six provincial branches literally grabbed foreign merchants, brought them into side rooms and promised them the most attractive terms possible with regard to private labels, designs and specifications, use of accessories, payments, and delivery. Even for products centralized in the head office—e.g., import of medical instruments by SINOCEM—branches could be found looking for foreign suppliers to meet requests from local end-users.

The aggressiveness of local authorities evident at the Fair is the direct result of the reintroduction of incentives in the foreign trade system, both at the individual level, as with the granting of bonuses, wage hikes, and "perks" such as trips abroad, and at the corporate level, by means of allowing locally controlled enterprises to retain larger portions of earnings from foreign sales. The latter development—provincial and county-run enterprises typically retain 15–20 percent of foreign currency earnings at present—had an immediate impact on the trade in agricultural machinery. Just prior to his departure for the Peking Agricultural Machinery Show, a foreign merchant was asked to pick up copies of technical literature on foreign tractors—to assist a Cantonese commune in filling \$20,000 in orders for foreign equipment. Locally held reserves also accounted for the small purchases of tractors, power shovels, and compressors made by MACHIMPEX from US suppliers at the Fair.

As for more "flexibilities," US firms should note the following:

- *Exclusives*: Worldwide exclusives for specially designed articles (ARTCHINA) and sole rights on all products handled by individual branches (CHINATEX);
- *Advertising*: Discounts and commissions to recoup foreign buyers who undertake advertising;
- *Exhibitions*: Rental and sale by commission of expensive handicrafts and works of art (ARTCHINA);
- *Payment*: Sale on consignment with 30- and 60-day credit (ARTCHINA) and greater use of D/P (MINMETALS and SINOCEM); and
- *Market Research*: Faster and more reliable analysis of world market information, resulting in speedier conclusion of business (CEROILS).

The 44th CECF will likely be remembered as the first Canton Fair at which cooperation arrangements were discussed between Chinese corporations and foreign businessmen en masse. At least four "materials processing agreements," in which the Chinese FTC processing materials are supplied by a foreign company on a fee basis, and two

**ESTIMATES OF US BUSINESS CONCLUDED AT RECENT CHINESE EXPORT
COMMODITIES FAIRS BY FTC EXPORTS AND IMPORTS ¹**
(current US\$ million)

Corporation	39th CECF		40th CECF		41st CECF		42nd CECF		43rd CECF		44th CECF	
	Ex.	Im.	Ex.	Im.	Ex.	Im.	Ex.	Im.	Ex.	Im.	Ex.	Im.
ARTCHINA ²									6.2	—	6.7	—
CEROILS	1.8	—	1.5	—	2.0	—	2.1	—	2.0	—	4.8	—
CHINATEX	5.7	—	5.5	10.0	7.0	12.0	15.6	—	9.3	0.8	26.0	.3
CHINATUHSU	6.0	—	14.0	—	15.5	—	15.5	—	13.5	—	8.0	—
EQUIPEX ³											0.25	—
INDUSTRY	4.8	—	6.0	—	6.5	0.6	7.9	1.2	0.5	1.2	0.75	1.5
MACHIMPEX	0.2	—	0.6	—	0.5	1.5	0.5	0.1	0.1	0.1	0.05	.3
MINMETALS	7.5	—	8.5	—	7.3	0.5	6.0	4.6	6.5	14.5	9.1	—
SINOCEM	2.0	0.5	1.5	6.5	1.9	15.0	2.0	12.0	2.5	12.0	3.0	80.0 ⁴
TOTAL	28.0	0.5	37.6	16.5	40.7	29.6	49.6	17.9	40.6	28.6	58.6	82.1

¹ Includes sales and purchases by US firms and their affiliates and agents.

² Active only at the 43rd CECF.

³ Active only at the 44th CECF.

⁴ Chemicals sourced from US.

small-scale compensation trade deals, involving the payback with garments of equipment handed over to China by textiles buyers, were concluded between US merchants and their Chinese counterparts at the month-long session. Larger deals, so-called "contractual joint ventures" involving US capital investment of \$500,000–1,000,000 are confidently expected to be closed over the next two to three months. Before the Fair's conclusion, the FTCs had picked up proposals from US firms for some very large projects, including one calling for the construction of a \$25 million factory on buyback terms. Details of the action are contained in the corporation-by-corporation breakdown which follows.

ARTCHINA: Sale on Consignment

Sales of arts and crafts to US companies rose modestly at the autumn Fair to reach \$6.7 million, up from a revised estimate of \$6.2 million recorded at the previous spring session, in line with the general increase of 10–20 percent in sales to global customers announced at the Fair's conclusion. The Arts and Crafts Corporation (ARTCHINA) invited a record 80 American customers to Canton for business discussions but, as is customary in this line, transactions in excess of \$150,000 were rare indeed. Two ladies from California come and place \$45,000 worth of orders in silk flowers, lacquer ware, and antiques; a buyer from a college town in Michigan signs contracts for \$50,000 of baskets and cloisonné. Such are the deals of which ARTCHINA's export totals are made, with a few notable exceptions.

The most notable exception at the autumn Fair was embroidery. The second-floor exhibition cum negotiation hall was packed with buyers from the opening day music on October 15 to the Fair's dying moments a full month later. Several US purchases in the neighborhood of \$200,000 were recorded, and an exclusive on the popular "appliqué" style drawnwork was granted to an especially good customer. To buyers of drawnwork and embroidery, China's policy of processing materials supplied by the eventual importer is nothing new—customers of Swatow's workshops have been

"buying back" Irish linen for years—but the autumn Fair witnessed much greater use of the scheme, which, by the way, is recognized by a special note in China's import tariff. (The most recent version of the tariff states that low duties of 5–7½ percent are applied to importers of linen "who produce a letter of guarantee stating that they will import only for the purpose of embroidering and will re-export within a given period.") China is known to be considering the import of specially designed sewing machines destined for her cottage embroidery industry, a move which will add fuel to ARTCHINA's mounting export drive in a traditional handicraft enjoying newfound popularity in the US market.

ARTCHINA's Kwangsi Branch is China's largest exporter of clothespins. Saved from certain import quotas by President Carter's October 2 overruling of an International Trade Commission's decision to seek quantitative restrictions on Chinese clothespins, the branch is now seeking to expand its already booming exports of the native handicraft to the US market. A cadre attached to the branch placed Kwangsi's production of clothespins for export at roughly one million gross, of which 600,000 gross are allocated for sale at the autumn Fair. Following Carter's decision, the Kwangsi Branch received a flurry of inquiries from potential US buyers, but few orders were placed in Canton due chiefly to the high price of \$.90 a gross (on top of which the importer pays a Column II duty of \$.20 per gross).

Buyers also expressed concern over Kwangsi's ability to expand production to meet increased demand on world markets. One knowledgeable source reported that the industry in the southern autonomous region has recently been hit by shortages of both labor and raw materials. Although the foreign trade corporation operates a small factory, it depends on private enterprise in the form of individual peasants working during off-hours for the bulk of its export supply. Demands on this work force arising from a campaign to boost agricultural production severely hampered production in early 1978; moreover, steel springs—supplied by the FTC to the individual assemblers—were cut back

when the factory concerned diverted supplies to a project considered to be of higher priority. To solve these problems, Kwangsi is reportedly interested in doing a compensation deal with a foreign supplier of assembly machinery—all assembling in the cottage sector is now done by hand—and stainless steel.

Sales by ARTCHINA's Porcelain Department to US customers amounted to \$500,000—down sharply from the spring figure of \$1.38 million, a corporation source reported. Few of the department's customers made the trek to Canton as most major buyers had concluded their purchases during ARTCHINA's selling mission to the US during August–September. One buyer who bought approximately \$200,000 of tableware reported price hikes of five percent over spring levels, due chiefly to an 18 percent freight rate increase. ARTCHINA spokesmen stressed the corporation's desire to work closely with importers in manufacturing porcelain ware to buyers' specifications, but remarked that present capabilities precluded reproductions of sets exceeding "20 or 30 pieces." ARTCHINA is continuing its efforts to solve the problem of high lead content in tableware.

In a first-ever occurrence, the Swatow Subbranch of ARTCHINA offered an American buyer a worldwide exclusive agency for porcelain miniatures. The port corporation also promised to employ the company's packaging, contingent on the American firm's technical assistance.

Another area affected by ARTCHINA's successful sales delegation to the US was straw, willow, and rattan ware. Few large transactions were recorded, though total sales probably reached \$800,000. Importers reported slight drops in the price of basketware; willowware was generally short in supply, but rattan ware—processed from Indonesian raw materials imported through Hong Kong—was plentiful.

Much of the best business was to be found on the fourth floor in the ivory carvings, silk flowers, and lacquer ware discussion rooms. A Hong Kong newspaper reported that the Peking Branch alone sold more than 700 ivory carvings on opening day; jade and stone carvings were also popular. An American silk flowers importer, pleased with the fine quality of the Chinese handicraft, signed five contracts—including a sample order for 2,000 dozen of one item—on his first visit to discussion rooms, and hinted at very large purchases following a planned visit to Shanghai's producers in 1979. A ranking member of ARTCHINA's General Business Department confided that sales of large lacquer vases were being made to US customers bent on transforming the Chinese products into standing lamps. The popularity of decorative vases provided a much-needed uplift to exports of antique porcelain ware, one of the few items still found in plentiful supply in Canton's antique warehouses.

New practices introduced by ARTCHINA at the just-concluded trade fair included "sale by consignment" and "sale of rented products on a commission basis," to quote one spokesman. Under the latter method, an importer may rent expensive items for display in his showroom and remit the purchase price—minus commission—after a successful sale. ARTCHINA is willing to do compensation trade and process materials for foreign customers—"provided that the goods to be produced are neither indecent nor reactionary." Products to be made under one of the few compensation arrangements signed between ARTCHINA and a Japanese corporation at the Fair fulfill these two conditions: a factory

producing tatami mats will shortly come on stream in Kwangtung Province.

In developing exports of Chinese arts and crafts to the US, an ARTCHINA official opined, problems on both sides must be solved. "On our side, production in the factories is often too slow. Moreover, our policy regarding payments does not yet conform to international practice and should be reformed. Now, our customers are asked to open the L/C two or even three months before shipment, and during the time before shipment he is forced to pay interest to his bank. We should change this, and we should make greater use of D/P."

Additional information on ARTCHINA's internal structure was released by leading members of the corporation during the trade fair. The head office has not yet established an import department, so all purchases related to processing for export are currently being channeled through other FTCs or China Resources in Hong Kong. The Ceramics Export Department located in Canton's CECF complex now monopolizes the sale of pottery and porcelain exported by the Kwangtung, Hunan, Kwangsi, and Kiangsi Branches; other branches continue to deal directly with foreign customers or make sales through the head office in Peking. As for the Jewelry Department, also located on a year-round basis in Canton, all items with the exception of freshwater pearls (handled by Shanghai) have now been centralized in the CECF complex.

CEROILS: Sales Volume Doubles

The value of contracts concluded between the Cereals, Oils, and Foodstuffs Corporation (CEROILS) and US buyers at the fall Fair topped \$4.8 million, more than double the levels recorded at each of the previous five trade fairs when business lay stagnant in the \$1.5-2 million range. Frozen seafood, dried ginger, and tung oil sales provided the impetus to the healthy surge in Sino-US foodstuffs trade recorded at the event, but problems continue to plague the Chinese corporation's efforts to bolster sales of canned goods, a potentially great exchange earner.

After three Fairs without a single notable sale of frozen shrimp to the US, CEROILS' Aquatic Products Department racked up sales of an estimated 130 tons at the autumn event. The early days of the Fair witnessed familiar scenes of price haggling, with US buyers complaining that Chinese C&F quotations were noncompetitive with Mexican and domestic ex-factory offerings and Chinese salesmen replying that US counteroffers were too low, especially when compared to prices Japanese and Hong Kong merchants were willing to pay. By the Fair's second week, however, differences over price had been straightened out; Chinese quotes for the popular Shao An headless (without roe) shrimp ranged from \$13,634 per MT for the largest grade to \$5,526 per MT for the smallest grade, with an average \$6.30 per lb. (C&F) compared to a going \$6.50 ex-factory in the US.

The quantities offered by CEROILS were, however, much smaller than US frozen shrimp customers were prepared to buy, and Chinese offerings often included large portions of less desirable smaller grades. Japanese trading houses, eager to buy any Chinese product in an effort to hold down their burgeoning trade surpluses, once again snapped up the bulk of CEROILS' supplies. A Japanese source revealed that CEROILS notified 22 Japanese buyers that new frozen shrimp prices would become effective on



Galaxy of lanterns in ARTCHINA showroom.

October 20, whereupon 12 of the customers made large "on-the-spot" purchases.

A similar situation prevailed with other seafoods, including jellyfish, carp, and other fishes. One New York buyer managed to secure five tons of jellyfish at the astounding price of \$4.75 a lb.; other customers were unable to buy any quantities at all. Even Hong Kong buyers complained that CEROILS' sales to Japan had left their market short of fresh shrimp, jellyfish, and sepia, but their lot is likely to improve with the just-announced establishment of an Aquatic Products Export Department to operate year-round at the CECF complex in Canton.

Close behind the \$1.5 million volume achieved in frozen seafood came CEROILS' export of more than 200 tons of dried ginger to "seven or eight" customers at a price of 4,000 RMB a ton. (Dried ginger is handled by CEROILS; dehydrated ginger is handled by CHINATUHSU, which was reportedly unable to offer even a single ton of the commodity to the US at the Fair. Reason: competition between FTCs in the countryside, possibly manifested by differing state purchase prices offered to rural producers.)

A corporation source revealed that one of CEROILS' largest transactions with a US company was an end-fair sale of 500 tons of tung oil; the order was placed by cable. Rounding out the corporation's business at the Fair were small sales aimed at replenishing shelves in Chinatown's retail outlets. Transactions in the \$20,000-50,000 range were concluded in rabbit meat, vermicelli, soy sauce—and canned foods.

Shortly before the Fair opened, CEROILS registered three low-acid canned foods exported by its Fukien Branch, bringing to more than 50 the number of low-acid foods for which process forms have been filed with the Food and Drug Administration. Yet, in the words of a trade official attached to the corporation's Canned Foods Department, "Since registration, sales to the US market of these products have shown little growth, and for some items our exports have actually declined." This at a Fair in which the department announced that total exports of canned foods to all countries rose by a very respectable 20 percent over the previous spring Fair's volume.

In a number of meetings between National Council staff and senior members of CEROILS' trade delegation, minor problems which had resulted in the FDA returning process

forms for 14 products were discussed. The corporation promised to convey the National Council's suggestions for speeding up and improving low-acid foodstuffs registration to the exporting branches and their subordinate canneries, and explained that technical problems which had arisen would be solved promptly by the registered factories. Both sides reviewed the reasons for the continued stagnation in the canned foodstuffs trade, the National Council stressing the need to offer a greater variety of can sizes, upgrade canning technology, improve labeling, and reform corporate pricing to enable importers to buy at discounted prices for the purpose of staging special promotional campaigns. CEROILS, for its part, emphasized the high tariff discrimination against its canned foodstuffs, and cited a number of potentially large mushroom deals which fell through because of the corporation's inability to cut its sales price by 50 percent to absorb the \$.10 per lb. plus 45 percent tariff imposed by US Customs.

Nevertheless, CEROILS' personnel reaffirmed the corporation's commitment to pushing ahead with canned foodstuffs registration. One officer stated, "Although we have registered about 50 items, this figure does not meet US market requirements." The decision to register the Fukien Branch's stringless green beans was apparently related to a US buyer's pre-Fair cable of intent to order substantial quantities, a hopeful sign that the corporation is now prepared to register low-acid foodstuffs which *might* be sold rather than restricting registration to products already sold. In this vein, CEROILS revealed that both the Peking and Tientsin canneries were gearing up for exports to the US and were preparing to carry out registration. CEROILS is studying the possibility of sending a market study mission to the US in the first half of 1979; a decision is expected shortly.

The corporation is interested in pursuing opportunities for cooperative production with US firms, but a spokesman cautioned US companies to put forward proposals based on advanced techniques. Too often, he implied, firms from the developed countries view China as a market for unwanted products and technologies they are unable to sell elsewhere. One US firm reported that its proposal to export machinery to upgrade the quality of Chinese citrus products was nearing successful conclusion, but reported that the value of the machinery in the product-buyback deal was not likely to be large. Hong Kong leftwing newspapers revealed that record sales of Shantung vermicelli had been achieved at the Fair

FAIR "BEST EVER" SAYS CHINA HAND

The autumn Fair was "by far the best ever" according to Eugene Theroux, the National Council's vice president from 1973 to 1975. Theroux, a Washington attorney whose visits to China began in 1972 and span 15 Fairs, said he "found every Chinese negotiator with a ready smile and a ready pen, willing to talk—not just listen" about American proposals.

"In 1976 the policies of the Gang of Four tested the patience of my clients to near the breaking point" Theroux said, adding that "the China of today is pragmatic and clearly eager for business."

following the successful conclusion of a "materials processing" agreement.

Development of fisheries is also a priority. An Indonesian overseas Chinese merchant reached agreement with provincial authorities in Kwangtung and Fukien to set up fish ponds on a cooperative basis to supply Japan and other Asian markets. And a senior official in Kwangtung's trade hierarchy contacted the National Council's Hong Kong representative with a request to recommend Hong Kong-based US firms interested in supplying vessels and cold-storage facilities in return for output for both regional and international markets.

Representatives of CEROILS' Market Research Department held numerous meetings with foreign customers, including representatives of US firms. The pre-Fair activities of this department in correctly establishing prices and other terms based on international market conditions were credited by corporation officials as the principal reason behind the speedy conclusion of business talks at the Fair. On November 13, a spokesman announced that approximately 7,000 contracts had been signed between CEROILS and 1,300 buyers from more than 50 countries, resulting in an overall increase in foodstuffs exports of 30 percent over levels reached at the previous spring session.

CHINATEX: Record Sales, Quota Blues

Sales by the Textiles Corporation (CHINATEX) hit new heights at the 44th CECF. A spokesman for the corporation told two American reporters that exports to all customers rose 50 percent and 70 percent, respectively, over levels reached at the spring 1978 and autumn 1977 versions of the event. Sales to US firms exceeded \$25 million, of which approximately \$16 million was accounted for by garments orders. American purchases of cotton greige goods exceeded \$4 million, placed by five major customers.

Buyers were struck by the number of contracts signed in Canton which call for third and even fourth quarter 1979 shipment. Chinese production of popular items—velveteen, corduroy, cotton flannel, and acrylic knitwear—is almost fully booked through the end of 1979, the result of very large deals concluded in August and September (during which a CHINATEX mission visited the US and many big customers traveled to China's major export centers) and at the trade fair.

To encourage sales, CHINATEX kept prices fairly stable for goods destined for the US market. For silk, there were no price increases, but also hardly any availability. Cotton greige goods rose an estimated 10–15 percent, but buyers reported that lack of supply was the principal reason behind their failure to win larger orders. US purchases of cotton-polyester piece goods have always been minimal and were therefore little affected by the 35–40 percent price increase for Hong Kong buyers reported by the PRC-tied press at the Fair's conclusion.

With more autonomy given to CHINATEX's branches, US buyers found that local offices reflected a lack of understanding of the needs of the US market in printed piece goods. US customers were encouraged to buy prints that could not possibly be sold in the US.

An interesting facet of the trade in garments at the autumn Fair was the number of small deals in the \$200,000–300,000 range reported to the National Council representative in the near future. At the Fair, the Chinese

representative. Very few deals in excess of \$1 million were concluded. The hottest item was probably flannel shirts, followed closely by garments made of medium wale corduroy. Old customers arriving at the end of the first week encountered sellouts here, even though many of the firms had placed very considerable business in the past.

Similarly, an established buyer of silk piece goods was told that, in his line at least, the Fair had changed from a place where "old friends" do big business with the corporation to a venue for meeting and getting to know "new friends." To the buyer's request for 50,000 meters of silk cloth, the CHINATEX representative replied, "You must be joking. That's my whole allocation for the US market for the second quarter 1979. I'll sell 3,000 meters here, 5,000 meters there . . . most if not all to new customers." Apparel and greige goods departments, however, have their old and steady customers in terms of quantity and prices.

Business was good in children's garments, but knitware sales dropped an estimated 50 percent from the previous spring level, due chiefly to the high volumes achieved during CHINATEX's summer sales mission. A surprising amount of interest was shown in polyester-cotton shirts (55–45 and 65–35 blends) where the chief value is polyester. Previously virgin territory, the result of exorbitantly high duties, small purchases were reportedly made by US buyers at the 44th CECF.

The first cooperation agreements (also often known as compensation) between US firms and a Chinese corporation were signed between CHINATEX on the one hand and Oxford Industries and Prestige on the other. The agreements were concluded "immediately prior" to and during the trade fair. A source close to the deals reported that Oxford industries would supply "less than \$100,000" of continuous fusing equipment to the Shanghai Branch in return for which the US firm would receive corduroy suitings on a non-exclusive basis, payback to take place within one year.

The deal concluded between Prestige and the Talien Branch of CHINATEX was considerably larger, involving the outfitting of "three or four" factories with German and American steaming and fusing equipment for the manufacture of velveteen suitings. In addition to granting an exclusive on all goods manufactured by the equipment, Talien agreed to Prestige's request that Chinese-speaking technicians be stationed at the plants to assist the Chinese workers in learning how best to employ the machinery, described as "the world's most advanced in this line." As with the Oxford deal, payback is anticipated to be completed within one year of the plants coming on stream.

The conclusion of these agreements—a preface to many more compensation deals in the very near future—enables China to produce garments of a fashion and style hitherto unattainable, while greatly expanding capacity for the branches concerned in two popular cloths. CHINATEX's success in negotiating the first compensation agreements with US firms is the highlight of a general plan to develop the textiles trade as a major exchange earner. Other indications of this intention were the huge purchases of polyester chips (imported by SINOCEM) and synthetic fiber.

While the Fair was in session, an American company was invited to Peking where it concluded a contract with CHINATEX's head office to sell "several million pounds" of polyester staple in 1979, the first of many such deals

delegation specialized in small purchases of specialized yarns.

CHINATEX officials expressed their grievances to US customers over dual obstacles to US-China textile trade in the form of Column II duty rates and now an impending quota arrangement with the US. CHINATEX has stressed to its customers that if quotas were imposed, it would have to take into consideration the total trade picture with the US. This may mean China's turning to other import markets for purchases of cotton and synthetic fibers as well as heavy equipment and plants. CHINATEX understands President Carter's domestic and political problems but feels nevertheless that the imposition of a quota would go against the principles of the Shanghai Communiqué, which state that trade should be based upon equality and mutual benefit. China now buys more textile products from the US than it exports to the US. China's exports of those items presently restricted by quotas is small. CHINATEX officials believe it is possible to have reasonable growth in these areas without undue restraints.

CHINATUHSU: Decline and Fall

The Native Produce and Animal By-Products Corporation (CHINATUHSU) posted the weakest performance among all Chinese trading delegations at the 44th CECF. Invitations to US buyers were cut back (an estimated 200 US buyers attended the spring Fair compared to a mere 120 at the autumn Fair) and business fell sharply. CHINATUHSU exports to the US arising from contracts signed at the Fair will not surpass \$8 million, down from \$13.5 million in sales recorded at the previous event and roughly half of the value of sales made at the autumn 1977 Fair.

A number of reasons can be cited for CHINATUHSU's rapid drop from the front ranks of Chinese exchange earners at the Fair. The corporation has sent or will be sending three sales missions to the US during the second half of 1978—a native produce delegation (August–November) dealing in essential oils, spices, nuts, rosin, turpentine, and bamboo products, a tea delegation (October–December) selling tea, coffee and cocoa, and a carpet delegation (November–December) eager to export floor coverings. A successful Forestal Products Minifair—at which three American importers bought an estimated \$1.5 million worth of firecrackers and assorted pyrotechnics—was held in Peking in mid-July, and three animal by-products minifairs are slated to occur in Chinese cities during January and February 1979. Small wonder that few buyers in these lines bothered to make the long and lonely haul to Canton—and that those who did encountered serious shortages of needed goods.

The decline in CHINATUHSU business at the Fair is not solely attributable to pre- and post-fair activities, however. Serious marketing blunders and an all-too-frequent sloppiness in quality control were largely responsible for the disastrous drop in the once mighty feather and down trade. The corporation announced, through the Hong Kong press, that it was now willing to manufacture fire-works in compliance with foreign safety regulations (a decision reported in *CBR* a full year ago) but remained silent on when steps would be taken to obtain sterilization licenses for down-filled bedding products as well as to register the canning processes for its small line of low acid foodstuffs.

Although members of the Feather and Wool Department claimed that sales of raw feathers and down were made to US customers at the 44th CECF, not a single transaction in this commodity came to the attention of the National Council representative at the Fair. Eight weeks before the Fair's opening, CHINATUHSU dropped prices of feathers and down by 45 percent, only to raise them 7 percent on October 7. The moves mystified animal by-products traders long accustomed to the inscrutabilities of the corporation's pricing policies.

Regarding claims that CHINATUHSU's unilateral revision of down content specifications had adversely affected sales of the commodity—an assertion hotly denied by the corporation at the previous Fair—a senior spokesman remarked: "This is a technical problem which my colleagues in the Feather and Wool Department are doing their best to solve. The leaders of our corporation are paying attention to this question and, in the future, our processing plants will strive to meet our foreign customers' requirements."

An estimated \$500,000 of skiwear was booked by US buyers at the Fair, down sharply from the \$1.5 million level achieved at the 43rd CECF. At least three "old friends" came to Canton armed with claims over quality discrepancies arising from alleged substandard workmanship. To reassure customers of the corporation's commitment to high standards, tours of Canton's feather and down processing plant and garment factory were laid on. The processing plant was termed "the world's most advanced"—a fully-automated enterprise equipped with \$1 million worth of Losch machinery purchased in 1977. The 1000-man garment factory churns out approximately \$10 million in down jackets and sleeping bags per annum, and was working on a 40,000-piece order for sleeping bags when two American buyers made their tour. So impressed were the importers that they placed an estimated \$100,000 in "trial orders."

The sole bright spot for CHINATUHSU at the autumn Fair was business in cashmere and other fine hairs, notably angora. In a significant reversal of policy, China has decided to increase exports of raw cashmere. On October 15, the *People's Daily* editorialized on the need to bolster production and procurement of wool, camel hair, and other animal by-products "to serve as a source of export supply." One buyer was told that CHINATUHSU was trying to open up supply bases for cashmere in Tibet and the remote regions of west China.

Sales of cashmere to US customers topped last Fair's figure of \$1.5 million, aided by marginally bigger allocations and a five percent price hike. US agents placed sizable orders for angora. Japanese merchants also bought large quantities of angora, but firms desirous of purchasing cashmere were politely told to go to Osaka where a CHINATUHSU selling mission was carrying on business.

Rounding out the business in animal by-products, small deals in carpets and fur products were recorded. Typical was the experience of one specialized buyer who, arriving in Canton after a very successful swing through major production centers, placed token orders at the Fair. Orders placed by non-US customers were large and included a purchase of 10,000 square meters of carpets made by a Hong Kong distributor during the Fair's first week. Carpet prices rose four percent and prices for fur products drifted upwards by 2–10 percent. A furrier based in New York com-

**CHINA NATIONAL MACHINERY AND
EQUIPMENT EXPORT CORPORATION
(Head Office)**

Managing Director: Chia Ching-lin

Director, Export Department Number one: Hsao Kang

—"Comprehensive Department" handling large transactions.

Director, Export Department Number Two: Miao Chueh-min

—Exports of machine tools, forging and pressing equipment, woodworking machinery, measuring and cutting tools.

Director, Export Department Number Three: Yang Hsu-wen

—Exports of electric motors, electric wires and cables, electric devices and facilities, various instruments and meters.

Director, Export Department Number Four: Chao Ying

—Exports of heavy-duty machinery, mining machinery, machinery for petroleum and chemical industries, general-utility machinery, agricultural machinery, power generating machinery, diesel and petrol electric generating sets, automobiles, bearings, hoisting and transport equipment, building machinery, machinery for printing industry, rubber-making machinery, plastics-making machinery.

Director, Export Department Number Five: Tu Tsao-hsiang

—Exports of complete industrial equipment.

plained that supplies of some items had been cut by as much as 50 percent since spring, possibly in anticipation of the upcoming Fur Products Minifair in Peking.

Few fireworks customers attended the Fair, and a corporation spokesman estimated total business in this line at "about the same as at the spring Fair," e.g., \$200,000. Prices of bamboo ware dropped, but not enough to stiffen flagging demand. Spices were generally unavailable, as were chilis, ginger, and peppers. Small deals in dehydrated fruits and vegetables took place; prices were up 6-10 percent. Honey was purchased in small quantities, but high prices quoted for licorice were prohibitive. Rosin and essential oils witnessed little activity. There were few takers for the small quantities of cashew nut oil offered at \$1,350 a ton.

More than 20 US importers made inquiries to purchase Chinese native medicines. Business in ginseng and other cures set new records; total turnover was reliably placed at \$180,000-200,000.

Trading in tea, coffee, and tobacco showed little change from the previous session. Black tea, at an average price of \$1.05-1.10 a kg., was purchased in 50-100 ton lots, but transactions for larger quantities were rare indeed. At least one sizable coffee purchase was made at \$3,000 a metric ton, pushing total CHINATUHSU coffee exports to the US to a new high of just under \$500,000. Informed sources related that the coffee is to be shipped from West Africa to Whampoa, where it will be rebagged for export to the US. CHINATUHSU's Kwangtung Tea Branch is thought to be

interested in finding an American partner for a compensation venture to manufacture instant coffee. With current availabilities of green coffee, the branch figures it could pay off the \$3 million capital investment with output (at current prices) discounted 10 percent over a two-year period.

Highlighting a shift towards greater autonomy for branches and sub-branches, CHINATUHSU's head office requested that market reports and other information be sent directly to the provincial corporations. Many of the branches will henceforth handle business with US customers independent of the head office, and may begin sending their own selling missions to the US in 1979. Customers just beginning trade with the corporation, however, are asked to direct their preliminary inquiries to the head office.

EQUIPEX-MACHIMPEX: Trading Debut, Sales At Last

China's newest foreign trade corporation, the China National Machinery and Equipment Export Corporation (EQUIPEX) made its trading debut at the 44th CECF and, if accounts in Hong Kong's Chinese-language press are to be believed, the corporation got off to a roaring start. Exports of machinery handled by the new corporation—previously handled by the Machinery Corporation (MACHIMPEX)—rose a full 100 percent over the value of sales made at the previous Fair. Six "regular customers" placed orders for a total of 8,000 sets of equipment. Growth in machine tool business was particularly impressive, with sales rising a phenomenal 200 percent. Exports of vehicle spare parts went up 30 percent to reach \$950,000; sales were reportedly made to Southeast Asia, Iran, Iraq, Syria, Australia, New Zealand, France, West Germany, the UK—and the US.

EQUIPEX business with its handful of US customers was quite small, probably in the \$300,000 to \$350,000 range. One of the corporation's biggest customers from the US was invited to the Fair as a jumping-off point to a long inspection tour of Chinese machine tool factories in Wuhan, Chungking, Shanghai, Peking, Shenyang, and finally far-off Chichihar. The American company has been buying modest numbers of machine tools at recent Fairs, but its volume has been held down by the need to modify the electrical system and calibration of the machines upon their arrival in the US.

To overcome such difficulties, EQUIPEX is aggressively soliciting compensation deals in which the US company supplies designs, gearboxes, electrical systems, and other components, and accepts payment in finished machines. In a series of meetings between the delegation's Secretary General and the National Council's representatives, the leading member stated that EQUIPEX was anxious to receive proposals to carry out compensation trade in advanced machine tools (especially digital control), vehicles, and agricultural machinery.

"There are two ways of cooperating in joint production," the official pointed out. "Under the first method, we import parts, assemble them in China and export the finished product to the US. For digital-control machine tools, we are willing to receive the digital-control systems, manufacture the mechanical parts ourselves, assemble and export. Under the second method, we purchase electrical parts from the US firm on an L/C basis, use one part of the electrical parts domestically and outfit our machine tools with the

remainder. The US firm could then import our finished products."

To assist National Council members interested in exploring compensation opportunities with EQUIPEX, the corporation provided the Council's trade fair representatives with information on the structure of the Peking head office (see box). Interested firms should contact the export department concerned, care of its director, who will in turn liaise with the First Ministry of Machine Building and provincially controlled factories through EQUIPEX's network of branches throughout China.

EQUIPEX is a specialized export corporation expected to develop overseas markets for machinery produced by factories under the control of the First Ministry of Machine Building. Its establishment heralds the creation of a great number of specialized foreign trade corporations each handling business on behalf of an individual ministry, informed sources in China's Ministry of Foreign Trade relate.

Although EQUIPEX now exports the bulk of China's salable machinery, MACHIMPEX officials were quick to point out that their corporation still retains control over ship exports. Two 17,500-ton cargo carriers were ordered at the Fair by the Hong Kong Navigation Company, and a Hong Kong-based British company reportedly showed an interest in ordering two 22,000-ton multi-purpose vessels. MACHIMPEX sold hand tools to US buyers.

Both EQUIPEX and MACHIMPEX now state that they are "willing to accept orders outside of the factories' production plans." Other flexible techniques introduced at the Fair include the inclusion of contract clauses allowing the buyer to change specifications on three-months' notice and the extension of the order period from six months to a full year. A spokesman for EQUIPEX revealed that, as far as his corporation is concerned, a foreign company's sharing of profits (through royalties) on sales in the domestic market of products manufactured under compensation agreements "can certainly be discussed."

After a prolonged drought of several years during which few if any machinery sales were made by US suppliers, small sales of American machinery were made at the 44th CECF. Business was dominated by the Japanese—who sold 500 trucks and cars but were deterred from other deals by MACHIMPEX's insistence on a 40 percent discount to offset the stronger yen, and the Scandinavians—who sold ball bearings, but US firms were able to sell small numbers of electrical testing devices and single units of agricultural machinery, compressors, and construction equipment. The value of American sales at the Fair totalled a mere \$250,000, nearly all of which was financed by locally controlled enterprises with their own foreign exchange holdings.

INDUSTRY: Planning to Exhibit

With the exception of the two machinery corporations, the Light Industrial Products Corporation (INDUSTRY) sells less to US buyers than any other FTC. A very reliable source placed total sales at the autumn CECF at \$750,000—termed a record. (The National Council's previous Fair estimate of INDUSTRY business was on the high side due to the inclusion of sales totals for products—notably clothespins—then thought to be within the export responsibilities of the corporation.) On the other hand, exciting prospects exist for sales by US firms to INDUSTRY in such lines as paper and pulp, cinematographic and photographic sup-

plies, sewing machines, cigarette accessories, and even consumer goods. INDUSTRY purchases at the 44th CECF are estimated to have topped \$1.5 million, second only to SINOCHEN in the value of Chinese imports concluded with the US at the Fair.

In a wide-ranging interview of members of INDUSTRY's Import Department, the National Council was told that the corporation "wishes to do business with the United States. Please tell your members that we currently have demand for DSP, UKP, and BKP pulp. Our corporation also buys cameras, tape recorders, TVs, radios, film, sewing machines, and some light industrial products like PVC and polyethylene used in the manufacture of consumer goods."

The largest US-sourced sale to the corporation was a 3,200-ton transaction in pulp sourced through a Japanese agent. Cigarette accessories like cellulose and acetate rods for filters—last Fair's hot item—were bought in minuscule quantities, reportedly due to the exertions of Japanese and Scandinavian salesmen in Peking during September. Specialized industrial sewing machines saw good action, with sales by at least two firms amounting to a total in excess of \$200,000.

Sales of audiovisual equipment—including tape recorders and projectors—have been taking place through Filmco, a Hong Kong-based firm which recently staged a series of exhibitions in Chinese cities and followed up the showings with sales of more than \$10 million worth of audiovisual equipment, much of it American. A source close to the Canton authorities revealed that the city is studying the possibility of erecting a large educational and technical center equipped with as much as \$3 million worth of equipment.

With the exception of film products, a spokesman for the department remarked, "No US firms have tried to introduce such products as TVs, radios, and watches to China." Wondering if the current consumer goods purchasing program—covering Japanese TVs, synthetic fiber piece goods, and Swiss watches, all in abundance in Canton's shops—would soon be expanded to cover other products like cameras, the cadre replied: "We only purchase cameras for specialty purposes, such as for use by the NCNA and film studios. But we are seriously considering buying greater supplies of film and photographic laboratory equipment."

One reason for the dearth of US consumer goods sales is China's high Column II tariffs against American products. Since the purchasing ministry, in this case the Ministry of Commerce which in turn distributes the product through department stores and other outlets throughout the country, must pay an import tariff on consumer goods, appliances from EEC countries and now Japan enjoy preference over US-sourced products.

On the selling side, INDUSTRY's \$750,000 export total was made up largely of deals involving leather and canvas shoes. A PRC-backed daily in Hong Kong was told that shoes are receiving priority attention in the corporation's present export drive, and this was especially true with regard to US business. Senior members of the delegation in Canton revealed that INDUSTRY is now awaiting the State Council's permission before going ahead with preparations to participate in the New York Shoe Fair to be held in February 1979. In the words of one trade official, "We are preparing to send a delegation. We are going to carry out market investigations, to look and learn. We will send

WHAT CHINA WANTS TO BUY

At the 44th CECF and elsewhere, officials from various FTCs have made direct statements about products and technology which they are interested in purchasing from the US. A list of these desired goods follows.

Product and/or Technology	Interested Corporation
Boring machines, milling machines, lathes (particularly universal lathes), numerically controlled grinding machines, shapers, material for sealing oil leaks, gear hobbing machines, steel beams, etc., for hydraulics.	Canton Machine Tool Research Institute
Vessels and cold storage facilities (cooperative arrangements which would return output for regional and international markets).	CEROILS
Gearboxes, electrical components and other components, advanced digital control machine tools, vehicles, and other machinery (cooperative arrangements).	EQUIPEX
Radio components, electronic vacuum tubes (components), crystal tubes, integrated circuits, radios (cooperative arrangements).	MACHIMPEX
DSP, UKP, and BKP pulp; cameras, tape-recorders, television, watches, radios, film, sewing machines, and some light industrial products used in consumer goods manufacture; film, photographic laboratory equipment.	INDUSTRY
Herbicides for soybeans, cotton, and rice; microsurgical instruments, ultrasonic diagnostic instruments, large X-ray devices, computer tomograph scanners. Erection and complete outfitting of "several" 1,000-bed hospitals.	SINOCHEM

our shoes for exhibit. We will do business and accept orders."

If the State Council gives the go-ahead, INDUSTRY's participation in the Fair would mark the first time for a Chinese trade delegation to attend and do business at a US national show. However, there has been no change in the status of the frozen assets and claims issue, which allows a US claimant to attach the shoes as payment for his lost assets. It is highly unlikely that anyone would make such an attempt.

Another sign of the corporation's determination to push sales of footwear is its decision to shoot for an early conclusion of a compensation deal with a US firm, possibly by the end of the year. If concluded, the buyback arrangement would be the largest Sino-US contractual joint venture to date, involving, in the words of a possible machinery supplier, "upwards of \$500,000 worth of equipment."

Of all the delegations present at the Fair, INDUSTRY showed by far the greatest flexibility in the application of "internationally accepted trading techniques." Regarding the length of time covered by a compensation deal—during which the foreign supplier would receive exclusive rights over the output of his machinery—a senior spokesman revealed that the corporation had recently concluded a toy deal with DCM Toys of the UK with buyback for a period of ten years, and was willing to consider even longer spans—up to 20 years, according to one corporation source.

On advertising, an official remarked, "We haven't done much advertising to date. Our products' quality, style, and workmanship is not quite suitable and, anyway, our inventories aren't large. But we will definitely consider granting discounts to our customers and agents who carry out advertising, and we have already offered commissions to some buyers which include the charges paid on promotional activities."

Aside from shoes, small sales were recorded in such areas as stationery and musical instruments. The corporation informed the National Council of its exclusive agents in the US, but noted that no new exclusives were granted to any of the 21 American firms invited by INDUSTRY to the Fair.

MINMETALS: Rare Metals Offered

At the conclusion of trading on November 15, the Metals and Minerals Corporation (MINMETALS) announced that the delegation had signed sales contracts worth a full 50 percent more than the value of export agreements concluded at the spring Fair. US purchases of metals and minerals were placed at \$9.1 million by a ranking member of the delegation, up 40 percent from the \$6.5 million figure recorded at the 43rd CECF, but, unlike the previous session, no US sales were made at the autumn Fair.

MINMETALS' export performance with US firms was the best since the heady Fairs of 1974 and 1975, when sales of tin moved that commodity into the top ranks of Chinese exports to the US. Very little tin was available at the 44th CECF, and what little there was went to satisfying old customers with manufacturing requirements. Thus, an American firm with a factory in Hong Kong managed to procure 20-30 tons of 99.95 percent purity metal at a price of roughly \$14,000 a ton, but very few if any of the metals traders did business.

The reason for the lack of supplies for tin exports re-

portedly lies in the coming on stream of the tin-plating lines at the massive Wuhan Steel Works. As a result of domestic producers in Yunnan and Kwangsi diverting production to meet Wuhan's needs, MINMETALS' export plan for 1979—approved four or five days after the autumn Fair's opening—calls for very low volumes of tin sales in the coming year.

Similarly, domestic requirements largely preempted sales of zinc at the Fair. One trader reported that MINMETALS had revised its pricing formula—based on LMB rates plus a premium—but this was denied by the corporation. Another buyer reported sky-high prices; he walked away from small offers and will now look to other countries to fill his zinc needs. On the other hand, a small amount of business was reported in tungsten between American end-users and MINMETALS. Prices were reasonable enough to overcome high US tariffs, but most traders who purchased the metal did so for markets other than the US.

Business was best in minerals. Barite and graphite emerged as the corporation's top exchange earners with combined sales in excess of \$4.5 million. The other popular commodity offered in sufficient quantities at the Fair was antimony trioxide at \$1.22 a lb. Business well in excess of \$1.5 million was concluded.

During MINMETALS' sales mission to the US in late summer, a senior cadre disclosed, it was discovered that there was demand among several customers for molybdenum, an important metal in the production of ferroalloys. Upon the mission's return to Peking, the production departments were contacted to determine if any quantities—molybdenum was last exported in 1965—could be freed for export. The response was positive, and molybdenum was offered at the autumn CECF, attracting considerable interest among traders.

Other rare metals offered were titanium and niobium, though in very small quantities. Of MINMETALS' 40 new products offered at the Fair, "about 10 were exportable"—to quote the Chinese press—and most of these were in the strategically important high-priority rare metals.

Very little business was recorded in hardware, a result of this department's strong representation on the July–August sales mission. Members of the hardware department of MINMETALS' trade fair delegation were reduced to releasing nuggets of information like "Nails and fasteners are centralized in the head office but all other products are handled by the branches." One source stated that two big US customers were soon to enter negotiations in Peking for large orders and, possibly, exclusives. MINMETALS is looking for a firm to act as its sole agent for wire nails on the West Coast to compliment its existing agency on the East Coast and Gulf.

MINMETALS invited 56 US companies to the trade fair—compared to about 40 last spring—but few came armed with proposals to discuss compensation trade. Moreover, MINMETALS adopted a rather standoffish attitude to the question of buyback deals, preferring to concentrate on attracting overseas Chinese capital participation.

In the short term, the strategy seems to be working, as several very large cooperation agreements have been signed or are about to be signed with Hong Kong capitalists sympathetic to the PRC. Oriental-Cosmo (see *CBR* 4:6) is reliably reported to have swung a very large deal involving the erection of a microcrew factory capable of producing

"several hundred million" screws a year. Magnate Henry Fok has already sunk an estimated \$2.4 million into the upgrading of a quarry just over the border in Pao On County and, at the time of this writing, is expected to put big quantities of extracting equipment into the development of an aggregate site close to Macao. It is likely that US machinery companies will be called upon to assist in these and other projects in the future.

SINOCHEM: Bonanza in Chemicals

Purchases of US-sourced chemicals, rubber products, and medical instruments by the Chemicals Corporation (SINOCHEM) reached "about \$80 million" at the autumn Fair, a senior member of the trading delegation revealed on November 15. No fewer than 15 American chemical companies reported major sales; five firms claimed that their total transactions at the Fair were in the \$8–12 million range. One firm, which concluded \$7–8 million in sales, signed more than 35 contracts. According to a SINOCHEM source, "a sizable portion of the US-sourced chemicals was sold by European firms with US-based factories," a significant reversal of the previous trend which saw the bulk of sales made by US firms being sourced offshore, particularly from European plants. A UK-owned firm termed its US-sourced business "fantastic." The company did roughly \$3 million worth of business outside of the US "in every conceivable product area we handle." The trader continued: "This Fair we encountered absolutely no problems in sourcing materials from the US, whereas at the last Fair we noted some resistance." Nevertheless, several of the American companies signed big contracts calling for shipment from their non-US facilities in Australia, Japan, and Europe.

SINOCHEM purchases ranged widely across the whole field of industrial and agricultural chemicals, but activity was heaviest in hydrocarbons, chrome chemicals, plastics, industrial intermediates, petrochemicals (mostly additives for the petroleum industry), rubber chemicals, and agricultural chemicals (including both fertilizers and pesticides). Biggest transactions in a single commodity were several multi-million dollar purchases of polyester chips which go into the manufacture of polyester fiber; a corporation source placed SINOCHEM imports of polyester chips from US firms at the 44th CECF "in excess of 20,000 MT at \$800 per MT."

Strong inventories, aggressive marketing, and a weak US dollar lay at the root of the strong performance registered by American chemical companies at the Fair. Several large multinationals stationed personnel at the Fair for nearly the entire four-week session, but it wasn't until the middle of the Fair's third week that the "wave" broke and SINOCHEM traders began producing contracts. On November 5, one experienced trader visited the National Council office and bemoaned the fact that, up till that point, business had been slow—"lots of haggling over prices and terms." The next afternoon the trader returned clutching a bundle of purchase contracts which SINOCHEM had asked him to type . . . contracts with a total value well in excess of \$2 million.

Heavy buying of agricultural chemicals in the Fair's closing days came as a pleasant surprise to several traders who had been told that this business would be concluded in Peking. Chinese interest in herbicides remains strong.

In a session between Tom Plato of Diamond Shamrock Corp., the newly-elected head of the National Council's Plant Protection Subcommittee, and the leader of SINO-CHEM's Import Department at the Fair, the Chinese official stated: "We have experimented with US agricultural chemicals and have determined that they are useful in increasing output. We realize that American herbicides in particular can save much labor, and we intend to buy more and apply them to the vast lands of the Northeast and Northwest. Our purchases in the first half of 1978 were all made for state farms north of the Yangtze River, but we do not rule out future purchases of pesticides for application on crops prevalent in the South. We will gradually increase the tonnage of herbicides currently being applied to such crops as soybeans and cotton, and we are investigating the import of herbicides to eliminate water grasses which plague our rice crops."

Sales of US medical equipment to SINO-CHEM topped \$800,000, well up on the \$250,000 worth of assorted instruments and machinery sold at the spring Fair. The official charged with heading the Medical Instruments Import Section acknowledged that her group intended to greatly increase its purchases from the US, and pointed to opportunities for transactions in microsurgical instruments, ultrasonic diagnostic instruments, large X-ray devices and computer tomograph scanners, highly sophisticated devices with expensive price tags.

Although growing, SINO-CHEM's import of medical equipment from US suppliers is dwarfed by the corporation's purchases of Japanese equipment, the official commented, for three reasons:

- US companies supply too few copies—"sometimes only one or two"—of brochures and other reference materials to SINO-CHEM for transmittal to end-users. "Introducing medical instruments to end-users is very different from introducing specialized chemical products where there are only a few end-users. There are hundreds of city hospitals and many thousands of rural hospitals in China, not to mention research institutes, the Medical Academy, etc. We must have sufficient materials to adequately introduce American products."
- US pricing policies detract from the competitiveness of American products. The period covered by the offer is too short, often covering only one or two months. Moreover, US companies "seem to have a policy of increasing their prices every six months. The Japanese give a price which remains stable for a full year."
- Backup services on American medical equipment was termed "quite poor." As China buys more and more advanced equipment, the end-users will have to be convinced that the supplier is committed to providing the fullest possible range of technical training and maintenance services.

Down the hall from the Medical Instruments Section, US firms were making sales of pharmaceuticals, both raw and finished products. One American company was asked to put on a technical seminar, on very short notice, before an audience of local personnel in the medical and health field. Three or four hundred Chinese reportedly turned up for the session.

Demand for both medical instruments and pharmaceuticals will grow sharply with the construction of "several" 1,000-bed hospitals planned for major urban centers in

the near future. A decision to go ahead with the ambitious project has already been made by the Ministry of Health, a SINO-CHEM source revealed, and the corporation is interested in contacting American firms interested in participating in the erection and complete outfitting of the hospitals "on terms similar to those employed on complete plant transactions."

One of the few weak spots in US chemical sales was dyestuffs. While Japanese and European suppliers racked up very large sales, representatives of US firms had to be content with small Chinese orders. Industry sources cited high US prices as the principal reason for the dearth of sales. One US supplier offered an intermediate dyestuff at \$750 a metric ton—SINO-CHEM purchased Japanese material at \$570 a ton.

Chinese exports of chemicals to the US registered solid gains at the 44th CECF, hitting approximately \$3 million. (Memoranda of intent to purchase goods for 1979 were also signed, and if the value of these agreements were to be included, the value of SINO-CHEM sales would reach nearly \$8 million.) The leader of SINO-CHEM's Export Department named furfural, barium carbonate, and stannum carbonate as the corporation's top exchange earners. The price of barium carbonate was adjusted downward by a significant margin, enabling one company to secure very sizable quantities of "several hundred tons" as well as an exclusive agency on the product. A transaction in synthetic cryolite, also bound for the US, was termed "sizable." Small deals were registered in barium nitrate and sodium fluorsilicate. A buyer for the National Institute of Health's Cancer Research Program managed to buy five grams of homoharringtonine, an anti-cancer drug used for treating leukemia.

Few sales were recorded in other medical products, however; the result of high tariffs on the US side and a continued reluctance on the part of China to test according to USP standards or, alternatively, provide more detailed specifications on Chinese pharmaceuticals. The leader of SINO-CHEM's Export Department revealed that the corporation had planned to send a market research delegation to the US in 1978, but canceled the mission "because we felt that the chances of its success in selling more products were too slim." Overall SINO-CHEM sales to all customers rose "10-30 percent," according to press reports; 30 new products were offered for export.

Responding to an American company's proposal to erect a large chemical plant in China and accept payment for equipment and technology in output, a senior member of SINO-CHEM's delegation stated: "We have been instructed by the trade fair authorities to discuss this type of business, and we have been bombarded with many proposals from foreign companies at this Fair. But the authorities haven't spelled out along what lines this business can be done, so we can only accept the proposals and pass them on to production departments. The central government should set up a separate organization to coordinate compensation trade and lay down guidelines."

Although American proposals made some headway at the Fair, the only deals concluded between SINO-CHEM and outsiders involved overseas Chinese capital. At least three major deals—involving the setting up of factories to produce plastic tiles, PVC tubing, and patent medicines—were concluded during the 44th CECF.

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Exporter's Notes

Briefly:

- **China's ministries are getting into the act: Will the FTCs last?**
- **Rep. AuCoin resubmits ExImBank bill to extend government-backed financing to China; meanwhile, bankers explore commercial lending prospects in PRC.**
- **Promises, promises: China tells US agricultural chief, congressional leaders, that US will become favored grain supplier.**
- **The lid is off: US-China trade explodes with huge hotel, mining deals, a Ford truck sale, and a Boeing plane contract.**
- **Links between US and Chinese official agencies blossom unofficially: Bergland and Schlesinger bring back programs for technical cooperation in China's agriculture, energy, but US government is still unable to sign formal pacts with PRC.**
- **US agricultural machinery applauded in Chinese press.**

GENERAL

The keynote is euphoria—among the Chinese FTCs and end-user corporations and the foreign companies which are choking the hotels and Erh Li Kou conference rooms. Nine floors with meeting rooms which were opened up this summer at Erh Li Kou, the nerve center of China's foreign trade, are already inadequate to handle the rush.

Technical seminars given by US companies alone have almost trebled. Between September and December, US companies presented 38 technical seminars compared to 32 in the first nine months of the year, according to an official of the China Council for the Promotion of International Trade.

The latest hot rumor around Peking is that the glamorous new trade center which the Japanese think they are building for themselves will be China's new World Trade Center. Foreign companies and FTCs will get a share as well as the Japanese. Reports from Peking indicate that the FTCs are already preparing for the big move to

new office space, possibly in 1979.

Foreign companies, including US companies, have been told that they can open up offices in Peking "today," space permitting. But space remains a big if in a Peking where businessmen are rushing to get contracts signed before Christmas.

Behind the scenes, changes are going on of a deep and as yet ambiguous character. The industrial ministries are getting more deeply involved with foreign trade, and may gradually edge the FTCs out of the game. TECHIMPORT and MACHIMPEX officials have hinted that their role in the future may be reduced to rubber-stamping contracts signed and negotiated by the industrial organizations—ministries, domestic corporations, factories, and even municipalities.

The industrial ministries are now actively engaged in selecting and overseeing installation of foreign equipment, as vendors from Tokyo to Copenhagen will attest. Masterminding the switchover is probably the State Capital Construction Commission, the agency directly responsible for supervising capital investment for the 10-year plan from 1976 to 1985.

By 1985, the State Capital Construction Commission may be coordinating an import trade worth over \$50 billion annually, based on a 25 percent growth rate. As of mid-November, contracts signed or under negotiation for import over the eight-year period between now and the end of the plan were already nearing that figure.

With the rise in power of the ministries, the monolithic FTCs may drop out of sight or take on different roles. China's newest foreign trading corporation, EQUIPEX, is described as having dual responsibilities to the Ministry of Foreign Trade and the First Ministry of Machine Building. Other FTCs may follow in its path, becoming sales agents of the ministries and domestic corporations rather than separate entities.

The times are changing. And businessmen are watching nervously for straws in the wind that will tell them what the final result will be.

EXIMBANK BILL TO BE SUBMITTED AGAIN, BUT WILL IT BE IN TIME?

Congressman Les AuCoin (D-Oregon) is ready to submit his bill to extend ExImBank credits to China a sec-

ond time, although it was voted down in the last session of Congress.

Reports legislative aide Gary Conkling, "The bill suffered last year because there wasn't a great deal of understanding about the issues. We've been through the hoop once now. More members are aware of a greater demand from the PRC for credit financing, and it makes it easier to tell them the story."

The China amendment to the ExImBank bill was voted down 179-138 by the House in full session on June 2, 1978. The revised amendment, which will be simpler than HR 8196, its predecessor, according to the AuCoin staff, will be submitted at the beginning of next year. "We're going to explore ways to make the bill simpler and remove the parliamentary obstacles to its passage," says Conkling.

And not a moment too soon. Financing is becoming more urgently needed in three areas in which US companies have signed or hope to sign major contracts: petroleum exploration and development, iron ore and copper mining, and hotel development. In these three areas alone, actual and potential business exists in the range of \$19-25 billion worth.

Without government-guaranteed credits, US banks are virtually excluded from fixed rate financing on terms longer than five years. A US bank seeking to undertake fixed-rate financing for a plant export worth \$50 million, for example, would normally be able to do so only by shifting losses resulting from fluctuations in the commercial lending rates onto the exporting company.

For financing above \$50 million, US banks would have to form syndications of which the outer possible limit for credit expansion would be \$250 million.

US companies seeking fixed rate financing for exports to China may have to go overseas to get it, according to at least one major US bank. If the financing comes from abroad, based on government guarantees to the correspondent banks, then the equipment will have to be sourced outside of the US as well.

Meanwhile, US bankers are flocking to China as though they expected an early resolution not only to the problem of interest rates but to other barriers to full-fledged banking relations with China as well.

TRADE-RELATED DELEGATIONS FROM CHINA

Date	Purpose (Number of Delegates)	Chinese Sponsor	US Primary Host
October 4–December 31, 1978	Coal industry technical survey group (8)	China Coal Industry Technical Equipment Corporation	Hughes Tool
October 18–November 18, 1978	Power shovel trainees group (10)	Tah Sing Copper Mine	Harnischfeger
October 24–mid-November, 1978	Synchronized radioactive accelerator group (4)	China University of Science and Technology	Stanford Linear Accelerator
October 27–mid-November, 1978	Packaging group (8)	CHINAPACK	Packaging Machinery Manufacturers Institute
October 27–December 20, 1978	Mississippi River delegation (16)	China Society of Civil Engineering	American Society of Civil Engineers, Dravo Corporation, East Asiatic Co.
October 28–November 11, 1978	Gene cell and behavior group (2)	Fudan University, Shanghai Institute of Plant Physiology	California Institute of Technology
October 28–mid-November, 1978	Motion picture technology delegation (5)	China Central Broadcasting Administration	Society of Motion Picture and TV Engineers
October 29–November 17, 1978	Meteorological group (5)		National Oceanic and Atmospheric Administration
October 29–December 10, 1978	Tea selling delegation (4)	CHINATUHSU	NCUSCT
November 1–November 7, 1978	Motor performance technical study group (15)	TECHIMPORT	B & F Sales Corporation
November 1–November 22, 1978	Aromatic hydrocarbon equipment installation training group (10)	TECHIMPORT	UOP
November 6–early December, 1978	Catalyst C-41 training group (4)	TECHIMPORT	Standard Oil of Ohio
November 11–December 11, 1978	Ethylene design liaison group (14)	TECHIMPORT	Stone and Webster
November 13–December 1, 1978	Delegation to Conference of Magnetism and Magnetic Materials (5)	Academic sector	IBM
November 15–December 5, 1978	Sensitive magnetic tape study group (12)	Ministry of Chemical Industry	Du Pont
November 19–December 20, 1978	Carpet selling delegation (5)	CHINATUHSU	NCUSCT
November 23, 1978–January 23, 1979	Geophysical survey group (3)	Geophysics Institute CAS	University of Southern California
November 23, 1978–January 5, 1979	Computerized well-testing technology trainees (17)	TECHIMPORT	Dresser Industries
November 25, 1978–January 4, 1979	Oilfield oil and gas collecting survey group (8)	TECHIMPORT	Union Oil
November 26–December 26, 1978	Diesel engineering manufacturing technical study group	China Petroleum and Natural Gas Exploration and Development Corporation	Caterpillar Tractor
November 27–December 20, 1978	Communications satellite purchase mission (15)	China Space Technology Research Institute	NASA
November 30, 1978–April 30, 1979	Seismic prospecting trainees group (6)	MACHIMPEX	Mertz Iron & Machine Works, Inc.
December 8, 1978–April, 1979	Seismic prospecting trainees (5)	China Geological Prospecting Corporation	Mertz Iron & Machine Works, Inc.

TRADE-RELATED DELEGATIONS FROM CHINA (Cont.)

Date	Purpose (Number of Delegates)	Chinese Sponsor	US Primary Host
December 9-29, 1978	Commercialization of solar energy (3)	Shanghai Institute of Machinery, Tsinghua University, Tientsin University	University of Miami
December 12-26, 1978	Octyl-alcohol design group (6)	TECHIMPORT	Union Carbide
December 1978	Uranium mining delegation	MACHIMPEX	Fluor Corporation
January 1979	Pressed wood technical study group	TECHIMPORT	NCUSCT
January 1979	Nuclear particle accelerator technical study mission (9)	Tsinghua University	High Voltage Engineering Corporation
March 1979	Nonferrous metals delegation	China Society of Metals	NCUSCT
March-April, 1979	Nuclear power generating technology	China Nuclear Society	American Nuclear Society
1979	Coal chemistry and coal technology	Ministry of Metallurgy	Department of Energy
1979	Hydroelectric technologies	Ministry of Power and Water Conservancy	Department of Energy
1979	Plant germ plasm research (5-7)	Chinese Society of Agronomy	USDA, Office of Science and Education Administration
1979	Biological pest control (5-7)	Chinese Society of Agronomy	USDA, Office of Science and Education Administration
1979	Animal health and animal production (5-7)	Chinese Society of Agronomy	USDA, Office of Science and Education Administration
late 1979	Education in agriculture	Chinese Society of Agronomy	USDA, Office of Science and Education Administration
1979	Social sciences; pure and applied mathematics; remote sensing; unconventional energy sources	China Association of Science and Technology (STAPRC)	National Academy of Sciences

Major Banks to China

By the end of December, top-level teams will have gone from Chase Manhattan Bank, Citibank, Manufacturers Hanover Trust, the Bank of America, United California Bank, and Merrill Lynch and Co., the investment bankers. Their discussions will involve the possibility of medium- and long-term syndicated loans and investment loans; Chase Manhattan President Willard Butcher announced publicly in mid-November that "there are many ways to finance [China's development] without a resolution of the frozen-assets question."

The importance attached by the Chinese to discussions with US banks was underlined by the meeting of Merrill Lynch Chairman Donald T. Regan

with Chinese Vice Premier Li Hsien-nien in mid-November. Not only was the meeting publicized in the Chinese press, but the possibility of loans from the US was openly raised.

"As long as it is not detrimental to China's sovereignty, China could use advanced technology and funds from developed countries like the US, Japan, and West European nations to speed up the four modernizations," the November 11 dispatch from the New China News Agency stated.

China is clearly planning for a trade deficit in the range of \$2 billion or more for the next five years. As of mid-November, the estimated cost of contracts signed or under negotiation was approaching \$50 billion. What remains to be answered is the way in which

China will seek to accommodate its debt.

One US banker recently back from Peking warns, "They don't have an answer themselves over there." Paying interest on loans associated with China's capital equipment imports will be a radically different experience for the Chinese, who up to now have relied on various modifications of conventional suppliers' credits to pay for what they order.

ADMINISTRATION MOVES QUIETLY FORWARD ON CHINA CLAIMS ISSUE

A recommendation by the Treasury Department to require banks to pay interest on frozen foreign assets is seen in Washington as a first move to-



Agriculture Secretary Bergland visits Shanghai grain elevator site.

ward resolution of the financial claims issue.

Out of \$76.5 million worth of PRC assets seized in 1950 after Peking intervened in the Korean conflict, between \$42 million and \$60 million worth were in sight demand deposits at the time of freezing. Accordingly, while deposit holders were unable to draw on the accounts, the banks and other financial institutions holding them had free use of the accumulated interest on the funds.

Estimates of the acquired windfall of the approximately 19 banks which hold the greater part of the blocked PRC funds run as high as \$200 million. Once the deposits currently placed in non-interest bearing accounts begin to earn money, the PRC accounts could start making between \$2.1 and \$3 million annually.

Treasury Department official Dennis M. O'Connell, acting director of the Office of Foreign Assets Control, described the proposal as intended to "preserve and enhance the value" of the blocked assets. Other spokesmen of the department said the regulations were designed to help banks improve their management of the funds.

Holders of blocked funds were requested to submit their comments on the proposals within a 30-day time period ending December 14. The responses will provide Treasury an opportunity to evaluate the language of the regulations and, some observers speculate, to gauge the possible reaction of the banking community to a settlement of the claims.

One of the most practical suggestions for resolution of the claims issue between China and the US has been

to let the claims of either side cancel each other out. However, because US assets seized by China in 1950 shortly after the US action outweigh the frozen PRC assets almost 3 to 1, US claimants are likely to get back only about \$.40 on the dollar.

Fattening the blocked PRC accounts by allowing them to draw interest will mean that US claimants can expect higher returns in the event of a claims settlement based on the mutual cancellation formula.

The proposed regulations will affect frozen assets of Vietnam, Cambodia, North Korea, and Cuba, as well as the PRC.

CHINA TO TAKE 60 PERCENT OF GRAIN IMPORTS FROM THE US

China made major new purchases of grain from the US in October and November, bringing the total for the year to over 6.6 million metric tons. And, according to the latest word from Peking, US farmers can expect sales of the same magnitude in years to come.

With China's grain import needs projected by trade analysts at 11 million metric tons, the US agricultural sector has already met 60 percent of China's import demand this year.

Visiting Peking in November, two US government delegations brought back the news of China's interest in a long-term relationship with American grain suppliers.

US Assistant Secretary of Agriculture Dale Hathaway, who traveled to China with his boss Bob Bergland early in the month, disclosed in an interview with the *Journal of Commerce* that China will "import something in the

neighborhood of 10 million metric tons of wheat and corn annually, 5 to 6 million metric tons from the US, subject to their own crop conditions, foreign exchange availability, and price."

A few weeks later, US Representative Bill Alexander (D-Arkansas), chairman of the House Export Task Force, was told by Chinese Vice Premier Li Hsien-nien that US suppliers would be favored, in essentially the same words.

Wheat, Corn, Soybean, Cotton Sales Up

Wheat trade insiders are already tagging 1979 as the "Year of China."

Since April of this year, the value of grain contracts signed with China, including wheat and corn, is in the range of \$730 million to \$780 million. At least \$300 million worth of the contracted amount will be delivered before the end of the year, swelling the dollar value of 1978 agricultural exports to China from the US to more than \$600 million.

Since April 1978, PRC wheat purchases from the US have totaled 3.9 million metric tons. Of the full amount, 1.5 million tons are contracted for delivery in 1978. 1979 wheat shipments will thus start from 2.4 million metric tons, and are expected to go up from there.

November wheat sales to China included 725,000 metric tons, announced by USDA November 1, and 145,000 metric tons, announced November 23.

In mid-November, Congressman Glenn English (D-Oklahoma) told the *Washington Post* that he had learned of an additional 500,000 to 1.2 million metric tons of American wheat sold to China through an intermediary, which had not been reported to USDA. If the report is true, the amount of wheat sold to China this year could be as much as 5.1 million metric tons.

Value of the wheat contracts accounted for by USDA is estimated in the range of \$500 to \$550 million, with the mysterious sale reported by Congressman English bringing the grand total to a possible \$650 million.

China's first substantial corn purchases since 1973 and 1974 were made in October and November. Following the October 11 report that China had purchased 276,000 metric tons of corn, further purchases of 2.7 million metric tons were made between October 31 and December 4.

Corn contracts were reported by USDA on October 31 (200,000 metric tons), November 3 (800,000 metric tons), November 15 (200,000 metric tons), November 17 (400,000 metric tons), November 28 (350,000 metric tons), December 1 (100,000 metric tons), and December 4 (300,000 metric tons).

While the corn contracts specify delivery during the current corn marketing year (October 1, 1978, through September 30, 1979), agricultural specialists say that most of the shipments will be moving in the next six months. The value of corn bought by China so far is in the range of \$270 million to \$300 million.

China picked up 57,000 tons of soybeans from US suppliers in early November. Most of the contracted amount, with an estimated value of \$15.6 million, will be shipped in 1978.

PRC orders for US soybean oil, which by the end of September registered 44,000 tons, were boosted in early November by additional orders of 60,000 tons of optional origin, bringing total contracts of optional origin, which may or may not be sent from the US, to 80,000 metric tons.

October saw the resumption of US cotton exports to China on a large scale. Orders amounting to 149,000 bales in October brought the total for the current cotton marketing year (August 1, 1978, through July 31, 1979) to 346,000 bales, of which 123,000 bales had been shipped as of November 12.

Together with cotton shipments in the first half of the year, the total amount of cotton shipped by mid-November came to 495,000 bales. USDA analysts estimate that by the end of December 1978 an additional 30,000 to 50,000 bales will leave the docks, bringing total cotton exports to the PRC in 1978 to 525,000 to 550,000 bales.

As of the end of October, the latest date for which precise value figures are available, the value of US cotton exports to China in 1978 was \$137.2 million, ranking next in value to wheat exports to China through October, at \$160.7 million.

Blight Stalks the Path of US Grain Exports to China

The last has not been heard of inspection problems with US grain exports to China.

Confronting US Agriculture Secretary Bob Bergland during his 10-day

visit to China in November, managers of a Shanghai grain elevator asserted that recent corn shipments from the US had "too much dust."

The incident later turned out to be a misunderstanding. As of the time of Bergland's visit, no US corn had yet left the port for China. The Chinese had been mistaken.

In 1973, during the last peak of US grain sales to China, complaints about the quality of grain shipments were the first sign of a cleavage between client and agent that ended with the Chinese tearing up contracts and refusing to accept cargos in port.

The type of corn involved in the current dispute has fallen under a shadow before. Used as a feedgrain in the US, Number 2 corn has a higher moisture content than is acceptable to the Chinese, who use it for human consumption. In 1973, the Chinese sued for damages on corn which had too much water and was mixed with "foreign substances."

Tougher grain inspection regulations in the US today should prevent the recurrence of the quality problems of 1974, Bergland told the Chinese. Meanwhile, grain contractors are writing discounts into contracts to account for inspection costs.

According to an official of the National Council of Farm Cooperatives who visited China last year, the Chinese asked for a \$3.50-4.00 discount per ton to cover costs of sterilizing incoming wheat shipments.

US EQUIPMENT MAKES WAVES AT PEKING FARM SHOW AND ELSEWHERE

While no US firm was represented directly at China's first multinational farm equipment show, foreign subsidiaries of American companies were there in force.

US labels were on view at the German, French, Italian, Canadian, Australian, and Japanese pavilions. International Harvester reportedly had displays at three different pavilions; John Deere, Clark Equipment Company, and Caterpillar each had two stands, and Uniroyal had one.

The two-week event, from October 20 to November 3, attracted more official luminaries than any similar event in recent times. On October 29, Chairman Hua toured the exhibition grounds, walking through each of the 12 country pavilions. Cheering on the

businessmen of their respective countries were the agricultural ministers of France and West Germany. And US Secretary of Agriculture Bob Bergland arrived in town only two days after the close of the exhibition.

At least 80 percent of the estimated \$20 million worth of equipment exhibited was sold during the course of the show. Business conducted during and after the event was thought to be in the range of \$75-100 million, including contracts both signed and pending.

Introducing several new techniques of exhibition management at the show, the China Council for the Promotion of International Trade (CCPIT) won plaudits for its efficiency. Among other points raised by US observers were:

- CCPIT's synchronization of the show and organization of support crews were both excellent.
- Translation teams provided by the CCPIT made valuable contributions. On request, each company could have both an interpreter with foreign language capabilities and an "explainer," who had expertise in the kind of equipment sold by the company but no special language abilities. The job of the explainer was to describe fully technical specifications to passing spectators, but more than one explainer went further to provide such sales services as snagging the managers and other decision-making types out of the passing throng, and delivering sales pitches on the company's behalf.
- End-users were eager to provide names, positions, and even their business addresses to foreign companies in a complete departure from past practice.
- Technical seminars, of which over 300 were given during the course of the fair, were ticketed. Companies had no difficulty discovering whom they were addressing.

On the negative side of the balance sheet, companies complained that CCPIT had been ineffective in setting up business appointments, in spite of the distribution of application forms for meetings with the FTCs several weeks in advance. Not one of his applications was approved, one executive grumbled.

The conclusion of many Americans attending the fair was that the Chinese are anxious to see as much as possible of US technology, hopefully via an American exhibition. An indication of

CHINA'S MINISTRIES GETTING INTO THE ACT

China's ministries are inviting foreign companies to talk with them directly about everything from sales of plant, licensing technology, and consulting, to merely buying and selling product. There have been clear indications in 1978 that China's foreign trade corporations are becoming the conspicuous purchasing or sales agents of ministries rather than acting in their traditional role as the PRC's middlemen dividing buyers from sellers.

A guide listing Chinese ministries, their product responsibilities, and the corresponding foreign trade corporations is given below. This roster may be read in conjunction with the guide to China's new domestic corporations in the last issue of CBR. It is not comprehensive, since many product categories are handled by several different ministries. For more details contact the Council.

Product	Ministry	Trading Corporation
Aerospace industry	Seventh Ministry of Machine Building	MACHIMPEX, Import Dept. No. 4, TECH-IMPORT, Import Dept. No. 3 (complete plants)
Agricultural equipment	First Ministry of Machine Building, Production Control Bureau No. 6, Ministry of Agriculture and Forestry	MACHIMPEX, Export Dept. No. 4, Import Dept. No. 2
Automotive equipment	First Ministry of Machine Building, Production Control Bureau No. 6	MACHIMPEX, Import Dept. No. 2
Boilers and turbines	First Ministry of Machine Building, Production Control Bureau No. 4	MACHIMPEX, Import Dept. No. 3
Chemicals	Ministry of Chemical Industry	SINOCHEM, Import Dept. No. 2
Computers	Fourth Ministry of Machine Building	MACHIMPEX, Import Dept. No. 4, TECH-IMPORT, Import Dept. No. 3 (complete plants)
Electric power generation equipment	Ministry of Water Conservancy and Power, First Ministry of Machine Building, Production Control Bureau No. 8, SCCC*	MACHIMPEX, Import Dept. No. 3, TECH-IMPORT, Import Dept. No. 3
Electronics equipment	Fourth Ministry of Machine Building, First Ministry of Machine Building, Process Control Bureau No. 10	MACHIMPEX, Export Dept. No. 2, Import Dept. No. 4, TECHIMPORT, Import Dept. No. 3
Fertilizers	Ministry of Chemical Industry	SINOCHEM, Import Dept. No. 1
Food processing and packaging equipment	Ministry of Light Industry	MACHIMPEX, Import Dept. No. 3
Heavy weapons and artillery	Fifth Ministry of Machine Building	
Instruments and meters	First Ministry of Machine Building, Production Control Bureau No. 7, Ministry of Public Health, Ministry of Posts and Telecommunications	MACHIMPEX, Import Dept. No. 4
Internal combustion engines	First Ministry of Machine Building, Production Control Bureau No. 4	MACHIMPEX, Import Dept. No. 3, TECH-IMPORT, Import Dept. No. 3 (complete plants)
Iron and steel plant and products	Ministry of Metallurgy	TECHIMPORT, Dept. No. 2, MINMETALS, Export Dept. No. 1, Import Depts. 1 and 3
Machine tools	First Ministry of Machine Building, Production Control Bureau No. 2	MACHIMPEX, Import Dept. No. 5

their desire has been the appearance of articles about US farm equipment in Chinese domestic publications. One such report details the operation of 60 complete sets of farm equipment sold to the Chinese in early 1978:

"The use of these imported farm machines has enabled the team (the Number 2 Production Team of the fifth subfarm of the State Friendship

Farm in Heilungkiang Province) to increase per-mou grain output considerably over the past year. In addition to producing 160,000 catties of rapeseed, with the help of these machines the team's present 20 agricultural workers can now tend 970 mou of farmland and produce 200,000 catties of soybean and grain per person." (NCNA, October 30, 1978.)

Similar glowing accounts have been published about a mechanized poultry farm using US technology imported in February 1978. Located in Kwangtung Province, 50 miles outside Canton, the farm incorporates the latest modes of equipment, including six sets of equipment for feeding chickens and five incubators. Over 30,000 chicks and fertilized eggs were imported from the US

CHINA'S MINISTRIES GETTING INTO THE ACT (Cont.)

Product	Ministry	Trading Corporation
Medical equipment	Ministry of Public Health, First Ministry of Machine Building, Production Control Bureau No. 7	MACHIMPEX, Import Dept. No. 4
Metallurgical, mining, and construction equipment	Ministry of Metallurgy, Ministry of Coal, SCCC*, First Ministry of Machine Building	MACHIMPEX, Export Dept. No. 3, Import Dept. No. 2
Military equipment (conventional weapons)	Third Ministry of Machine Building	MACHIMPEX
Nonferrous metal products	Ministry of Metallurgy	MINIMETALS, Export Dept. No. 2, Import Dept. No. 2
Papermaking, printing machinery	Ministry of Light Industry, First Ministry of Machine Building, Production Control Bureau No. 1	MACHIMPEX, Import Dept. No. 3
Petrochemical plant	Ministry of Chemical Industry, SCCC*	MACHIMPEX, Import Dept. No. 3, TECH-IMPORT, Import Dept. No. 1
Petrochemicals	Ministry of Chemical Industry	SINOCHEM, Import Dept. No. 1
Petroleum drilling and exploration equipment	First Ministry of Machine Building, Production Control Bureau No. 3, Ministry of Metallurgical Industries, Sixth Ministry of Machine Building	MACHIMPEX, Import Dept. No. 2, TECH-IMPORT, Import Dept. No. 1
Pharmaceuticals	Ministry of Public Health, Ministry of Chemical Industry	SINOCHEM, Import Dept. No. 2
Pumps and compressors	First Ministry of Machine Building, Production Control Bureau No. 1	MACHIMPEX, Import Dept. No. 3, TECH-IMPORT, Import Dept. No. 3
Rolling stock	Ministry of Railways, First Ministry of Machine Building, Production Control Bureau No. 5	MACHIMPEX, Import Dept. No. 2
Sewing machines, bicycles, other light industrial products and production equipment	Ministry of Light Industry, First Ministry of Machine Building, Production Control Bureau No. 1	LIGHTINDUSTRY, MACHIMPEX, Import Dept. No. 3, TECHIMPORT, Import Dept. No. 4 (complete plants)
Ships	Sixth Ministry of Machine Building, Ministry of Communications, First Ministry of Machine Building, Production Control Bureau No. 9	MACHIMPEX, Import Dept. No. 2 COSCO
Steel plant	First Ministry of Machine Building, Production Control Bureau No. 3	TECHIMPORT, Import Dept. No. 2
Telecommunications equipment	Ministry of Posts and Telecommunications, First Ministry of Machine Building, Production Control Bureau No. 10	MACHIMPEX, Import Dept. No. 4
Textile machinery	Ministry of Textiles, First Ministry of Machine Building, Production Control Bureau No. 1	MACHIMPEX, Import Dept. No. 3

*State Capital Construction Commission

to stock the farm, in a project supervised by US poultry specialist Roland Hsu.

Perhaps the most startling development of all to US businessmen accustomed to the proscription of Sino-US commercial exhibitions was a September 24 announcement of a show of US electronic products in Harbin, China.

Jointly sponsored by the Harbin

Municipal Science and Technology Commission and the Harbin Science Hall, the exhibition featured "foreign new products" from Japan, Germany, Britain, France, the Netherlands, and Rumania. In the list of foreign contributors, the US was mentioned first.

The equipment on display was obtained on loan from Chinese owners, probably the CCPIT's Center for In-

troducing Samples of New Foreign Products.

Thus, while US companies have a long way to go before direct US exhibitions in the PRC become a reality, in the meantime US products are getting a big push from an unexpected source—the Chinese media. When the time does come for a US show, the Chinese will be waiting.

CHINA'S FOREIGN TRADE CORPORATIONS AND ORGANIZATIONS NEW TELEX NUMBERS

	TELEX
China National Cereals, Oils, and Foodstuffs Import and Export	22111 CEROF CN 22281 CEROF CN
China National Native Produce and Animal By-Products Import and Export Corporation	22283 TUSHU CN
China National Textiles Import and Export Corporation	22280 CNTEX CN
China National Light Industrial Products Import and Export Corporation	22282 LIGHT CN
China National Arts & Crafts Import and Export Corporation	22155 CNART CN
China National Chemicals Import and Export Corporation	22243 CHEMI CN
China National Machinery Import and Export Corporation	22242 CMIEC CN
China National Metals and Minerals Import and Export Corporation	22241 MIMET CN
China National Technical Import Corporation	22244 CNTIC CN
China National Foreign Trade Transportation Corporation	22153 TRANS CN 22154 TRANS CN 22265 TRANS CN
China National Chartering Corporation	22153 TRANS CN 22154 TRANS CN 22265 TRANS CN
China Ocean Shipping Company	22264 CPC PK CN
China Ocean Shipping Agency	22264 CPC PK CN
The People's Insurance Company of China	22102 PICC

Source: Canton Fair Committee, November 1978

FLUOR FLYING HIGH

In the largest deal signed by an American company with China to date, Fluor Corporation completed negotiations in early December on an \$800 million copper mine, to be built at an undisclosed location in central China. Signed in Peking on December 7, the Fluor contract joins a small but growing circle of orders placed by the PRC with US companies that run into nine figures.

Now Fluor tops them all, at least momentarily. Fluor will design and manage a copper mine and concentrator facilities which, by 1983, will be

turning out 190,300 tons of ore a day. The mine will be three times the size of a Peruvian mine, also built by Fluor, which is said to be the world's largest copper mine today.

Payment will be made according to a reimbursable-cost formula, by which the Chinese will reimburse Fluor for expenses plus a profit.

BETHLEHEM STEEL: \$100 MILLION MINING DEAL, MAYBE MORE

A second important consulting contract to develop an iron ore mine in China has been signed by a US company.

On November 20, a sales team from Bethlehem Steel led by Russell Grander signed the first two parts of a package deal giving Bethlehem overall responsibility for developing an existing mine site at Shuichang, in Hopeh Province.

Bethlehem will provide "planning and testing services" for construction of two modern facilities at the mine—a beneficiation plant and a pelletizing plant.

Signing of the contract followed three months after Kaiser Engineers, a California-based consulting firm, announced that it would provide general engineering services to develop two of China's iron mines, one at Nan Fen, near the Korean border, the other at Szechiating, also in Hopeh.

Company officials said the cost of services to be rendered by Bethlehem was in excess of \$100 million. The total capital investment cost of the mine could run as high as \$1 billion, according to specialists, with equipment costs making up about a quarter of the total.

So far Bethlehem has reached no agreement on participation in the procurement and production stages of the contract, although a protocol was signed in Peking to lay out the remaining steps, according to reliable sources.

If the company does sign for the remaining parts of the Shuichang package, it will probably be looking among its established circle of suppliers to provide equipment for the Chinese mine: Dravo for pelletizing equipment; Allis Chalmers and Koppers Company for mill equipment; and P&H Harnischfeger, and Terex for mining machines.

Assisted by San Francisco lawyer and China specialist Stanley Lubman, the Bethlehem team spent five weeks in China negotiating the contract. First indication of a serious Chinese response to the company proposals came in late August, during the visit of a Chinese delegation led by the Vice Minister of Metallurgy. Under sponsorship of the National Council for US-China Trade, the delegation visited Bethlehem facilities at Hibbing, Minnesota, where the company has developed an ore body said to be similar to the Shuichang deposit.

American opencast mining technology for developing low-grade ore bodies is in high demand in China because much of China's high-grade iron ore deposits have been exhausted. Low-grade iron ore requires extra processing

before being fed into a blast furnace.

Bethlehem officials were surprised and gratified with the rapidity of the development. The Chinese gave Bethlehem firm indication of interest during the August visit, but says company official E. M. Hurd, "The question was whether it could happen this quickly." A delegation from the company was sent to Peking at the end of August to confirm the Chinese interest, followed in November by a sales group.

Coal Deals: Joy Prevails

In early November, Joy Manufacturing Company announced a \$6 million deal to supply continuous miners and shuttle cars to China's coal mining industry. The sale was completed after a Chinese team completed a two-month review of applications of Joy's underground mining equipment.

The equipment ordered by China represents an alternative to conventional blasting techniques. The continuous miner is a rotating drum with bits on it that tears the coal off and shunts it onto a loading device. Joy's model 12CM continuous miner has a rated mining capacity of 8-12 TPM in seam 44"-122". The 10SC22-A shuttle car brings the coal to the device which takes the coal out of the mine. Conveyor speed is 100 FPM which discharges the load in 30 seconds.

The order is regarded by the company as experimental and may be followed by more. In early November, a second Chinese team visited the com-

pany's plant in Franklin, Pennsylvania, to look at roof-bolting and loading equipment.

Delivery of the miners and shuttle cars is scheduled for completion by October 1979.

US Steel: Angling for \$1 Billion

A matter of days after Bethlehem Steel announced its contract, US Steel disclosed that it had entered the final round of negotiations on a \$1 billion iron mine project. US Steel President David M. Roderick said at a press luncheon in New York City on December 6 that among a competing group of Australian and Japanese companies, US Steel was the front-runner because it is the only company operating facilities of the size desired by the Chinese.

US Steel engineers have been in China bargaining over fine points of the contract since September, when the company first learned of a serious Chinese interest from the same buying team that visited Bethlehem Steel. Traveling under National Council auspices, the team sought iron ore beneficiation and pelletizing expertise for seven iron mine projects in China; three of the contracts have already gone to US companies.

Long-Term Deal in Offing?

Yet another US coal mining equipment company is working quietly on a three-year contract, valued in the hundreds of millions of dollars, for supply of coal mining machinery to China.

PAN AM AND OTHERS: LENDING A HELPING HAND

A host of international hotel chains will be helping to shape the future of the tourist business in China.

Since October, deals have been signed or are near signing to build hotels in China by Intercontinental Hotel Corporation, a Pan Am subsidiary, Hyatt International, and Sung Hung Kei Securities, a Hong Kong investment firm. While these contracts were being wrapped up, clause by clause, other hotel majors were investigating prospects that could mean upwards of \$3 billion worth of business.

China wants not only the hotels, but the services and style that go with them. Pam Am, for example, is providing special apparatus to shield its hotels from the eccentricities of Chinese water supply, power, and laundry service. In Tokyo, Vice Premier Teng Hsiao-ping said that Peking would have 10-15 high-rise hotels of "international class" before the 10-year plan runs out.

The public got its first inkling of the lucrative prospects when Pam Am Chairman William T. Seawell visited Peking in early October. In a "friendly meeting" with Vice Premier Teng that was publicized in the Chinese press, Seawell worked out the main outlines of the deal.

Intercontinental will manage, operate, and provide financing for a combined total of 5,000 hotel rooms in China, at an estimated cost of \$500 million. The hotels will be owned and

PRC AGRICULTURAL PURCHASES FROM THE US, 1978-1979

	1978 Delivery		1979 Delivery		Total	
	Volume (mil tons)	Value (mil \$)	Volume (mil tons)	Value (mil \$)	Volume (mil tons)	Value (mil \$)
Grain						
Wheat	2.15	\$279.5	1.722	\$223.8	3.872	\$ 502.0
Corn	1.10	143.0	1.6	208.0	2.7	297.0
Grain total	3.25	\$422.5	3.322	\$431.8	6.572	\$ 799.0
Cotton (thousand bales)	550	\$165.0	168.0	\$150.4	718	\$ 315.4
Other Agricultural						
Soybeans	.057	\$ 15.6	—	—	.057	\$ 15.6
Soybean oil	.065	37.3	.06*	34.5	.125	71.8
Total value		\$640.4		\$616.7		\$1,201.8

* Sales of optional origin

Source: USDA

Note: Data is as of December 4, 1978.

eventually operated by the PRC, with Intercontinental providing engineering and management training and the Chinese providing land, labor, and some construction materials.

Turner Construction Company, a New York-based firm, has been tapped to provide building services for the hotels, under the guidance of Intercontinental's architecture and engineering department.

The new hotels in China will be linked with Intercontinental's 78 first-class hotels outside the US in more ways than one. Part of the financing is being carried out as a form of countertrade. In late November, Intercontinental announced plans to purchase hotel "software" from China to supply its overseas units. Software, for a hotel, consists of the towels, hotel uniforms, bedspreads and other furnishings that give a hotel its distinctive stamp. Edward J. Dowling, Intercontinental's vice president for procurement, in an interview with the *Journal of Commerce*, said the company expects to buy \$250,000 worth of towels a year from China. At present, most of the towels that Intercontinental uses in its hotels outside the US are made in Great Britain.

China will also pay Intercontinental through a profit-sharing scheme, the details of which are being held in confidence.

Intercontinental Chairman Paul Sheeline said, reflecting on the contract which took only six days to sign, "This has gone so fast it is going to take a while to sort it all out."

On the Verge: Hyatt and Others

Hyatt International, meanwhile, is bidding on a \$1 billion contract to build 10,000 hotel rooms in nine major Chinese cities. In November, Hyatt International President Peter di Tullio led a team of architects, hotel managers, project financiers, and construction company representatives on a tour of 20 possible sites for hotel projects in China.

A Hong Kong financier, Mr. Fung King-hey, chairman of Sung Hung Kei Securities, returned from Peking in late August with a contract agreement in hand, according to sources in Hong Kong. While details of the arrangements remained unclear, it was understood that the Chinese wanted to manage and maintain the hotels built by the Hong Kong property firm them-

selves, paying for them in shares of tourist expenditures.

Among other proposals suggested by Hong Kong firms was one to collect tourist spending in advance by including trips to China in package tours until their investments are fully amortized.

The contracts have been signed with the China International Travel Service rather than a foreign trading corporation, in a significant departure from past practice.

China is preparing in other ways for the tourist rush. Chinese experts in building golf courses have been recalled from the paddy fields where they were banished by the Gang of Four to design a new course in Peking. The golf course, according to a spokesman for the Chinese National People's Congress Standing Committee, will be for the entertainment of foreign visitors.

And back in the kitchen, Chinese cooks and waiters are putting in extra hours studying the techniques of grand cuisine. An October report in a Hong Kong newspaper described the first training center in China for cooks, waiters, and waitresses. The first group of 65 was selected, according to the story, after rigorous testing.

FORD SELLS TRUCKS, BIDDING ON TRUCK PLANT

Ford Motor Company signed its first major deal with China in early November for 700 small and medium-sized trucks, at an estimated cost of \$5 million. The agreement which was signed with MACHIMPEX, also includes spare parts and tools for the vehicles.

Soon after signing of the deal, another Ford team left for China to work on further negotiations which some sources speculated were concerned with a truck or auto assembly plant.

A Chinese official, Lung Siu-hung, has been quoted in the Hong Kong press as saying that a site has already been selected for the Ford plant. The official said that the contract would be arranged through a Hong Kong intermediary and would provide both repair and assembly services for Ford vehicles. Ford officials would comment only that China had requested them to supply information about the company's "capabilities, including production of vehicles."

Meanwhile, General Motors has been

maintaining an aggressively high profile in China. In early November, GM Chariman Thomas Murphy led a team of 14 company vice presidents to discuss locomotives, engine technology, and, according to some sources, production technology and services for GM trucks. The Chinese also seem to be interested in GM help in retooling its own BJ-212 utility vehicle that it has tried unsuccessfully to market abroad.

OIL EQUIPMENT SALES: LAND RIGS, ROUGH TERRAIN VEHICLES, AND, MAYBE, A DRILL BIT PLANT

MACHIMPEX has a new approach with the US oil industry. Instead of inviting companies to Peking for sales talks, the machinery trading corporation is meeting with some companies in the PRC Liaison Office in Washington.

Talking oil rigs and seismic prospecting systems at PRCLO in the month of November were both a six-man team, which stayed put, and a traveling buyer, Yao Chia-chien, who originally entered the US with a team of eight others to study seismic prospecting systems manufactured by Texas Instruments. Mr. Yao has signed over 200 contracts worth \$70 million, according to reliable sources.

The six-man team reportedly bought seismic recording systems from at least three companies including Texas Instruments. A sale of 22 instrument packages announced by Geosource in mid-October (See *CBR* 5:5, p. 34) was negotiated by the team, and Surcel is rumored to have made an even bigger sale.

Companies including Cooper, Cabot, Emsco, Skytop, and National Supply rubbed shoulders in the PRCLO waiting room while discussions on land rigs went on behind closed doors. The team was reportedly seeking bids on a variety of drill rigs of different depths, workover rigs, and seismic land systems with geophones. The team was also shopping for desert drilling rigs for the new PRC oil finds in Chinghai Autonomous Region and Sinkiang Province.

A large order for rough terrain vehicles for oilfield transport was reportedly signed by one US company.

The MACHIMPEX team, headed by Yueh Chi-hsien, manager of the fourth import department of the corporation, arrived in Washington on November 6, 1978.

In another oil equipment sale, the Reda Pump Company of Bartlesville, Oklahoma, sold \$1.25 million worth of electric submersible pumps to China in early October, for delivery by February 1979.

In early November, a Chinese technical team arrived in the US to inspect drill bit technology of all major US drill bit manufacturers, including Reed, Hughes, Smith, and Dresser. The team was reportedly hunting for a complete drill bit plant to reduce import dependence on foreign suppliers. At least \$15 million worth of US drill bits have been sold to China in the last two years, according to one drill bit maker.

MORE SALES: TWO FOR INGERSOLL-RAND, A FIRST FOR ENCYCLOPEDIA BRITANNICA, C. ITOH SWINGS FERTILIZER DEAL

Ingersoll-Rand Co., based in Woodcliff Lake, New Jersey, has signed three contracts with China in recent months.

On October 12, the company announced the sale of two large water well drills and accessories valued at approximately \$1 million. The multi-purpose "Drillmaster" rigs are capable of rotary or percussive drilling using down-the-hole techniques to depths of 1,500 feet. The contracts, signed with MACHIMPEX, specified delivery by the end of the year. I-R's Clarksburg, W. Va., plant will produce the drill rigs, while the down-the-hole drills will be manufactured at I-R's Phillipsburg, N. J., industrial complex.

Two months earlier, the company signed a contract with the PRC for a power recovery system to be used in a refinery project in China. Valued at several million dollars, the contract includes an Ingersoll-Rand power recovery expansion turbine, an axial flow compressor and auxiliary equipment which will be involved in a fluid catalytic cracking unit.

In a different corner of the trade, Encyclopedia Britannica is helping China's S&T program by peddling reference books. Exhibited at an exclusive book fair in Peking in July 1978, nineteen reference books published by Britannica's GMC Merriam-Webster Division were sold by the company in an order placed on September 7. About 2,000 copies were sold in all. According to Britannica spokesman Randall

Garrett, the order represented virtually the entire Britannica reference series, including atlases.

A \$13.2 million fertilizer sale has been made by the New York-based company Phoschem. The order, arranged by the trading company, C. Itoh & Co., specifies the delivery of 60,000 tons of ammonium phosphate and 90,000 tons of concentrated superphosphate to China. Phoschem is a 9-member export organization which accounts for 75 percent of US exports of phosphate fertilizer. Member companies include W.W. Grace & Co., International Minerals and Chemicals Corporation, Agrico, and American Cyanamid Company.

Corning Glass Company is providing the technology for a plant to manufacture the glass valves for TV sets sold to China by Asahi Glass Company (See *CBR* 5:5, p. 63). The company hopes to market specialized glass products and glass-making processes to China directly as well.

BOEING DEAL ALMOST THERE

By early December, Boeing was nearing the conclusion of months of negotiations on the sale of five wide-bodied aircraft to China.

The plane which will probably be sold, Boeing's SP 747, is a version of the standard 747 adapted for flying longer distances. It can fly 6,000 miles nonstop, compared to 5,000 miles for the conventional 747. The SP, however, holding 300 passengers, loses 100 seats compared to the standard 747.

The five planes would currently be valued at \$250 million, but the price would probably go up by the time they are delivered in the 1980s.

Boeing has contacted United Technologies to supply its JT9D engines for the 747s. UT joined Boeing's sales effort by sending three teams to China between October and December, from its Power Systems Group, P&W Commercial Products Division, and Wire and Cable Group.

TIRE PLANT SALE IN THE OFFING

Chemtex, Uniroyal, and du Pont hosted a delegation from the China Chemical Fiber Corporation that came to the US in early November shopping for a plant to make nylon 66 for tractor tires. Estimated cost of the plant, which will be located at a site 600 kilometers north of Peking, is \$50-100 million.

Japanese tire cord makers have also been contacted to offer bids on the plant (see International Notes).

CHINA LOOKING OUT FOR ITS OWN

According to sources at the Department of Energy, the Chinese petroleum industry has for the first time sent a large group of representatives to the UN Conference on the Law of the Sea, in April and August 1978. The representatives included Madame Liu Shu-hsuan, of the Ministry of Petroleum Industry, and Chen Tekung of the National Bureau of Geology.

BERGLAND BRINGS HOME BONANZA

When Secretary of Agriculture Bob Bergland got back from Peking, according to USDA staffers, he went straight from Andrews Air Force Base to his office in the department's sprawling Washington headquarters, and immediately began to digest the notes and transcripts of one of the most productive China trips since the signing of the Shanghai Communiqué six-and-a-half years ago.

In three days of talk with Chinese Vice Premier Li Hsien-nien, Minister of Foreign Trade Li Chiang, and Minister of Agriculture Yang Li-kung, Bergland hammered out the outline of a cooperation program that will mean long-range US involvement in China's agricultural R&D programs, mechanization of agriculture, and commercial livestock enterprises.

Also arising from the talks was a verbal commitment from the PRC to favor the US as a supplier of grain for human and animal consumption.

In reply to a reporter's query in Washington, Bergland said that it would depend on "who one reads" whether or not his trip is regarded as significant by future historians. But it was clear that the immediate impact on US agricultural exports to China would be substantial.

In Peking, Bergland toasted his hosts with the words, "When trying to express my feelings about these fruitful few days in Peking, my thoughts turned naturally to the many fields we observed on our way to the Great Wall. In those fields, a second crop is planted as the first grows to maturity. While the first crop is harvested, yet a third is planted."

"And so it has been with our meetings."

The primary areas of US government participation will be in projects related to technical exchange, including exchange of crop production information, scientific research teams, and the sending of US marketing specialists to China under the Cooperator Program of USDA's Foreign Agricultural Service.

Exchange of Crop Production Information

Working together with USDA's Office of Centrally Planned Economies, the Economic Statistics and Cooperation Service will send specialist teams to the PRC to discuss methods of crop reporting and improving exchange of agricultural statistics between the two countries.

Exchange of Scientific and Technical Teams

The broad agenda for technical exchanges has already been worked out through 1981. At USDA, the Office of Science, Education, and Research will coordinate with the Chinese Society of Agronomy to host a series of technical training teams in 1979-1980 on remote sensing and its applications to food and agriculture, soil survey and testing, and computer technology.

According to a spokesman for the Science, Education, and Research Office, the groups of technical trainees, ranging in size from 10 to 30 persons, will visit US government facilities, private research institutes, and universities. Other government agencies will join forces with USDA, including the Soil Conservation Service, to introduce soil survey methods and networks employed by the service, and NASA to demonstrate satellite techniques for assessment of land resources.

Reciprocal visits by agricultural scientists are being planned by a private organization with close links to USDA, the International Science and Education Council. Co-chaired by Assistant Secretary of Agriculture Dale Hathaway and Dean Elmer Keil of the University of Oklahoma, the council will provide the mechanism for selecting the participating scholars and institutions on the US side.

Between May and September 1979, teams of five to seven senior researchers will be exchanged in the areas of plant germ plasm, biological pest control, and animal health and production. In

addition, the Chinese have asked USDA to plan for additional teams in the areas of agricultural education and research methods in food and agriculture.

At least three parties of scientists will travel each way in the program set up for 1979. Beyond 1979, and tentatively scheduled for 1981, the Chinese have asked to send teams to study agricultural engineering in the US and pasture and rangeland management.

The US side has indicated that it would like to send teams after the first year of exchanges to investigate the production and use of medicinal herbs in China, a further team to study animal health and production, and a team to study Chinese techniques of pasture and rangeland management. Five more areas for exchange were suggested beyond these for realization after 1979: horticulture and fruit production; soil and water management; forestry and reforestation techniques; multiple cropping systems; and human nutrition.

Cooperator Program

The Foreign Market Development Cooperator Program, a joint program between USDA and private industry, has been activated for China. Designed to stimulate trade, the Cooperator Program was set up under PL 480 to provide government assistance for technical exchange programs organized by private trade associations. The program's main thrust is towards feed and livestock production.

The first cooperator team will leave for China in February or March 1979, according to a USDA spokesman. Six trade associations have already been chosen to go, including the American Seed Trade Association, the American Soybean Association, the National Renderers Association, the US Feed Grain Council, and the Western Wheat Association.

The associations have been selected based on guidelines supplied by the Chinese about their marketing and import needs. China is interested in setting up bakeries, for instance, to reduce the long working hours of the Chinese housewife. The Western Wheat Association could potentially supply technicians and blueprints for a model bakery and baking school in China, and host Chinese trainees in the US for study at the American Institute of Baking.

Other proposals are being brought,

including one by the US Feed Grain Council to set up a feed processing plant in China. China lacks the computer technology for feed process control, part of the outfitting of modern feed plants in the US. The American Seed Trade Council will offer its assistance in the production, processing, and distribution of improved seeds. The Seed Trade Council, working with the China National Seed Corporation, has already begun discussions on US seed exports to China as well.

A seventh association will probably be selected to represent the US vegetable processing and canning industry.

A One-Sided Exchange or a Two-Way Street?

With China suddenly swept away with enthusiasm for "cooperation" with Western countries, some westerners are asking what Peking has to offer them.

In an interview with the *Wall Street Journal* in Hong Kong, Dr. Rupert Cutler, who accompanied Bergland as chief emissary of the Office of Science, Education, and Research, said that "in the area of science and technology, it's a rather one-sided situation; the concept of exchange is a difficult one to implement." But, he added, agricultural science provides an example of significant PRC research contributions which the US is eager to absorb.

In the field of plant germ plasm, or seed collection, US scientists have asked to do field research in China on original seeds of such major US crops as sorghum, millet, and soybean. Because the US varieties were based on imported seeds, resistance to disease, pests, and drought is lower than that of seed varieties based on native seeds. Scientists are hopeful that seed exchange will lead to the development of stronger strains.

Seed exchange has already begun with the presentation of 74 kinds of seeds to the Chinese by the Bergland party. In return, the Chinese gave the US side 85 types of grain and vegetable seeds.

In biological pest control, the Chinese have developed techniques to control aphids on small grains and pink bollworms on cotton. US farmers and agricultural scientists are highly interested in both methods. The scientists also plan to screen indigenous Chinese viruses for possible use in pest control.

Measures taken by the US that may be helpful to China include techniques for sterilizing male screwworms, which have been virtually eliminated as a problem for farmers in the southern US.

In animal husbandry, the US side will gain information and semen samples of China's prolific swine population. While US-bred hogs have a faster rate of gain than Chinese ones, Chinese pigs produce larger litters per sow. Joint research, it is thought, could produce a fatter and more fecund pig to the benefit of both sides.

Exchange of crop information will make it possible for both parties to accurately forecast markets and supply positions year by year. According to Assistant Secretary of Agriculture Dale Hathaway, the Chinese "generally agreed that it would be highly desirable, both for their own internal planning purposes and for everyone in the world, to have a better knowledge of their crop production."

MARKET PROSPECTS FOR US AGRICULTURAL TECHNOLOGY

In the long run, China may be less interested in American grain than in the ways the US has of making it grow.

In Peking on November 8, Bergland told assembled members of the press, "Chinese interest in American agricultural technology and equipment is extensive . . . They desire not only what is now available in the marketplace. They plan, eventually, to manufacture and produce much of the equipment and many of the products in China."

Requesting Bergland to contact private manufacturers on their behalf, the Chinese presented him with a list that included agricultural machinery, seed processing, pesticides, feed processing and use, food processing (including canning factories, bakeries, and fruit and vegetable processing plants), agricultural plastics, and irrigation technology.

Through the Cooperator Program and other liaisons with private industry, USDA is currently delivering more highly specified information on the PRC's requirements to the private sector.

Pesticides: A Pressing Need

While the Chinese are continuing to stride ahead in the field of biological pest control, they are anxious to absorb US technology for chemical pesti-

cides. Bergland reported that one of the areas in which his Chinese hosts displayed most curiosity was in the use of pesticides in large-scale commercial farming. Most of the pesticides currently manufactured in China are based on salts of mercury, copper, and arsenic, or DDT, chemicals with harmful effects on animals and humans as well as plant parasites. A barrage of questions met Bergland on the subject of the registration of pesticides by the US Environmental Protection Agency.

China is known to be shopping for herbicides, pesticides, fungicides, and plant growth regulators, with particular emphasis on applications to cotton, rice, wheat, soybeans, sorghum, corn, and fruit trees.

Herbicides, especially for rice, cotton, corn, and soybeans, are considered the most pressing area of all, according to PRC trade officials.

Adding to the over \$3 million worth of fungicides, pesticides and herbicides sold to China by US companies as of September 1978, FMC Corporation in mid-November closed a substantial deal for sale of its exclusive insecticide Furadan, a chemical with a wide spectrum of pest control and particular efficacy against rice pests.

PRIVATE SECTOR HOLDING ITS OWN IN FARM EXCHANGES

Leading up to the Bergland trip, private sector missions to China, including two congressional delegations representing constituent interests in the agriculture industry, investigated further areas of exchange with China.

- Traveling to China in August, a delegation from the American Farm Bureau Federation invited China to send young farmers to the US to learn advanced agricultural techniques under its program, cosponsored by the state of California, called International Farmers' Association for Education.

- A delegation from the California State Board of Food and Agriculture led by Lionel Steinberg, president of David Freedman & Co., visited China from September 12 to 29. The board has issued a return invitation to PRC Vice Minister of Agriculture Ho Kang, who visited California in early September with a delegation from the Chinese Society of Agronomy, to pay another visit exclusively to California • Departing September 15, the return delegation from the Mid-America International Agricultural Trade Council

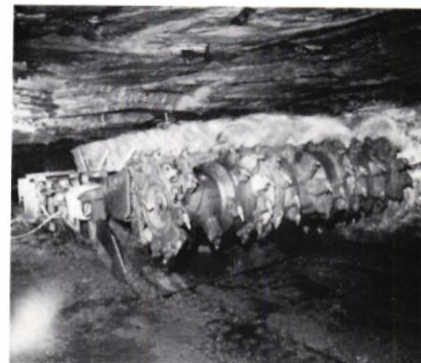
(MIATCO), which hosted a delegation of vice ministerial rank from the PRC last summer (see *CBR* 5:5, pp. 30-32), took with them Foreign Agricultural Service official Ed Nichols, in what may be remembered as an initial venture in USDA-private sector cooperation • Led by Rep. John Slack (D-West Virginia), a delegation from the State, Justice, Commerce, and Judiciary Subcommittee of the House Appropriations Committee visited China from November 16-25 to discuss US-China agricultural trade and related matters • The Cotton Subcommittee of the House Agriculture Committee, led by Rep. David R. Bowen (D-Mississippi), visited China to investigate prospects for continued cotton sales to China • Two PRC representatives will attend and present papers at the 16th Annual International Stockmen's School, organized by Agriservices Foundation, a nonprofit educational foundation based in Clovis, California, from January 8 to 11, 1979.

DOE TRIES HARDER

Handling difficult causes, like assembling an energy agency out of divergent components of the Washington bureaucracy, seems to be James Schlesinger's forte. And the task which the US Secretary of Energy set out to accomplish in late October—persuading Peking to accept US help for its energy resources development program—was another gamble against high odds.

The fast-growing list of China's international energy partners already includes France, West Germany, and Japan, among Western countries, and Rumania and Yugoslavia in Eastern Europe. Sweden may soon join the party. Since September 1978, agreements have been signed for cooperation in development of China's resources with each of these countries, and cooperation with Japan expanded

Continuous miner sold to PRC by Joy.





Refinery where first PRC oil to US will go.

to cover not only oil but hydropower, coal, and nonferrous metals projects.

The US role worked out by Schlesinger includes many of the areas already staked out by other countries. Schlesinger himself describes the arrangements with the Chinese as a "possible menu for collaboration," not a precise formula.

Nevertheless, in a series of talks with PRC energy and planning officials culminating in a two-hour session with Chairman Hua Kuo-feng on November 4, Schlesinger received assurances that US input, both from the governmental and private sectors, would be substantial.

Details of a list of five major areas for cooperation were worked out by a technical team headed by John Deutsch, director of DOE's Office of Energy Research, while Schlesinger toured other parts of China. Following further discussion in Washington, the list was augmented by five additional topics.

Menu for Cooperation: A Billion Dollar Banquet

The projects covered in the Schlesinger talks are enormous and would cost "billions and billions and billions of dollars," according to Deutsch, quoted in an interview with the *Energy Daily*. While US banks are fishing for means to bypass the regulatory tangle arising from the past history of US-China relations, the European and Japanese competition is throwing loan offers at China thick and fast. So far, the Chinese have given no hint that they would entertain investment loans from the US to support costs of any of the projects under discussion.

The main points of the agreement include:

- Coal: China wants US help for the development of two 20-million ton per year surface coal mines. US technology, as opposed to European-style

know-how, is considered most appropriate for the sites under consideration. China is also seeking modern efficient machinery to upgrade its existing underground coal mines. Cost of the coal mining projects is estimated at \$3-5 billion.

In addition, the PRC is shopping for coal preparation plants and partners for joint venture projects in mine machinery making.

- Hydropower: Perhaps the most ambitious of all projects discussed is a plan to build a dam across the Yangtze River gorges with an ultimate capacity of 25,000 to 30,000 megawatts; by comparison, China's present generating capacity is about 43,000 megawatts. Japan's assistance has also been solicited on this project.

Discussions were held on a second major hydropower project on the Yellow River, where the Chinese are having difficulties with site investigation work and foundation design. The Army Corps of Engineers or the Bureau of Reclamation may be tapped.

Other PRC hydro priorities include mine-mouth electricity, and backbone grid transmission system. Schlesinger was also asked for US help in training PRC experts in planning, design, and construction of hydroelectric power plants and high-voltage transmission systems.

- Renewable energy: The PRC expressed strong interest in all US renewable energy programs and detailed information exchanges on solar, biomass, geothermal, and ocean energy.
- Oil and gas: Discussions centered on resource appraisal methods and enhanced oil and gas technologies. The US Geological Survey was identified as the appropriate agency to carry out actual consulting, while DOE's role in the area may be confined to exchange of new research.

The Chinese encouraged continued discussions with US oil companies on their possible participation in Chinese oil exploration and development.

- High energy physics, nuclear physics, and magnetic fusion: Possible US assistance was discussed in the design, testing, and fabrication of the PRC's proposed 50 giga (trillion) electron-volt high energy particle accelerator.

China will be in the market for specialized basic research instruments. They are interested in obtaining, among other things, a Tokamak reactor and a heavy ion cyclotron. (In the

wake of the Schlesinger trip, one US company, High Voltage Engineering Corporation of Burlington, Massachusetts, has already signed a contract for a high energy accelerator and a second contract may be forthcoming.)

- Computer modeling for new coal mines is being sought by the PRC.
- Underground mine transport studies are needed.
- Studies on the environmental effects of energy resource development are needed.
- Coal degasification technology is wanted.
- Pollution control technology and equipment is needed.

Heightened Technical Exchanges Foreseen

The first step toward realizing most of these projects will be the exchange of technical delegations. In the course of 1979, at least 16 technical delegations will come to the US from the PRC, and US industry and government delegations will visit China, probably early in 1979, in each of the major areas discussed.

A tentative timetable for delegations in coal technology, hydropower, renewable energy, petroleum resource assessment and development, and high energy physics has already been set up.

- "As soon as possible," the Chinese want to send a coal chemistry and coal technology delegation to the US to develop appropriate organizations and reach specific agreements in areas of mutual interest. In return, a US coal industry delegation (in addition to the one already planned for the spring of 1979 by the National Coal Association) will visit the PRC, probably early next year, to look at specific sites where cooperation may be enacted.

- PRC hydropower officials will make "a series of visits" to meet with US government agencies including the Department of Energy, the Army Corps of Engineers, the Department of the Interior, and the Bureau of Reclamation.

- A PRC fact-finding mission and several technical groups will come to the US in early 1979 to investigate US renewable energy technology.

- Exchanges of US and PRC oil and gas experts will take place.

- In high energy physics, increased technical exchange will develop both on the private and governmental levels. Joint US and PRC committee will be

formed to implement the expanded cooperation.

Getting to be No. 1

While Schlesinger has defended the technical formulation of the proposed areas of cooperation, the fact remains that, like other Sino-US arrangements, none of the documents were signed. Carrying out the proposals will depend on the good will of both sides—and the strength or lack of strength of initiatives carried out by the competition.

Schlesinger characterized the accords as "concretely more than we anticipated." At the same time, he acknowledged that the scope of the proposals had more to do with what China needs and plans to import than what will end up being supplied by the US.

"I would not expect the aggregate of these things to take place," Schlesinger commented in Peking, near the end of his trip. "Undoubtedly, the Chinese will be selective . . . The extent to which the Chinese desire to go ahead, the extent to which in some areas there will be a response by organizations in the West, is as yet undetermined. Unquestionably, the resource requirements for the entire list would be very substantial and that represents an impediment."

The government side is budgetarily constrained from moving ahead aggressively with the proposals. Most observers concur that it is the private sector which will have the responsibility for realizing the more ambitious aspects of the scheme, and that only "some of the elements of the list will undoubtedly go forward," in Secretary Schlesinger's words.

Learning from China in Energy

While the focus of the Schlesinger talks was on transfer of US technology to China, some time was spent on exchange in the other direction, particularly in the area of renewable energy.

Director of Energy Research John Deutsch told the Chinese that the US was interested in Chinese achievements in the development of oil shale, in atmospheric fluidized bed operations, and in the use of biomass, which the Chinese convert to methane in millions of small biogas generators (see *CBR* 5:2, p. 38). Shale oil, an alternative energy source in which US environmentalists are highly interested, has been produced in China since 1941, and

atmospheric fluidized bed combustors are in wide use.

USGS: A SEPARATE AGREEMENT ON ENERGY

In early November, the US Geological Survey reached an agreement on a three-tiered cooperation program with the PRC in meetings with a Chinese delegation from the PRC's Scientific Research Institute of Petroleum Exploration and Development (SRIPED).

The program will involve the sending of a USGS team to China in early 1979 for exploratory discussions, the enactment of a joint research program in oil exploration and development, and the exchange of laboratory technicians over the term of the program to facilitate communications.

A number of projects are being discussed for joint development. The most important of these center on recently discovered oilfields in China's far West and Southwest. USGS will provide ground surveys for the two fields. One of them, in Changhai Province, is more than 200,000 square kilometers in total area.

Exxon Corporation has been asked to provide detailed assessments of the massive onshore sites.

The agreement caps more than a year of intensive exchanges between USGS and the China Petroleum Corporation (SRIPED is the corporation's leading thinktank).

Since July, top officials of the Geological Survey have traveled to China twice to secure details of the arrangement. Dr. William H. Menard, Director of USGS, accompanied Frank Press of the White House Office of Science and Technology, initiating discussions on a ministerial level. He was followed in November by a technical team with the Secretary of Energy's mission.

Chinese representatives, including Vice Minister of Petroleum Yen Tun-shih, have visited USGS facilities seven times in the last few years.

China is chiefly interested in USGS research on sedimentary basins, hydraulic fractions, and remote sensing, fields in which USGS has established an international reputation.

Among the star attractions of the recent SRIPED trip, a delegation which was invited and escorted by the National Council for US-China Trade, was the Geological Survey's EROS Data Center in Sioux Falls, South Dakota, where research is carried out on

remotely sensed satellite and aircraft photos of land resources worldwide. The Chinese are hopeful of obtaining EROS assistance in evaluating LANDSAT photos of their oil-bearing regions. EROS—the Earth Resources Observation Program—provides training courses, workshops, and consulting in evaluation and data processing of remotely sensed images.

Discovery of China's two new oil fields was announced in early October. In a dispatch from Urumchi in Sinkiang, Kyodo News Service reported that the new wells were "gushing out an ideal type of light oil." Work at the field in Chinghai Province's Tsaidam Basin is still in the exploratory stage. During the course of the trip, SRIPED Director Shen Li-sheng disclosed that preliminary exploration data from a third onshore site in southern China, in the area of the Kweichow Province-Kwangsi Chuang Autonomous Region border, showed oil deposits similar to low permeability formations found in western Texas. Carbonate areas with oil potential in Kiangsi, Kwangtung, and Yunnan were also discussed by the delegation.

US help, both from the USGS and the commercial sector, is being sought for the development of all three.

Commercial Spin-Offs from USGS Talks

Exxon, which has already been tapped by the Chinese to begin talks on joint research, clearly has an inside track on the race for consulting and service contracts. Exxon's technology for study of sedimentary basins, for mathematical models, and oilfield formation is among the best in the world. In the contracts currently under negotiation, Exxon could provide detailed work in areas surveyed by USGS.

The China Petroleum Corporation is also holding talks with Phillips for remote sensing, Mobil for reservoir permeability studies, Union Oil for oil field development injection systems, and Texaco for logging and drilling systems.

No major sales resulted from the SRIPED trip but commercial inquiries were made on a wide range of laboratory testing equipment. The big item the delegation came to talk about was an IBM 3031 computer for processing the vast amount of data arising from China's effort to locate new Tachings, oilfields capable of producing 20 mil-

lion tons or more of oil yearly. China currently has over 300 geophysical survey teams conducting on- and offshore research at sites around the country.

IBM has already gained export approval for export of the 3031 to China, but no contract had been signed as of early December. The IBM 3031 is the same model as was sold to the Bank of China for data processing control in BOC branch banks in Hong Kong (CBR 5:3, p. 44).

The delegation was also interested in core analysis equipment and services provided by Core Laboratories, Inc., of Dallas, Texas, and in remote sensing equipment from Phillips Petroleum. Core Labs was asked to submit bids on 17 different types of equipment, and other companies were asked to supply information on an EDAX autoscanner, a rock-evaluation gas chromatography unit, a spin-drop tensionometer, and the mylar base used in mapmaking.

The mission visited France before arriving in the US and clearly had comparative shopping in mind. Some companies found this a minor irritant to the talks, where there was a technology overlap with French models the group had seen. The French are currently staging a major promotional effort in oilfield technologies and equipment via a multicompany exhibition in Peking.

BUREAU OF MINES: WAITING, WAITING

While USGS forges ahead, its sister agency within the Department of the Interior is patiently waiting for its chance to form technical links with the PRC.

Three representatives of BOM traveled with Energy Secretary James Schlesinger's group to China to offer proposals for cooperation in metallurgical extraction processes, secondary recycling of materials, and environment-related mining technology. According to a bureau spokesman, the China Society of Metals is known to be interested in research going on at BOM in iron ore beneficiation processes. So far, though not through lack of trying, nothing has materialized.

The private sector is taking a more aggressive stance, however. On November 8, a 10-man delegation from the Society of Mining Engineers left for China at the invitation of the Chinese Ministry of Metallurgy. A technical exchange mission, the group was billed

as non-commercial in orientation, but included representatives of US Steel, Alcoa, Climax Molybdenum, and Ford Motor Company as well as researchers from MIT and the Rensselaer Polytechnic Institute.

The group visited technical institutes including the Institute of Metallurgical Research and the Institute of Mining and Metallurgy of the Chinese Academy of Sciences.

On the agenda for joint discussions were the status of metallurgical research in the US and the PRC, metallurgical education in China in the universities and in industry-related technical colleges, and the transfer process of science to technology in China.

US ARMY CORPS: ENGINEERING KNOW-HOW FOR CHINA?

If it can be cleared with the US Government, the US Army Corps of Engineers is ready to roll up its sleeves and dive into projects to develop China's inland waterways.

A Corps civilian consultant addressed a conference in Peking on China's inland waterways in mid-October. Another Corps representative traveled to China with Secretary Schlesinger to follow up proposals for Corps participation in the construction of a 25,000 MW dam and power plant across the Yangtze River gorge. During the visit of White House science policy chief Frank Press to China in July, an invitation was delivered to the Corps to send an official delegation to discuss navigation and harbor projects.

So far, the Army Corps is inhibited from official participation in Chinese projects because the PRC is not classified a "friendly country," in the State Department lexicon.

Normalization is not a prerequisite to win "friendly country" status. But the State Department is nervous about the public impact and policy implications of making the recommendation to change the PRC's designation while diplomatic relations are still in the future.

Meantime, the Corps is educating the Chinese about its resources and capabilities. Rated among the foremost authorities in the world on water resources development, the Corps currently has projects in 11 countries, including Saudi Arabia. In the US, the Corps engineers and maintains the entire channel of the Mississippi River

system, among others, through a system of locks, dams, and dredging operations.

Later in October, a Chinese group arrived in the US under auspices of the American Society of Civil Engineers and Dravo Corporation, a major contractor for the Army Corps, to take a closer look at the Mississippi River and the intricate system of research stations and water control projects that keeps it navigable 365 days of the year.

The group, led by a vice minister of the Chinese Ministry of Communications, Kuo Tsien, came to investigate possible US private sector involvement in the improvement of China's river traffic and harbor systems. Dravo is represented by the mammoth Danish trading firm, East Asiatic Co., which on September 11 signed a consulting agreement with China to modernize harbor installations in Tientsin (Hsinking) and Shanghai. East Asiatic will seek at least some assistance from its clients to carry out aspects of the contract which lie outside the head office's capabilities.

The private sector was upstaged, however, by the Army Corps in the latest round of technical exchange. Out of 54 days in the US, the Chinese group, officially sponsored by the PRC Society of Civil Engineering, a non-governmental organization, spent 26 of them viewing sites under the Corps' mandate.

Highlights of the trip included:

- A visit to the Coastal Engineering Research Center at Fort Belvoir just outside of Washington, DC, one of five Corps research centers around the country that carries out R&D affecting coastal engineering
- The Tennessee Tom Bigby Project, where a system of locks and dams is being built to link the Tennessee River with the Mississippi, giving the states through which the Tennessee flows another access to the Gulf
- The Tennessee Valley Authority in Knoxville, Tennessee, for a look at flood control and power generation projects
- The National River Academy in Helena, Arkansas, where the Corps trains river navigation pilots
- The hurricane and flood protection project at Houston/Galveston Port
- The Waterways Experiment Station in Vicksburg, Mississippi, where test simulations are run on river and har-

bor projects through a sophisticated model system

- Container facilities at Baton Rouge and the Avondale Shipyard in New Orleans
- A mat link plant which manufactures concrete mats for flood control and channel stabilization along the lower reaches of the Mississippi.

The 16-man team also spent a day in Pittsburgh reviewing power plants, locking operations, and dam sites of the Ohio River, the main stem of the inland water system which feeds into the Mississippi. During its stay in Pittsburgh, the group was shepherded by Dravo, spending a day of technical seminars on the regulation, management, and operation of the Ohio River at Dravo headquarters.

NATIONAL SCIENCE FOUNDATION: AND THEN THE DELUGE

By the end of January, about 200 students from the PRC will be enrolled at American universities from Berkeley to Harvard. By next September, the number may rise to 700, and the US will have 60 students and scholars working at Chinese universities, institutes, and research sites.

And these are only the number agreed upon between the two governments. In addition, many universities and technical colleges will be making their own arrangements, according to the National Science Foundation.

The formal exchange agreement between the National Science Foundation and the PRC's Scientific and Technical Association (STAPRC) was reached over the weekend of October 20-22 during the visit of a high-ranking Chinese educational mission.

Headed by Chou Pei-yuan, acting president of STAPRC and president of Peking University, the 11-man delegation visited 14 universities across the US, including some where PRC students are already in residence.

The students who have arrived so far are, for the most part, senior researchers coming to the US for stints of advanced work with colleagues whom they have thus far known only by their bylines in the professional journals. Undergraduate students will continue to be in the minority, with active professionals making up 80 percent or more, at least into 1980, according to NSF.

The first group of exchange students

to arrive ranges in age from 36 to 44. The party of six is made up of research personnel from the Chinese Academy of Sciences and is being hosted by Stanford University. The members went straight into English-language refresher courses before signing up for courses in various sciences and engineering departments.

Two mathematicians from the PRC arrived at Berkeley about the same time to conduct research in the Mathematics Department for one to two years. In return, Berkeley's Professor Shiing-shen Chern was invited to accept a chair at Peking University as Distinguished Professor of Mathematics. Professor Chern accepted the honor and will divide his time between Peking University and Berkeley beginning in 1979.

Not all the Chinese coming to the US will be senior professionals. On the other side of the balance sheet is the 22-year-old coed who has enrolled at Wellesley College, Huang Hai-nai, who has taken the English-sounding name of Roni Wang and wants to study the arts, not sciences.

The PRC students will not be sheltered from university life, contact with Americans, or Taiwanese, by mutual agreement of US and Chinese educators.

The National Science Foundation developed the form of the exchange program but will not be responsible for carrying the program out. No government agency has yet been officially designated to handle the Chinese students coming to the US, although the International Communications Agency (ICA) is coordinating with the Chinese Ministry of Education on visa responses and related matters. In the meantime, the PRC is making contact with universities directly, both for the official program and numerous unofficial exchanges.

Sisterhood is Beautiful

The PRC is seeking refuge in "sister relationships" with US and Japanese universities in lieu of more substantial institutional arrangements. Berkeley has become affiliated with Chinghua and Peking universities in the first such arrangement, and Stanford, Princeton, the University of Michigan, and the Massachusetts Institute of Technology are mentioned as likely candidates to become sisters with other Chinese universities.

Chinese authorities hope to establish relations between foreign universities and a roster in the PRC including Peking, Tsinghua, and Chung Shan universities.

The device is being used mainly to place Chinese students and scholars abroad, with little exchange in the other direction, says NSF Division of International Programs spokesman Dr. Bodo Bartocha. Stanford's sister pact is basically an agreement to take six Chinese students. For the time being, the number of students going to China will be small, at the most 60 by September 1979.

First US Students to China Selected

On November 28, the selection process was completed for the first party of combined trainees and researchers to China.

Smaller than the number of Chinese students coming to the US by a ratio of 15 to one, the US group will include a political scientist, two anthropologists, a sociologist, a geophysicist and a geochemist, an art historian, several historians and a Chinese language and literature major.

The Committee for Scholarly Communications with the PRC (CSCPRC), a joint committee of the National Academy of Sciences, the Social Science Research Council, and the American Council of Learned Societies, was commissioned by the US Government to make the selections from among hundreds of applicants. Out of the total of 13 scholars who will depart for China next year between February and April, seven will be graduate students enrolling in one-year programs and six will be independent researchers.

CSCPRC recommendations for the graduate students, all of whom have background in Chinese studies, were expected to pass muster with the Chinese Ministry of Education without trouble. Independent researchers have submitted a variety of proposals to the Chinese. Now under review by the Chinese are topics ranging from a village study, proposed by a husband and wife anthropological team, to a study on earthquake foreshock behavior.

The International Communications Agency is funding the initial group of exchange students to the PRC and will assist in placing the scholars once they have arrived in China through the ICA attaché at the US Liaison

Office in Peking, John Thompson. It is expected that a scholar-in-residence will join the US Liaison Office in the near future to coordinate some of the placement functions.

COMING: A WAVE OF S&T EXCHANGES

Establishing the framework for student exchange with the PRC, the National Science Foundation's Division of Applied Science has contacted the PRC about joint programs in earthquake prediction and engineering and astronomy. In cooperation with USGS, the science agency has issued an invitation to China to send a team to the US for a workshop on earthquake studies, perhaps by next year.

The Committee for Scholarly Communications with China has expanded its scientific exchange program with STAPRC as a result of talks in Washington with Chou Pei-yuan and talks in San Francisco with the Chinese Delegation of Science and Technology Administrators. On November 11, a memorandum of agreement was signed between the two non-governmental organizations to extend their relationship beyond the present scheme, which involves exchange of survey delegations only. In 1979, joint symposia, lecture tours, and research trips by individual scholars will add to the National Academy's growing interaction in China.

The six-year-old Committee for Scholarly Communications with China, headed by Mary Bullock, has sponsored or hosted 69 delegations between the US and China since 1972. In 1979, 10 more delegations will go, five in each direction. On the US side, teams on nuclear physics, animal sciences, Ming-Ching history, plate tectonics, and economics will travel to China during the course of 1979. On the Chinese side, four subject areas have been selected—social sciences, pure and applied mathematics, remote sensing, and unconventional energy sources—while one delegation has yet to be determined.

New to the CSCPRC agenda will be two joint symposia, one on pharmacology, to be held in the US, and one on polymer chemistry and polymer physics, to be held in the PRC. The correspondent institutions in the PRC are, respectively, the Chinese Academy of Medical Sciences and the Chinese

Academy of Sciences. Each symposium will involve the sending of about 10 scholars to the host country where they will meet with 25 of their counterparts.

A series of lecture visits has also been arranged for the first time. Ten Chinese scholars will come to the US, and 30 US scientists to the PRC, for speaking tours lasting from 3 weeks to 3 months.

Under the expanded relationship, the CSCPRC will be coordinating exchange visits by individual research scholars as well. At least 15 researchers will travel both ways between January 1979 and June 1980. The Chinese have already given warning that they would like to send 15 more, paying for the trips out of their own pocket.

NASA: SATELLITE TALKS BEGIN

Less than two weeks after the official go-ahead was given for export of advanced telecommunications equipment to the PRC, the Chinese were in Washington ready to talk satellites.

Arriving on November 28 at Washington's Dulles International Airport, the team from the Chinese Space Technology Research Institute spent four days at NASA headquarters before beginning a 20-day swing among the space industry majors. Companies on the delegation's itinerary went to RCA, Hughes, Western Union, and Ford Aerospace, among others.

According to a NASA spokesman, the team's major objective was to buy two domestic communications satellites and services for placing them in orbital slots long since assigned by INTEL-SAT, of which China is a member.

LANDSAT ground stations are also on the team's shopping list but apparently are of less priority.

Visiting the US concurrently with the NASA-hosted group was a technical study team visiting potential suppliers including RCA and Western Union. Leaving the US in late November was a 7-man team from the China Electronic Society, shopping for satellites at the invitation of the Electronics Industries Association.

The specific type of satellite to be sold has not yet been decided. Some sources claim that the White House has approved the export of an older type of communications satellite, the Westar-1, to China. While the US is reputed to have the best launching facilities for geo-stationary satellites,

other countries, such as Japan, West Germany, and France, may have fewer qualms about selling top-of-the-line equipment.

The delegation returns to Washington on December 19 for wrap-up talks with NASA. Jen Shen-min, Director of the Space Technology Research Institute, headed up the mission which also included representatives of the China Space Flight Society and the Chinese Academy of Sciences.

CHINA TRAVEL SERVICE: A NEW INTEREST IN TECHNICAL SEMINARS

Among the new roles with which the China International Travel Service (CITS) has been charged is holding technical seminars.

Whether the FTCs have too much else on their minds to worry about hosting seminars, or whether China's official tour agency has been given a greater part in achieving the country's economic goals, is a moot point. But on November 24, the first US group of company reps and engineers to travel under CITS auspices to give technical seminars left for China.

Sponsored by the New York firm, Conference Service Bureau, Inc., the 50-man group gave two separate programs on frigid zone engineering and construction, in Peking, and shipbuilding, marine engineering, and marine transportation, in Shanghai.

Companies joining the Peking segment included Stone and Webster, Pan American Engineering, and Equitable Life Holding Company. The presentations were grouped under three general headings: soil dynamics in frigid zones, design and construction in frigid zones, and operation and management of construction programs.

The Shanghai seminar on shipbuilding brought together companies such as Boeing Marine, Lash Systems, Westinghouse Electric, Waterman Steamship, Gulf Research and Development, Soro Associates, IMODCO, and Great Lakes Dredging and Dock. Design/construction and new technology, marine transportation and engineering, and port development were the general topics for presentations.

With the assistance of New York entrepreneur Charles Abrams, Chairman of China Trade Corporation, the Conference Service Bureau is gearing up to hold seminars in the US as well as China, possibly beginning in 1979. 完

China Economic Notes

Briefly:

- **1978 agricultural production up, but not as much as hoped for.**
- **New north-south pipeline completed.**
- **Guided missile launchings publicized.**
- **Campaign to build new railroads accelerated.**
- **Trade unions reactivated.**
- **Dancing, stylish clothing make comeback.**

GENERAL: EMANCIPATING MINDS IS THE NEW GOAL

China's remarkable turn toward pragmatic economic development and acceptance of things Western suddenly developed another dimension in the last weeks of November: an unexpected series of demonstrations called for democracy and freedom of expression in scenes reminiscent of the short-lived "Hundred Flowers" movement over 20 years ago. After the appearance of wall posters in Peking which dared to criticize Mao Tse-tung and Hua Kuo-feng, massive but peaceful crowds took to the streets in support of the PRC's new policies. Citing desire for a "Hyde Park" type of free speech, they mixed easily with foreigners, eagerly discussed China's present situation, and showed that their appetites are whetted for even more change.

Although a lid was pushed on the movement as December began, the episode was a clear indication of Vice Premier Teng Hsiao-ping's strength and of the support for his policies among the masses of China.

In every area of endeavor, Chinese leaders are encouraging the people to "emancipate their minds." In management, in trade practices, even in clothing design, workers have the go-ahead and the incentive to reorganize and to create a more livable China.

The Red Guard youth corps which Chairman Mao used as a human weap-

on against "capitalist roaders" during the Cultural Revolution was just abolished, and the policy of sending city youths to work in the countryside has been eased. Rural trade fairs and sideline production efforts are receiving good press, and personal incentives and bonuses are making a comeback.

On November 15 the *People's Daily* carried a signed article totally repudiating a controversial 1965 piece by former Politburo member Yao Wen-yuan, a member of the disgraced Gang of Four, which was officially described as having triggered the Cultural Revolution.

In Peking in late November, Teng Hsiao-ping confirmed that "an important political meeting" was underway. Teng did not say whether it was a plenary session of the Communist Party Committee, as was generally believed, an enlarged Politburo meeting, or something else. He did reveal, however, that the major aim of the conclave was to examine the policy of the four modernizations (agriculture, industry, national defense, science and technology), and to sort out other smaller problems.

MANAGEMENT: STILL TRYING HARD

As China barrels along, signing more contracts than ever before with the West, and its poor management practices become more visible to world traders, the process of acquiring management expertise continues to accelerate to an even more fevered pitch.

One can say that the first part of this process is receptivity. Another round of press pronouncements in October urged, "It is first of all necessary to wholly emancipate our minds, and the most important thing is to overcome the mentality of small producers."

Another aspect involves law and incentive. The *Kwangming Daily*, in a major article on economic responsibility, said that among Chinese domestic enterprises, "the system of economic responsibility is secured by means of economic contracts signed between suppliers and buyers. The supplier must deliver goods to the buyer according to the date, quantity, variety, quality, and other specifications stipulated in the contract."

Behind the new policy is the hope that "the contract system, which clearly

defines the economic responsibilities between one enterprise and another, will help eliminate dislocations between production and needs, make it possible to plan production according to market needs and insure the planned development of the whole economy." Banks, it has been decided, will supervise the enterprises to make sure they execute their economic contracts. "The bank may give more favorable loan terms to those enterprises which have done well in executing economic contracts and have successfully fulfilled state plans."

A third aspect is profit. Lending more support to China's recent outspoken streak on the merits of profit-making, the *Kwangming Daily* also ran an article asking, "In dealing with hogs, can you avoid losses and increase profits?" Answer: A Shantung county not only could eliminate losses, but since 1966 has reported a profit every year. "The key," insisted this article, along with so many others, "lies in summing up effective business management."

Learning from the West

Yet another aspect is making foreign things serve China. More articles continue to appear praising the advanced technology of Western countries and suggesting that China should "learn from their scientific methods of enterprise management." Quoting Chairman Mao, one piece cautioned, "We must firmly reject . . . all the decadent bourgeois systems . . . of foreign countries. But this should in no way prevent us from learning the advanced sciences and technologies of capitalist countries." After all, the article observed, capitalist enterprise management is way ahead of China in the use of socialized production.

Finally, there is the question of quality. An integral part of improving management is improving product quality. China's factories are currently festooned with banners urging workers to raise the quality level of their goods. Now the effort has been broadened with the introduction of China's first "quality month" campaign—which apparently encountered a few difficulties. It "did not develop evenly and is only a start," NCNA lamented in October. As a result, the State Economic Commission has issued a "Circular on Continuing to Vigorously Fight the Battle of Improving Product Quality." Among other tasks, the circular states that en-

terprises must establish a "rigid" system of responsibility. Quality must be put in first place while product-promoting plans are mapped out.

"All . . . enterprises should establish complete quality control systems, run quality control study classes, [and] raise the standard of management," the article noted.

Unemployment

On a related front, the effort to root out bad management practices has led the Chinese to acknowledge that a problem exists with youth unemployment in cities and towns. It is "a pressing problem," admitted the *People's Daily*, "but it can be solved readily." Perhaps for the first time, the official publication noted that a substantial portion of the 16 million high school graduates sent to the countryside at the behest of Chairman Mao have been slipping back into the cities illegally.

The series of articles stresses that arrangements must be made for the employment of these young people, indicating that the government is no longer so adamant about pursuing the down-to-the-countryside movement. Perhaps, the leaders now seem to agree, these youths can be better utilized in the cities and can help improvement management.

TRADE UNIONS ARE BACK

In October China held its first trade union conference since 1957. Banned during the intervening 21 years because of an emphasis on practical, rather than political, concerns of workers, trade unions have been reincarnated as forums for consideration of the living and working conditions of the masses. All workers will be enrolled.

"The trade union is a party bridge," pronounced Communist Party Politburo member Ni Chih-fu. Its most important and fundamental task is to maintain contact with the masses.

Trade unions will once again be established on all levels in Chinese industry. They will encourage workers to participate in management, organize them to study science and technology, and be concerned about their living conditions. Regarding the latter, Ni said, "The problem is that we have not shown sufficient concern or dare not show concern for the lives of staff and workers."

In a separate speech at the conference, Vice Premier Teng Hsiao-ping

said union officials should make workers feel their unions belong to them. "Trade unions should fight for the democratic rights of the workers and oppose bureaucracy of every kind." In a break with past tradition, he also announced, "Workshop directors, section chiefs, and group heads in every enterprise must in future be elected by the workers in the unit."

Within two weeks of the conference, the All-China Railway Trade Union Congress convened in Peking, the first such single-industry gathering to arise out of the rehabilitation of trade unions.

AGRICULTURE

China's agricultural production in 1978 will register a significant increase over that of 1977, but will not equal the hoped-for 15-million-ton jump which PRC farm planners had publicized earlier this year, said the USDA in mid-November after assessment of various PRC media reports. The New China News Agency in early November announced that, despite the worst drought in 29 years in the middle and lower reaches of the Yangtze River, output of grain, cotton, oil-bearing crops, sugar and others showed a slight increase.

The *People's Daily* on September 30 claimed a more than 10-million-ton increase in the early grain harvest, comprised of summer harvested grains and early rice. But USDA analysts feel that these gains represent the major, if not the total, increase in grain production in 1978. The drought definitely took its toll.

Preparations for next year's grain crop were also impeded by the lack of rain. About 30 percent of the winter wheat was planted in areas where activities were also underway to reduce effects of the drought. The Chinese claimed that 80 percent of the winter wheat in 13 northern wheat-producing province-level units was planted early enough, but US government observers suspect that both the timing and the quality of sowing were basically below standard.

As agricultural achievements lag somewhat behind those of other industries, many Chinese press reports have appeared urging peasants to grow their own pigs and vegetables and sell the goods privately. Chinese officials hope that such a stimulation of morale will lead to a general increase in agri-

cultural production.

At the same time, the PRC's premier model for agricultural emulation, the Tachai production brigade, has not figured so prominently in the national media.

Farm Machines Need Better Care

While lauding modest production increases, the media has recently chastised farm workers for poor care of farm machines and implements. Reflecting the unfortunate truth that full mechanization is still very far away, and that most peasants have no training for or understanding of those farm machines which do come their way, a letter in the *Liaoning Daily* from a worker noted the following problems: no special personnel are assigned to maintain machinery and implements; machinery is allowed to rust and corrode in the open air; tractors are not used for farming while tractor drivers enjoy special privileges; much fuel is lost or wasted.

Also from Liaoning Province comes a recent media condemnation of unauthorized purchase of goods. The Liaoning Provincial Revolutionary Committee, through an October circular, revealed the following problems: some government offices and PLA units are slipping into rural areas to purchase agricultural and sideline products which should only be purchased by the state; some communes and brigades are concurring in the subterfuge by selling such products on the side; and market management is not what it should be. The article stated that serious punishment would be meted out to those guilty of such offenses.

On the innovative front, recent media reports have publicized China's newly developed techniques using atomic energy and chemicals to increase farm production. Through the use of nuclear irradiation Chinese scientists have altered seed genes to breed some 100 new varieties of rice, wheat, maize, cotton, soybeans, peanuts, and cabbage. And in Canton, chemists have planted trees which absorb toxic gases, thereby improving the toxicity levels in the local environment.

ENERGY

As China strives toward the development of 10 new Tachings, press reports describing new and fast-developing fields are becoming more frequent. The three-year-old Jenchiu field on north China's central Hopeh plain is a recent

media star. According to an October NCNA broadcast, mapping of the field's rich reserves took less than a year, and a subsequent campaign in 1976 led to the opening of a group of high-yielding wells, producing from one to several thousand tons a day. By 1977, Jenchiu's crude oil output was already 10 percent higher than its designed capacity.

Jenchiu represents the first discovery of oil in the Sinian stratum of the Paleozoic Era. China's previous geologic finds have been in the Mesozoic and Cenozoic strata. Other projects underway at Jenchiu include two large pipelines and two large crude oil pumping stations. Water injection and acidification of oil seams are in use.

While Jenchiu may be the highest yielding of the new crop of oilfields, an even more recent discovery in the Sinkiang Uighur Autonomous Region may have the lightest and highest-grade crude. In mid-October, visiting Japanese journalists were told that deposits of "ideal" oil in the mountains near the capital city of Urumchi may prove to be rivaled in size only by Taching.

Drilling only began in the second half of 1977 in the southern basin of Sinkiang, but the annual output of the field appears likely to exceed the combined yields of two other existing oilfields in the region. China has begun building a railroad to these remote fields to facilitate future transportation of crude.

In a related dispatch, China announced in early October the discovery of substantial oil deposits on the Chaitamu plateau in the central province of Chinghai. A Peking report said that the plateau also contains coal and "minerals more valuable than gold."

An update on China's favorite oil field, Taching, in *Peking Review* No. 29 points out that this industrial model has made 32,300 scientific research achievements and technical innovations since its opening in 1960, 50 of these rivaling advanced world levels. These include a method for separating p-xylene from xylene, and techniques for maintaining high and stable well flows. Taching has 2 designing institutes, 23 research institutes, 1 petroleum institute, 30 workers' colleges, and many evening schools.

Autumn Statistics

Recently released eight-month oil industry figures claim that China's oil

drilling speed hit a record for the period, with 88 percent of the yearly quota completed. This is a whopping 77 percent above the same time span in 1977.

The country finished its 1978 oil drilling plan almost two-and-a-half months early, with all 288 wells drilled at Taching "up to standard." For the same period, China produced 11 percent more crude oil and 14 percent more natural gas than last year. These figures, oddly, are exactly the same as the percentage increase for the first half of the year (reported in *CBR* 5:5). By the end of October, well drilling had exceeded the state plan by 14 percent. In ocean drilling, the 32190 team in the Pohai Gulf completed three deflected directional wells, each 3,400 meters deep, from the same platform.

New Pipeline

In another significant step forward in the oil industry, the PRC has announced the completion of its first north-south pipeline, stretching over 1,000 km. from Linyi in Shantung to Nanking Harbor in Kiangsu. The pipeline is carrying crude from North China and the Shengli field to Nanking, where it is shipped along the Yangtze River to Shanghai, Chekiang, and Wuhan. It is served by many pumping stations of varying sizes, and has a modern crude transport station.

According to New China News Agency, the addition of this pipeline to China's existing system will improve the distribution of oil in the middle and lower reaches of the Yangtze River and will relieve the pressure on railways in east China.

China is sinking to new depths: an oil drilling team in Szechuan recently drilled a well of 7,175 meters. This is only the second well of such depth in the country. The first was drilled by the same team in July 1977, to a depth of 7,058 meters.

Coal Output Up

In the coal industry, October NCNA reports lauded production increases for the first eight months of the year. They said that China's output of raw and dressed coal topped state quotas, and were 17.5 and 35 percent higher, respectively, than for the same period in 1977. A total of 17 new coal pits have gone into production, and 40 percent more production capacity is expected from new mines this year over last.

NCNA also reported that large-scale mine construction is going on at the Huainan, Huaipai, Yenchow, and Huolinho coal fields, and that coal output has doubled since 1965 in nine provinces. Finally, further mechanization is under way, and the use of coal extracting machines has been extended to over 60 mines. Nine training schools for modernized coal extraction will be set up, and 58 technical schools reopened, expanded, or newly built to enroll over 10,000 students.

At the same time that the government was praising coal output, however, it berated some mines for the low quality of coal produced and for cheating on tonnage in the sale of coal. The Ministry of Coal Industry has dispatched cadres to solicit opinions from consumers on these problems.

INFRASTRUCTURE

Railroad development will be the bailiwick of a new chief, the New China News Agency announced in November. Newly appointed as Minister of Railways is Kuo Wei-cheng, formerly a vice minister of railways. He replaces Tuan Chun-i, who has become the Communist party and administrative head of Honan Province.

New Rail Lines

Kuo will preside over the acceleration of railway development goals which, announced only last April, were speeded up again at the end of September. Instead of building only six new trunk lines and "transforming" nine major lines by 1985, the PRC has upped the quota to construction of ten new trunk lines and modernization of eight old lines and seven "key" stations.

The new railway projects are designed to connect coal-producing centers, iron and steel bases, and grain centers; to open up new mineral deposits and water resources; and to link coastal cities and inland industrial cities. Plans for double-tracking and for electrification are also being stepped up. Four new electrified lines are underway, and automatic traffic control systems and electronic computers will be employed.

The emphasis is on the ten new lines and eight existing lines, which include:

- Sha-Tung line, from Changping, Peking, to Tungliao City, Kirin. This 870-km. railroad is seen as another

communications line linking the capital with the highly industrialized northeast region. The Sha-Tung line traverses difficult sand and wasteland conditions. Four years of hard work have already led to the building of 114 tunnels, 468 bridges, and track-laying for the entire length. Trial operations began toward the end of 1977, and construction work is in the final stage. "The railway will be ready for use in the near future," reported NCNA.

- Chih-Liu line, from Hupeh to Liuchou, Kwangsi, planned to extend 853 km. in length. It will link the Chiaotso-Chihcheng line in the north and the Hunan-Kwangsi line in the south.

- Tai-Chiao line, from Taiyuan, Shansi, to Chiaotso, Hunan, which links the northern Tung-Po line with the southern Chiao-Chih line, and will create another north-south transport artery along which coal from the mines of Shansi and Honan will be shipped directly.

- Tsinghai-Tibet line, whose 653-km. long first stage connects Haerhkai with Koerhmu, Tsinghai. The entire railway will be built on the Tsinghai-Tibet plateau, over 3,000 meters above sea level. Already built on their line is the 4,000-meter-long Kuanchiao Tunnel, and 1,000 km. of track on salt lake road beds.

- South Sinkiang railway, from Tulu-fan to Kuerhlo in Sinkiang, which is 474 km. in length. Its completion, noted NCNA, will greatly accelerate the economic construction and development of this farthest northwest of China's provinces.

More Road Transport

Road transport will also be accelerated. China has set up a new organization to study ways to speed up road development. Pan Chi, vice minister of communications, has been tapped to head the new society, which will have four committees: road construction, bridge engineering, road transport and machinery, and a road construction journal. The organization intends to draw on foreign experience and technology to achieve its aims.

At the same time as the road society's formation, China officially opened one of its biggest new roads: the I May Road, Central, of Changsha Municipality, which connects the I May Road, West, and the I May Road, East. Built in five months, the road is 4,260 meters long and 60 meters wide.

LIVING: EXPECTATIONS ARE RISING AS CHINA HEARS ABOUT THE WEST

In an unprecedentedly favorable view of the US, the official *People's Daily* in November printed a series of articles describing American lifestyles, following the visit of an NCNA delegation to this country. For the first time, the Chinese masses were enthusiastically told about the widespread use and large number of shows on American TV, about skyscrapers in US cities, about automation for vending machines and elevators, about the speed with which news is processed in American newspaper offices.

The articles also examined the less glowing sides of life in America, as described to them by Americans: crime, prostitution, poverty, lack of morality among youth. Despite the presence of these critical portions, the series of articles, which have now reached the bulk of China's enormous population, will surely be the first glimpse of a hitherto unknown high living standard—and will probably make PRC citizens hunger for more for themselves.

Inflation

In another first, China is acknowledging that inflation has become a problem for the working classes. Up until now, the Peking government proudly publicized the country's economic stability and the continued low prices of goods. But in late September *People's Daily* published a letter from two Peking residents complaining about the high prices of vegetables and fruits. They pointed out that the price of grapes has doubled to 21 cents a pound, that tomatoes have also doubled in price, and that the cost of green beans, cucumbers, and lentils is rising steadily. Because the letter appeared in the Party's official mouthpiece, it is clear that it is now safe to acknowledge the existence of such problems.

More Housing

Prices may be up, but so are the government's efforts to satisfy consumer demands. NCNA recently announced that more urban housing is to be constructed in the next seven years than was constructed in the past twenty-eight, which will mean more than the total of all city housing in China prior to the founding of the PRC. The broadcast revealed that both state and collective enterprises may now use part

of their profits to build housing for their own workers and staff, in addition to building from central and local government funds.

A housing conference in September worked out a plan to increase investments in city dwellings, but the press account openly admitted that "housing is still far short of the needs in many cities and towns." The conference decided to set up special companies to build urban residences and drafted measures for supplying building materials.

Peking is also publicizing new efforts to mechanize store operations. For example: electronic scales, calculators, and vending machines in Shanghai shops; machine-processed noodles, steamed bread and dumplings in Peking, where wheat is the staple food; digital-controlled devices for measuring out herbal medicines for prescriptions; vending machines and automatic bag-shaking devices in grain stores.

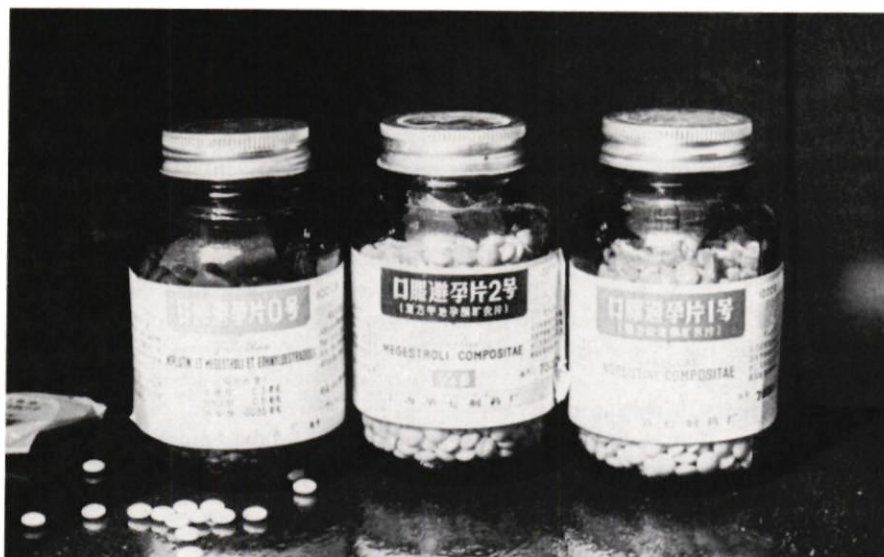
Social Issues

Raising the standard of living can only be accomplished if the population can be held steady. Visitors to Peking in September reported seeing signs pointing to the start of another nationwide birth control campaign. Banners urged "Marrying Late and Planning One's Family is Glorious" and "Let Us Work Toward the Great Cause of Planned Population Growth."

An American family planning specialist who visited China this summer recently reported on the various types of pressure on the people to stick to birth control goals. When coercion is higher birth rates decrease, but when campaigns stop, birth rates go back up. Methods include posting signs in factories charting birth plans of individual workers, noting the type of birth control they used, the number of children they had, whether they were pregnant or were planning to be sterilized. In cities, people who have not reached the proper age are not granted separate housing, and, in the countryside, grain and cloth rations are withdrawn as a means of enforcing birth control. The latter is a violation of state policy.

In most of China, the IUD is the most popular form of contraception, while in Peking the pill and condom are more widely used. In some factories, men are encouraged to accept sterilization.

Besides bad birth control practices,



Chinese birth control pills.

male chauvinism, too, must be eliminated from the new China springing forth. Two marital and sexual problem therapists from California who visited China in November found that chauvinism is the prime cause of divorce. Although divorce is discouraged in the PRC, and its incidence low, judges in a People's Court said that when it does occur, the most common reasons are the husband's failure to help at home or to treat his wife as an equal.

Back to Dancing and Stylish Clothing

Dancing is making a comeback in China's capital. After being denounced for over 10 years as an example of Western immorality, dancing once again received an official stamp of approval when delegates to the 10th National Youth Conference wound up the program by waltzing around Peking's Capital Stadium. Just after that, the nationally-distributed magazine *China Youth* described dancing as "a healthy and relaxing form of recreation suited to young people," and proclaimed to youth around the country that a dance had been held in Peking.

Those attending dances, or just going to work, have now received the green light to don more stylish outfits—if they can find them. Supply has fallen far behind the skyrocketing demand, but the government is urging clothing departments to keep up with consumer desires. Men's Western suits, women's fur-lined coats, and other items are no longer denounced. Even the close-fitting, traditional *chipao*, long regarded as a symbol of earlier decadence,

may be back. A November 20 NCNA broadcast gingerly mentioned the issue, noting that "quite a few garment plants still do not dare to produce the *chipao* . . . because they are afraid they will be accused of 'promoting bourgeois fashion.' In view of this, it is necessary to continue the exposure and criticism of Lin Piao and the Gang of Four."

Foreigners, too, may again hold public dances. The first was held in early November at the International Club of Peking. The club's announcement, however, warned foreigners planning to attend that no dancing with Chinese girls would be allowed, as the club is exclusively for foreigners.

SPACE AND TELECOMMUNICATIONS: GETTING MORE PRESS

China has successfully launched a large number of guided missiles and satellites in the past few years, the New China News Agency reported on November 15. According to foreign observers, this is the first time that the PRC has publicly announced such launchings.

The credit was given to the 2nd Company of "a certain unit" of the National Defense Scientific and Technological Commission, located somewhere in the Gobi Desert. The company has worked for nearly 20 years at "the glorious task" of test-firing guided missiles and satellites.

According to the report, China's first guided missile was launched in 1960, 20 days after the Soviets pulled out. In 1966, the company, with other help, launched a guided-missile nuclear

weapon, and in the spring of 1970, the PRC's first man-made earth satellite.

Foreign sources believe that China has conducted 22 nuclear tests since 1964 and launched six satellites since 1970. They conjecture that the PRC started deploying medium-range ballistic missiles, possibly with a range of up to 1,000 miles, four or five years ago. It is also believed that China has started manufacturing intercontinental ballistic missiles with a range of more than 3,000 miles.

Satellites

In the past few months, the Chinese have also publicized their work on communications earth satellites, the first one to be launched by 1980, and the second in 1981. On the first, the booster system will have a power comparable to the General Dynamics Atlas-Centaur launch vehicle combination. It was designed for a launch weight of 440,800 pounds and a liftoff thrust of 617,120 pounds, according to one report. Its first two stages will be powered by nitrogen tetroxide and unsymmetrical dimethylhydrazine.

Telecommunications operations in the PRC were put under a new leader in October. Wang Tzu-kang, formerly vice minister of the Fourth Machine Building Ministry, replaced Chung Fu-hsiang, who had not appeared in his capacity as minister for several months.

IRON AND STEEL: PRODUCTION UP

Chinese steel workers met this year's production targets for steel and rolled steel in mid-November, the Ministry of Metallurgical Industry announced on November 18. Output was termed the biggest annual increase ever seen in China's iron and steel industries.

Steel production hit 28 million tons, 4 million tons more than for all of 1977. Rolled steel reached 19 million tons, nearly 3 million tons over last year.

On November 5, the PRC's iron production reached the 29,500,000-ton goal for 1978, more than 5 million tons over the 1977 goal.

An NCNA report said the ministry revealed that production costs had dropped, allowing the iron and steel industry to meet 1978 state targets for profits three months in advance. Chinese steel workers are now aiming for 30 million tons of steel to be produced by the year's end.

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Importer's Notes

Briefly:

- **Countertrade enters the scene with a bang, and a few whimpers.**
- **First imports of PRC oil reach US market.**
- **PRC end-users signing contracts. FTC role changing.**
- **China softening up the US market with exclusive spirits; while US importers help build China image with new promotional ideas.**
- **MFN for China? The time may not be far off.**
- **1979 delegations from China announced.**

FTC BRANCHES AND END-USERS MAY NOW SIGN CONTRACTS DIRECTLY

Since July 1978, China's foreign trade officials have risen to the challenge issued by the Ministry of Foreign Trade to entertain greater flexibility in international trade. Voiced quietly by the foreign trade corporations themselves, and more loudly by the industrial ministries, is the hint that China's whole foreign trading system is about to be revolutionized.

The process has already begun: End-users, from individual factories to research institutes, are being encouraged to take an active role in foreign trade negotiations.

On November 3, 1978, NCNA carried the story that 26 factories producing for export and a silk corporation under the Shanghai Textile Bureau had been given permission to "deal directly with foreign businessmen." The report has subsequently been confirmed by National Council staff visiting Shanghai in November. All ordinary export orders can be signed, as the NCNA report editorialized, "on the spot."

Branches of FTCs have become highly active, to the extent of pushing for independence from head offices in trade in most commodities. The situation is different for each FTC; in CHINATUHSU, tobacco and some lines of carpets may be retained under the control of the Peking head office;

at CHINATEX the head office is in charge of importing textile equipment and plants, and arranging countertrade deals, but conventional contracts may be signed by all the branches; branches are signing contracts at INDUSTRY and CEROILS.

Organizing their own technical exchange programs independently of FTC head offices and the China Council for the Promotion of International Trade may be the next move for the branches.

Major changes in pricing policy and marketing are afoot that will compel the FTCs to form new relationships with production units. In late October, the news was broadcast on Kwangtung Province News Service that Canton's Foreign Trade Department had "improved production of export commodities by switching from the method of planning sales according to output quantity to planning production according to sales forecasts." This will mean that FTCs will work more closely with factories and workshops, providing market forecasts and setting production targets based on anticipated business. It could mean that the FTCs will take on more of a consulting and research role and quietly drop more concrete business activities.

In the future, FTCs may be absorbed into the industrial ministries, sacrificing all or part of their commercial functions. The latest addition to the FTC family, EQUIPEX, represents a departure from the standard FTC setup that could be the shape of things to come.

Unlike the other FTCs, EQUIPEX is not an intermediary between producer and buyer but the direct agent of the producer, which in this case is the First Ministry of Machine Building.

Representatives of production departments from the First Ministry of Machine Building, responsible for most non-military machine making in China, will take part directly in EQUIPEX contracts.

Describing the creation of EQUIPEX as a "reform in the foreign trade management system," a November 7, 1978, article in the *People's Daily* lauded the advantages of the new practices.

It pointed out: "This is only the beginning and we still have to constantly sum up experience in actual practice. What we can say now is that the present system can enable the production departments to talk directly

with businessmen about specifications, fully grasp the international market, and better fulfill their export tasks. By simultaneously grasping production and export, the new corporation can base production on sales and combine production with sales."

How far the ministries go may be limited by their ability to coordinate among themselves their sales and buying work. Duplication of at least one import order by three separate ministries has been reported by a US construction equipment executive. And more may follow before the ministries finish sorting out their affairs.

In the meantime, the foreign merchants flocking to Canton and Peking to see for themselves what has been heralded as a China trade boom are tripping not only over each other but over the tangled skeins of responsibility at Erh Li Kou, center of China's foreign trade administration.

CHINA LIGHTS UP LOS ANGELES

The Coastal States Gas Corporation has become the first US customer for Chinese crude oil, following negotiations in Peking that lasted 10 days.

With the signing of the contract on November 17, 1978, the US was added to the growing list of customers for China's low-sulfur, light-gravity crude—now including Japan, the Philippines, Thailand, Brazil, France, and Italy.

The contract was the first China has inked with a nongovernment agency for exports of Chinese crude oil, except for two small orders placed by an Italian firm.

Coastal States' first order of 500,000 metric tons, with an estimated value of \$50.4 million, will be delivered between January and June 1979. Destined for the company's West Coast refinery at Hercules, California, the Chinese oil will be used to fuel power stations of the Los Angeles Water and Power Company and San Francisco's Pacific Gas and Electric Company.

Chinese oil will supply approximately a quarter of the Hercules refinery's supply needs in the first half of 1979. Company public affairs spokesman Will Osterloh explained that company interest in the fuel was sparked because of its low-sulfur content. A sweet crude comparable to Indonesia's Minas variety, Chinese oil from the Taching field in northeastern China produces a clean-burning oil

capable of meeting California's strict environmental standards.

The oil will be shipped in five or more shiploads from China's Talien port, the exit port for oil lifted from Taching.

Julian Sobin, chairman of Sobin Chemicals, a subsidiary of the Associated Minerals and Metals Corporation, cosigned the contract with officials from Coastal States.

An experienced trader in the chemical trade with China, Sobin was first contacted by the crude oil marketing arm of SINOCHEN in July 1978 about the possible sale of Chinese oil to a US company. Since the summer, other US brokers including an automotive manufacturing firm and a mortgage banker have offered Chinese crude on the US market, but Coastal States is the first US company to sign a contract.

Additional oil transactions are being discussed by Sobin Chemicals, and Coastal States is confident that its initial purchase will lead to "considerable future business," according to Osterloh. Shipping costs for the Chinese oil are competitive with oil shipped from Indonesia, currently Coastal States' major Asian supplier.

COUNTERTRADE BLUES

In the course of searching for ways to make purchases without quickly exhausting hard-currency coffers, the Chinese have plunged wholeheartedly into various forms of countertrade. The rites of passage in countertrade have come to an end with the signing of numerous such contracts in recent months; 12 by Canton's Foreign Trade Department alone, according to a recent newscast. But events may be moving too fast for some FTCs, and certainly for some of their foreign partners, the countertrade blues are starting to set in.

A series of articles in *Ta Kung Pao*, a PRC-leaning newspaper in Hong Kong, graphically explored the confusion of foreign businessmen seeking to negotiate countertrade arrangements with China. Among the more important points raised were:

- Who owns equipment delivered under terms of a compensation contract, in which payment is delivered in installments through manufactured products, before the installments are completed?

- If it is the PRC that assumes own-

ership, then is it still up to the foreign company to provide spare parts, servicing, and liability insurance?

- Financing is a problem. The ordinary route of raising money through mortgaging the equipment is precluded if the party doing the borrowing no longer has any claim on the property. The seller is thrown back on his own resources to support costs before he begins to receive the return on his investment.

- Special arbitration procedures will have to be developed to cope with the crises peculiar to countertrade (shortages of raw materials, refusal of sellers to provide contracted parts or raw materials, failure of the buyer to meet product specifications, price fluctuations affecting fulfillment of payback schedules, other disputes).

- The difficulty of obtaining travel visas to China means that it will not be easy to implement technical cooperation clauses. The article claims that entry procedures from Hong Kong to Shanghai now require a total of 10-12 days. "What may be a very small technical problem," comments the writer, "which could be solved on the spot in 2 or 3 hours, can possibly cause work stoppages for half a month."

- There is continued misunderstanding of the application of US tariff regulations to articles produced under compensation arrangements with US companies (see *CBR* 5:5, pp. 44-46, for the text of a memorandum prepared by the US Consulate General in Hong Kong on the tariff status of US goods processed in China).

While the difficult procedural issues of countertrade are being debated by the upper echelons of the FTCs, at the grass roots level FTC officials are playing a waiting game. Foreign companies are being allowed to propose, propose, and propose. The FTCs are evidently hoping that at least a few of the ideas will match up with the needs and capabilities of end-users, but in the meantime, foreign businessmen are uncertain how to respond.

So far, end-users and FTC branches are refraining from the use of countertrade or compensation. This, according to recent travelers, is still a job for the head office in most cases. Meeting with the Shanghai Garment Branch of CHINATEX, National Council Import Services Director Suzanne Reynolds learned that the emancipation stopped short of buying equipment or

indulging in cooperation or product buyback arrangements.

Whence countertrade? is the plaintive song being sung by foreign traders and FTC officials alike. Until the dust clears, the pace of new developments is likely to be slow. The Ministry of Foreign Trade has made no move to set up a separate corporation to deal exclusively in countertrade, an idea whose time seemed to have come, according to reports from Peking in September.

MFN FOR CHINA?

As any importer knows, life would be much easier, and trade with China bigger, if China had Most-Favored-Nation (MFN) status.

Case examples of importer sufferings stemming from discriminatory tariffs on PRC imports are legion. Rates applied to imports from the PRC and most other Communist countries are up to 80 percent higher than rates on comparable products from MFN countries.

Because the classifications on which US Customs officials base their assessments are not always clear to importers, further mishaps may arise.

The import trade in antiques is particularly subject to confusion. Handicraft products over 100 years old enter the US duty-free, regardless of the MFN status of the exporting country. But Customs officials and the importers don't always see eye to eye on what makes an antique.

An importer in Dallas brought in a shipload of embroidered plaques in 1977, on which he anticipated a tax for restoration work (new material applied to the embroideries as backing), but thought would otherwise enter duty-free. He had a certificate verifying the age of the pieces from the China Light Industrial Products Import and Export Corporation. Later, the firm of Francis Whitmeyer, Antiques, backed up the Chinese finding with independent testimony that the embroideries were over 100 years old.

But Customs disagreed, and a bill for tariff duties that had been \$3,000 suddenly became \$18,000. The difference between the two bills represents the inequity of the tariffs applied to the PRC. The classification which Customs decided to use carried with it a 90 percent ad valorem tax for goods from non-MFN countries.

That imports from China would be much greater if MFN were extended is

the contention of two recent economic studies. Using different modes of analysis, and looking at the trade in two different years, 1975 and 1976, the authors conclude that Chinese exports to the US would have been 50-90 percent higher in 1975, and 30-34 percent higher in 1976, with MFN.

Both studies appear in the just-published volume of China's economy sponsored by the Joint Economic Committee, *Chinese Economy Post-Mao: Policy and Performance* (Washington, US Government Printing Office, November 9, 1978). While their arguments differ in details, the studies agree that MFN would have a significant impact on Chinese exports to the US, and that the impact would be uneven, with trade in some products benefiting more than others.

Out of 24 leading Chinese exports to the US, 16 are like antiques, exempt from discriminatory tariffs. This "is strongly suggestive of an MFN restraint on the commodities not traded, or traded at low levels," say Philip Lincoln and Jim Kilpatrick, authors of "The Impact of Most-Favored Nation Tariff Treatment on US Imports from the People's Republic of China."

For the group of 24 leading products actually imported into the US from China in 1975, the rise in the value of

imports as a result of MFN, the authors hypothesize, would have been small—no more than 5-7 percent.

However, with the removal of artificial tariff barriers, the product mix of PRC exports to the US would almost definitely change. In the second part of the analysis, US imports from China are compared with the major PRC exports to the European Economic Community (EEC). Surmising that US imports from China could have achieved the same mix as EEC imports from China in 1975 if China had MFN, the authors estimate that "normalized" trade would have been 55 percent higher overall, and that trade in products subject to ad valorem tariff differentials might have risen by as much as 90 percent.

Raffel, Teal, and McQueen, authors of the second piece, "The Impact of US Most-Favored-Nation Status on PRC Exports," are relatively modest in their projections, estimating only a 30 percent rise in PRC exports to the US as a result of MFN. Basing their analysis on a comparison of Sino-US and Sino-EEC trade in 1976, the writers produced an estimate of the trade increase using only the actual combination of products for that year. But, like Lincoln and Kilpatrick, they think that MFN would change the types of goods

China sells to the US. The PRC might concentrate on exporting the products which benefited the most from lowered tariffs. "Such an alteration of export product mix could eventually increase the MFN impact on US imports above the 30 percent estimate," they admit.

Neither set of authors thinks that increased Chinese exports will have negative effects on US domestic industries. According to Kilpatrick and Lincoln, the outside limit of worker displacement as a result of MFN for China would be 6,000 workers. Raffel, Teal, and McQueen think that increases in imports from China would displace other exporting countries, not US makers.

Fruits of MFN

What are the products that would benefit most from MFN? Basically, apparel and light manufactures (toys, sporting goods, etc.), Lincoln and Kilpatrick say. The two studies produce slightly different lists of the individual products that would gain most from the end of discriminatory tariffs against the PRC:

- Manufactured articles, clothing, chemical products, non-cotton textile fabrics, footwear, toys, pottery, made-up articles and textile articles, organic chemicals (Lincoln and Kilpatrick).

MORE CHINESE CANNED GOODS REGISTERED WITH FDA

As most traders were on their way to the 44th Canton Trade Fair, the registration of four additional Chinese canned goods was announced by the Food and Drug Administration (FDA). Bringing the list of FDA-approved Chinese canned foodstuffs to 48, the new ones are:

CEROILS Branch	Factory and FCE Number	Item	Can Size
Kwangtung	Kwangtung Cannery #06188	Fried dace with salted black beans	149 x 73 x 46.5
Chekiang (exporting through Shanghai)	Hangchow Canned Food Factory #07091	Fried fish with edible vegetable oil and soy sauce	102 x 53
Talien	Luta Canned Food Factory #07377	Top shell in soy sauce	77 x 81
Fukien	Foochow Canned Food Factory #07230	Stringless green beans (whole)	77 x 114
		Mushrooms (whole, sliced, pieces)	86.5 x 117
			77 x 61
			68 x 101
			77 x 110
			102 x 124
			156 x 173

Source: FDA, Data as of October 1978
Data in millimeters (1 millimeter = .03937 inch)

• Household linens, basketwork, silk fabrics, medicaments, porcelain and chinaware, underwear, cotton fabrics, dried vegetables (Raffel, Teal, and McQueen).

How close is the US to granting MFN to the PRC? It might be very close indeed. The hangup is not normalization, but whether China lives up to the human rights standards of the Jackson-Vanik amendment to the Trade Act of 1974, which disallows MFN to countries with restrictive immigration policies. China's attitude toward travel abroad by students and professionals, at least, has changed radically in the last six months. Pat Derian's Office of Human Rights at the State Department has commended China for its "acknowledgement of past violations" of human rights (11/28/78). And with visits to China by Cabinet secretaries whipping up expectations for increased US exports to China, some of the legislators and policy-makers may begin to work on making things easier for companies importing from China as well.

AUSTRALIA GIVES CHINA GSP

In the wake of the affirmative decision on September 19 by the EEC Council of Ministers to lower certain quotas on PRC imports, Australia has decided to give China GSP.

The initials GSP stand for Generalized System of Preferences. Australia and other countries have developed a system to help developing countries improve their exports by eliminating tariff duties on selected goods.

The announcement, made by Australian Trade and Industry Minister Doug Anthony on October 11, followed his meeting in Canberra with PRC Foreign Trade Minister Li Chiang.

If the US granted MFN to China, extending GSP would be the logical next step. The conditions for granting MFN and granting GSP are roughly the same: the country under consideration for preferential treatment must come up to the human rights standards of the Jackson-Vanik amendment. Economists Helen Raffel, Robert Teal, and Carol McQueen, in a recent article on the effects of extending MFN to China, estimate that PRC exports to the US would rise by 34 percent if GSP were extended.

The GSP system, which went into effect in the US on January 1, 1976, currently provides duty-free treatment for some 2,700 items from 40 dependent

territories and 98 nations including South Korea, the Philippines, Taiwan, and Singapore in East Asia.

TSINGTAO EXCLUSIVE

A New York company claims that it has signed an exclusive agreement with CEROILS to market Tsingtao Beer in the US. Monarch Wine, Inc., signed the contract in late September at the conclusion of a three-week visit to China by Leo Star, the company president. Monarch hopes to import about 250,000 cases of the famous suds from Shantung Province in 1979 and thinks it will be about one million cases annually in a few years, which would easily place Tsingtao among the top 10 imported beers. The first deliveries should arrive in March.

At least eight other companies have reportedly held licenses and approved labels for marketing Tsingtao Beer in the US over the past several years, but only two or three of them apparently were actively engaged in importing it. And, according to a Monarch official, much of the Tsingtao Beer currently imported into the US has come via Hong Kong and Singapore distributors. He added that Tsingtao beer marketed here by Monarch will have a new, specially designed blue label instead of the customary green label and that the label will say the beer is distributed exclusively by Monarch.

Monarch also agreed to import a certain amount of Tsingtao Vodka beginning in 1979, though the official refused to say how much it would be buying. Monarch's main efforts, however, will be directed toward beer distribution. Monarch is one of the 10 largest wine and spirits companies in the US.

BUILDING THE CHINA IMAGE

Since it was first transported over the old Silk Route by caravan to the Mediterranean, China's handwork in the form of porcelain, carpets, and textiles has fired the Western imagination. Visions of a far Cathay were—and are—conjured up by a brush-painted teacup; a brilliant embroidered jacket; a soft carpet with emblems of butterflies, bats, and the Chinese character 'hsi' for happiness.

Cathay is not so far away anymore. But the old traditions are carried on in village, commune, and urban factory. The problem that besets marketing strategists today, both in the PRC and abroad, is developing a China

image that both speaks for the distinguished, traditional folk crafts and appeals to modern consumer tastes.

Helping the Chinese solve the issues of fashion forecasting, putting together product packages, and finding a niche for Chinese products among consumers who use them for other than the intended ends are foreign importers for whom the China Look means business.

Textron: Orientation

Yupin Mar, Director of Trade Development at Textron International, is Chinese herself, and perhaps in a better position than most to comprehend the way the Chinese see the US market.

The Chinese are very open and eager, she notes, for information about color trends in US fashions, the development of accessories to accompany fashion looks, and the perceptions US consumers have of Chinese products.

Mrs. Mar's observations apply strictly to the Chinese trading officials of 1978. For four years she has tried, without success until now, to educate her PRC trading partners about the fine points and idiosyncracies of the US market.

But in October 1978, a Chinese market survey team from ARTCHINA, traveling in the US under National Council auspices, expressly asked for a return performance of Mrs. Mar's lecture on fashion forecasting and color trends.

On October 3 and 4, in a too-brief talk session that Mrs. Mar describes as "superficial" and in a walk-through of showrooms of Textron's Gorham, Sheaffer-Eaton, and Talon divisions, she used her background and wide experience of the trade to open a window for the Chinese on the way things work in America.

"America is in the 'me' generation," she told the Chinese. "American people relate more to objects (than do the Chinese). When they dress or furnish their homes, it's a statement of themselves."

In the course of the two-hour talk, most of the Chinese questions centered on American perceptions of Chinese products. Illustrating her points by discussing product lines handled by Textron, Mrs. Mar explained how Textron blends Chinese products with US components to develop items unknown to the Chinese consumer market. Since Americans have much leisure time, she told the group, prod-

ucts like adult games, fancy stationery, and cards enjoy great popularity. Textron's Sheaffer Eaton Division imports hand-painted writing paper and puzzle pictures from the PRC, which are further processed in the US using the familiar packaging and finishing details favored by the American consumer.

"You must be very Chinese and at the same time very universal," advised Mrs. Mar on the problem of how to work out the details of a fashion package. And the Chinese seemed ready to listen.

Putting Together a Chinese Look: Noble Trading Company

Coming at the problem of assembling a China Look from another angle is the Noble Trading Company, a small trading company whose work has caught the eye of major retailers. In November and December, Bloomingdale's opened store-wide promotions in Washington and New York based on the company's high fashion look, and Bullocks-Wilshire was scheduled to follow shortly with a West Coast campaign.

Developing an aesthetic perhaps verging on decadence in the eyes of the Chinese, the Noble Traders have combined Chinese-crafted antique and modern jewelry and embroidery-work with Western styling. "The best way to go with Chinese fashion is to make it fashionable," says Noble guiding genius Baba Groom. Since the company was established 16 months ago, Baba and partners Leslie Schweitzer and Martin Klingenberg have spent a total of 3½ months in China seeking

the materials to feed US fashion whimsy.

What they arrived at after months of effort was a mixed collection of antique and modern jewelry designs, evening bags, jewel-like basketry, and wicked-looking antique fingernail guards, with designer silk caftans thrown in for good measure.

Some of the jewelry, and most of the embroidery, was reworked once it was brought back to the US. Antique, amethyst-studded Chinese baby bibs, from the days of the high-living gentry class in China, have become elegant neck-pieces fit for gowns by Dior or Halston. Straw baskets with woven designs of parrots and goldfish become disco bags. And so it goes, in the Noble Trading Company.

And if you should discover the legend, "3 Noble Traders say precious Chinese jewelry at Bloomie's in your future," when you open your next fortune cookie, well . . .

Chinaware: Taking Advantage of the China Look

"This is Chinaware," the promotional copy for Viceroy Sportswear's new line of sportswear reads. The very same clothes worn today in the People's Republic of China . . . Let the mystery, the excitement, the sheer fashion magnetism of this profitable new line create an event in your store."

Viceroy's tactic, and one which promises to be highly successful, is to use the Chinese reputation for hard work and rugged endurance—shades of Taching's Iron Man Wang—to sell clothes for sports and outdoor use.

The photo spread that goes with the Viceroy ad, aimed at the wholesaler market, shows hardy young Americans, dressed in padded jackets, cone-shaped Chinese peasant hats, and cloth shoes stepping off the pier from a Chinese junk anchored at New York's 23rd Street Marina. Underneath their Chinese jackets, the men have on plaid flannel shirts, and the female models in no way look sexless, despite the box lines and trousers.

The new Viceroy line, inaugurated August 1978, includes quilted Mongolian jackets with mandarin collars and closure; cheungshan jackets, boxy with button closures, mandarin collars, and lots of pockets; workers' pleated trousers with self belts and slim legs; pants that tie at the waist and

ankles; unlined cotton jackets with hip-line slits; and reversible quilted vests to be worn, Chinese style, under jackets.

Working With Others: China Enters the Age of Madison Avenue

Madison Avenue, move over. The first ad placed by a Chinese enterprise has appeared in a foreign publication, according to sources in Hong Kong.

Appearing in the November 21 issue of the *South China Morning Post*, an English-language publication based in Hong Kong, an ad placed by a pyjama factory in Canton claimed that it could produce "flannel pajamas at the keenest prices." And elsewhere, some FTCs are trying to help US companies promote their products by providing samples for exhibitions, allowing companies to photograph in China for shows, and, in some cases, providing discounts for lines which are used in promotional projects.

This fall, *House and Gardens* was exposed to super-special treatment when it traveled to China for a photo spread on Chinese arts and crafts. In perhaps the first example of a cooperative promotional venture, photos of Chinese-made jewelry and fashion wear were shot against a backdrop of typical Chinese surroundings.

The message is beginning to get across. The day may not be far off when China mounts its own promotions in the shopping plazas of the world.

DELEGATIONS 1979

While details are not yet finalized, FTC headquarters in Peking have provided information about at least 12 selling delegations that will travel to the US in 1979 under Council auspices.

CHINATEX will send three delegations, on silk, garments, and piece and greige goods.

INDUSTRY is planning three trips as well, on leather shoes, cloth shoes, and one other topic, yet to be decided.

From CEROILS will come a delegation on canned foods, and another on wines and spirits, both in the first quarter of 1979.

CHINATUHSU, MINMETALS, SINOCHEN, and ARTCHINA are planning to send delegations but have not yet determined product priorities.

Importer Services will convey further news about upcoming delegations to member companies as soon as it becomes available.

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The China Look from Noble Traders.



China International Notes

GENERAL

France signs \$14 billion trade agreement • China declares new policy on joint ventures • PRC and Japanese firms will exchange offices in Peking and Tokyo • Peking claims record exports, but is mum on imports • Chinese trade leaders circle the globe, while overseas trade delegations pour into Peking • Japan does record trade at Canton Fair.

SINO-FRENCH AGREEMENT CALLS FOR INCREASED TRADE, A-PLANTS SALE

China and France signed a seven-year framework agreement on December 4 that calls for almost \$14 billion in trade between the two countries. French sales would presumably include two French-built nuclear power plants. The agreement was signed in Peking by French Foreign Trade Minister Jean Francois Deniau and Chinese Foreign Trade Minister Li Chiang in the presence of Teng Hsiao-ping.

Teng reportedly told French journalists present that the two nuclear power stations alone would cost some \$4.5 billion. But France must first receive permission from the US before the sale can go through, since Framatome, the French nuclear firm that would build the plants, licenses the technology from Westinghouse. The State Department indicated in November that it would not object to the sale provided that France and China work out suitable safeguards to ensure that the plants will be used only for peaceful purposes. China has in the past refused on-site inspections required by American law when American firms export nuclear technology, and thus Westinghouse was barred from making the sale itself. Although the French are not required to conduct on-site inspections, they must get the Chinese to agree not to extract plutonium from the plant's spent fuel to use in nuclear weapons, and then work out suitable prevention

measures that would satisfy the State Department.

France is expected to supply the enriched uranium for the two nuclear plants, which are said to be identical, each generating 900,000 kilowatts of electricity. In return, China has apparently won guarantees from France of export credits worth more than \$6.8 billion over the next 10 years. The interest rate is thought to be about 6.5 percent.

FRANCE TO GET PREFERENCE IN OTHER PROJECTS

A letter that accompanied the trade agreement expressed China's willingness to give France preference in 11 fields if French terms and technology are comparable to those submitted by other bidders for the business. These areas are oil, steel, aluminum, aerospace, atomic power, electronics, thermoelectric power generation, sugar, insecticides, public works, and hotels.

No specific contracts were signed along with the agreement, which states desirable goals but does not commit either side to definite purchases. It was not immediately known what products the Chinese would hope to sell under the agreement, but informed observers believed that the principal Chinese exports would be coal and oil.

CHINESE COMPANIES TO OPEN TOKYO OFFICES

Some 20 major Chinese trading and industrial corporations, along with the Bank of China, are expected to open offices in Japan early next year. The Chinese announced this and other dramatic decisions at a high-level meeting with Japanese officials in Peking on November 28-29. The Chinese also agreed to permit Japanese firms to open Peking branches and to participate in joint ventures with China. The Chinese also said they might accept government loans from Japan.

The decisions suggest that China will show an equally liberal attitude toward Western, especially European, companies because of its policy of not giving the Japanese special treatment. The Chinese also reportedly agreed to give Japanese businessmen one-year visas for entry into China.

CHINA OFFERS 49% EQUITY OWNERSHIP IN JOINT VENTURES

China is now willing to let foreigners make direct investments in China, so

long as the Chinese themselves own at least 51 percent of the equity in any joint venture. That new policy was first disclosed to a high-level French delegation led by the brother of President Giscard d'Estaing in November. It was subsequently reiterated to both British and Japanese businessmen.

The apparent reason for the new policy is that joint ownership lightens China's own investment burden. The foreign firm investing in such a joint venture would assume almost half the borrowing liability for a project in which China's own share is only 51 percent.

The French mission, led by Francois Giscard d'Estaing, president of the French External Commerce Bank, included top executives of 17 major companies from the banking, manufacturing, electronics, building materials, chemical, and other industries. The delegation met with Vice Premier Kang Shih-en and Ku Ming, deputy chief of the State Planning Commission. Companies asked by the Chinese to consider such joint ventures were P.S.A. Peugeot-Citroen, an automaker, and the aluminum unit of Pechiney Ugine Kuhlmann.

In one of the more unusual new joint venture agreements, the Hong Kong group, Asian International Electronics, will import equipment from overseas which will be used in China to manufacture cassette tapes, color television sets, and stereo equipment. The Hong Kong firm will pay only 30 percent of the capital costs and should be able to recoup its investment entirely after three years, by which time the plant and equipment will become completely China-owned. The company is guaranteed a 20 percent profit on the products, which will be exported from Hong Kong.

40 ITEMS TO BE PRODUCED IN CHINA

The deal with Asian International Electronics is just one of many that Peking claims to have signed with foreign firms. The New China News Agency reported in late November that Peking factories will be making more than 40 items—including digital clock radios, refrigerators, cameras, and computers—for US, European, and Asian companies. The products, which also include stereo radios, imitation leather bags, cottonwear, lenses, and plastic sheeting, will be produced under three

basic types of contracts.

The first type calls for the foreign concern to supply all the parts, which the Peking factories assemble for a service fee. Under the second type, the foreign concerns supply only some parts, while the others are Chinese-made. The third type of contract commits the foreign firm to advance funds so that the Chinese factory can import key parts and material and assemble them into products with Chinese-made parts. Refrigerators and radio cassette players are included in this category. The NCNA report did not say how the foreign companies would be compensated, but remuneration would probably be in goods from the factories, or at least goods at a discount that the companies could sell overseas.

CHINA CLAIMS RECORD EXPORTS

China reported record exports for the first eight months of the year, a key factor in providing funds for massive purchases of foreign technology and equipment in its modernization program. NCNA said exports increased by 29.8 percent over the first eight months of 1977, while imports rose 59.2 percent in the same period. No exact figures were given, nor was any claim made regarding a record level of imports. The agency did, however, say that "negotiations and transactions for import of advanced technology and turnkey equipment in the petroleum, coal, electricity, communications, iron and steel, nonferrous metals, chemical, and machine-building industries are on target."

EEC MISSION CLAIMS SUCCESS

Major trading opportunities between the European Common Market and China will soon exist, according to a senior EEC delegation that visited China in late September and early October. Wilhelm Haferkamp, chairman of the EEC's External Affairs Commission and leader of the delegation, said Chinese leaders told him that Peking's trade with Europe could reach the same level as Japan's. Haferkamp said Chairman Hua Kuo-feng told him that a \$60 billion ceiling has been set on Japan's exports to China between now and 1990, though other sources say the figure could go as high as \$100 billion. Western Europe's exports to China in the first half of 1978 amounted to \$1 billion, more than double the figure

for the same period in 1977.

The Haferkamp mission, which followed the signing of the EEC-China trade agreement last spring, was described as exploratory. A mixed commission representing China and the nine EEC members will have its first meeting in Peking early next year, while Roy Jenkins, president of the EEC Commission, will visit China in the spring. Follow-up technical talks will cover such topics as administration, industry, energy, and agriculture.

The successful development of Sino-European trade hinges largely on China's ability to increase its exports. Common Market foreign ministers took a step in that direction on September 19 by relaxing import controls on certain restricted items. Haferkamp said additional liberalization was possible. He mentioned high-value nonferrous metals as one possible area for Chinese export expansion. Besides Haferkamp, the delegation also included Helmut Haeusgen, president of the European Confederation of Banks, Dirk de Bruyne, president of Royal Dutch-Shell, Roger Martin, chairman of France's Saint Gobain Pont-a-Mousson, and Sir Peter Tennant, chairman of the London Chamber of Commerce and Industry. Top Chinese officials met by the team included Hua Kuo-feng, Vice Premier Li Hsien-nien, and Foreign Trade Minister Li Chiang. The delegation also met representatives of the China Council for the Promotion of International Trade, the Ministry of Metallurgical Industry, and the Ministry of Water Conservancy and Power.

CHINA AND GERMANY AGREE TO COOPERATE IN SCIENCE AND TECHNOLOGY

Chinese Vice Premier Fang I signed an agreement on cooperation in science and technology with Volker Hauff, West German minister of research and technology on October 9. The agreement covers research and technology in energy, raw materials, aeronautics and space, physics, applied mathematics and message technology, agriculture, medicine, environmental protection, and ocean policy. During his West German tour, Fang also met Chancellor Helmut Schmidt, Foreign Minister Hans Dietrich Genscher, Economics Minister Otto Lambsdorff, Christian Democratic Union President Helmut Kohl, and Christian Social Union President Franz-Josef Strauss.

Fang's meeting is supposed to pave the way for a European tour next spring by Hua Kuo-feng. Fang and his party toured electronic plants, space development centers, nuclear power plants, and aviation industrial complexes. Economics Minister Lambsdorff said he expects West Germany and China to sign a five-to-seven year agreement on economic and industrial cooperation in 1979, though he advised businessmen not to be too euphoric about trade prospects with China. China is also reportedly interested in German help on a large radio-telescope and an electronic accelerator. Fang also traveled to France for discussions on science and technology, including space cooperation, with senior French officials.

TRAVELS WITH TENG

While Fang I was surveying the European scene, Number One Vice Premier Teng Hsiao-ping was moving around quite a bit in Asia. Teng traveled first to Japan for the formal signing of the Japan-China Peace Treaty and talks with Japanese leaders on economic and political subjects. After a brief respite in Peking, he then ventured off to Southeast Asia, where he visited Thailand, Malaysia, Singapore, and Burma.

Teng received his warmest welcome in Thailand, where the government is trying to strike a balance in its relations with China and Vietnam. Teng signed a trade agreement calling for the exchange of \$80 million in Thai products next year in return for Chinese oil. His reception in Malaysia was considerably cooler because of his refusal to disavow Marxist guerrillas fighting against the regime of Prime Minister Datuk Hussein Onn.

Teng's reception in Singapore was "correct," but there was no indication by early December that the trip had resulted in a decision by Prime Minister Lee Kuan Yew to normalize relations with Peking. Lee has previously stated that his country would not do so until Indonesia and China resume normal relations, which were severed in the mid-1960s.

While in Singapore, Teng met with officials from local branches of the Bank of China and the Kwangtung Commercial Bank, China Insurance, and Tai Ping Insurance, all Peking-controlled organizations. Singapore is the only site in Southeast Asia where

any of these organizations have offices. Teng urged them to step up their efforts to earn more foreign exchange. Teng concluded his 10-day Southeast Asian swing on November 14 with a two-hour stopover at the Rangoon airport, where he talked with President Ne Win and other top officials.

CHINA SPONSORS TRADE FORUM

In an apparent effort to find new markets for its exports, the Chinese Ministry of Foreign Trade and the UN Conference on Trade and Development cosponsored a three-week seminar on China's trade and management in October. Participants included trade officials of developing countries from Latin America, Asia, and Africa, UNCTAD representatives, and Chinese Vice Minister of Foreign Trade Wang Jun-sheng. None of the developing countries taking part in the conference were identified. Sessions of the forum were held in Shanghai, Peking, and Canton.

Meanwhile, China is also reportedly becoming more involved in UNCTAD-sponsored multilateral talks intended to set up commodity trade agreements. Of the 10 major commodities that UNCTAD has identified as suitable for stockpile programs, Chinese imports in 1974-75, the latest years for which UN figures are available, averaged \$1.06 billion a year, and exports were \$143.2 million. Of the 10, China is a major importer of cotton, rubber, and wood. It also imports cocoa, coffee, sugar, jute, and copper. It exports tea and tin. (Oil and tungsten are not part of the UNCTAD commodities program.)

China's active participation in the real work of attempting to devise commodity agreements stands in marked contrast to its previous posture of using UN meetings as forums for castigating the Soviet Union and the West, while espousing solidarity with the Third

World. Another indication of China's new world role is a report from Japan that China is considering entry into the International Convention for the Protection of Industrial Property. A mission led by Wu Heng, vice minister of the State Scientific and Technological Commission, visited Japan from December 8 to 22 to discuss patent laws and their application.

TRADE AGREEMENTS

China's desire to step up its trade links with the Third World were recently manifested in a series of trade agreements signed with Brazil, Sudan, the Congo, and Thailand. The most significant of these appears to be the accord with Brazil, which commits that nation to buy one million tons of Chinese oil in 1979 and 1.5 million tons in 1980, with the amounts that will be purchased in 1981-83 to be negotiated later. In return, China will buy large quantities of iron ore and sugar.

Other Latin American countries with which China is developing closer ties include Mexico, Argentina, and Chile. Mexican President Lopez Portillo journeyed to Peking in October for discussions on possible exchanges of oil technology and know-how, while the Chamber of Argentina-China Commerce was officially founded in Buenos Aires on October 5. The chamber is designed to promote commercial and economic relations between the two countries. Chile has signed a new agreement on Chinese purchases of copper after a visit by China's Foreign Minister Hernan Cubillos. China reportedly led all Socialist countries in imports from Chile in 1976, with purchases totaling \$33 million.

Undoubtedly keeping an eye on such developments is South Africa, which, according to recent press reports, feels that it can meet many of China's import requirements, particularly in grain, mining, fertilizer, and chemicals. The reports suggested that the Chinese might be amenable, but would probably prefer to use Hong Kong as a clearing house rather than trade directly with Pretoria.

JAPAN: THE DELEGATION PARADE CONTINUES

High-level trade delegations continued to shuttle back and forth between Peking and Tokyo during the fall. Besides Teng's visit in October, during which he asked the Japanese

for massive scientific, technological, and financial assistance, the Chinese sent a team of industrial ministers and administrators in November for a month-long tour of Japan's automobile, steel, and light electrical producers. The team was led by Yuan Pao-hua, vice minister of the State Planning Commission. The mission had three main objectives: to study the role played by the Japanese government in the achievement of high growth; to examine management at the corporate level, including production and quality control; and to study local industrial development projects.

A six-member goodwill mission from the Japanese opposition party Komeito arrived in Peking November 27 for a 13-day visit as guests of the China-Japan Friendship Association.

RECORD TRADE FOR JAPAN AT CANTON FAIR

Total Sino-Japanese trade at this fall's Canton Fair amounted to \$530 million, including import deals by Japan of \$260 million and export deals of \$270 million. Textiles, trucks and other motor vehicles, machinery and small plants, chemicals, and foodstuffs were the main items traded by the two countries.

The Japanese bought 97,000 tons of soybeans, far above the normal level of 30,000 tons, and also purchased some 2,000 tons of shrimps from China. Japanese won Chinese orders for about 550 trucks and other motor vehicles. Some 3,600 Japanese attended the fair.

SINO-BRITISH TRADE INCREASE PLANNED

Trade between China and Great Britain will increase substantially by 1985, according to an agreement reached in principle by Vice Premier Wang Chen and British Prime Minister James Callaghan during Wang's 11-day visit to Britain in November. Total trade between the two countries over the next seven years is expected to amount to \$8-10 billion, for an annual average of \$1-1.5 billion, compared to \$400 million in 1977. The new accord thus confirms and expands on the proposal made by British Trade Secretary Edmund Dell to the Chinese on his August mission to Peking, during which he spoke of a three- or fourfold increase in Sino-British trade. The proposed agreement calls for trade in more than a dozen areas, including power generation, mining, metallurgy, steel,

Hydro project in Kweichow Province.



Xinhua

agricultural machinery, ships, ports, airports, railways, and offshore oil.

Wang's visit, however, was marred by the failure to reach agreement on China's plan to buy 100 Harrier jump-jets from the UK. Assuming that the Harrier deal eventually goes through, Callaghan will probably accept an invitation to visit China in 1979. The invitation was extended by Chinese Foreign Minister Huang Hua during his October trip to Britain. Callaghan responded by inviting Chairman Hua Kuo-feng to visit Britain in 1979. Hua reportedly wants to make a grand European tour next summer, which could also cover France, Germany, and Italy. The London Chamber of Commerce and Industry will keep the momentum going on the trade side next spring when it will send a top-level mission to Peking. That particular mission was announced in October following a reception given by the chamber for a group from the Peking Municipal Committee led by Vice Chairman Wang Hsiao-yi.

FINANCING TALKS

Huang Hua also visited Italy in October for talks on financing Italian exports to China and to prepare the ground for the expected 1979 visit of Hua Kuo-feng and a formalization of trade accords. Huang had barely left the country when a top Italian industrial group, Confindustria, dispatched a 20-man team to Peking to discuss possible countertrade agreements, financing, and, most importantly, to demonstrate the Italian capacity to meet China's industrial needs.

Also involved in high-level exchanges with China were Switzerland, Ireland, Australia, New Zealand, and Canada. Swiss Trade Secretary Paul Jolles visited Peking in September for talks on financing and possible sales of Swiss technology. In September a Chinese trade mission visited Ireland, and the Irish trade group Coras Trachtala agreed to reciprocate by sending a similar team to China. Later in the month the foreign ministers of the two countries, meeting at the UN, discussed the possible establishment of diplomatic ties as well as increased trade relations.

Foreign Trade Minister Li Chiang's October visit to Canberra was reciprocated later in the month by Deputy Prime Minister Doug Anthony's journey to China. Li also visited New Zealand which, along with Australia,

announced its decision to offer Chinese exports preferential tariff status.

Canada hopes to achieve a total trade with China of \$10 billion between now and 1985, according to a top-level Canadian delegation which visited China in late September and early October. To achieve that total, annual trade would have to be tripled over the current yearly figure of \$500 million. The mission, scheduled to be followed shortly by a Chinese economic delegation to Canada, could result in the establishment of scheduled air service between the two countries next year, according to Ian Sinclair, president of the Canadian Pacific Airlines.

TOURISM

A group of Hong Kong firms is negotiating with China to build hotels in Chinese cities to cope with the boom in tourism that recently prompted the Chinese to sign a \$500 million hotel construction contract with Pan Am subsidiary Intercontinental Hotels.

SCIENCE AND TAIWAN

The International Council of Scientific Unions voted unanimously at its biennial assembly in Athens in October to explore the possibility of initiating and facilitating discussions between Chinese and Taiwanese scientists to see if they can work out some modus vivendi allowing both groups to participate in ICSU activities. Scientists from China and Taiwan have attended several international conferences this year, and ICSU would like to see it happen more often. The organization wants China to join ICSU but does not want to eject Taiwan. China now belongs to three ICSU unions—the International Unions of Geodesy and Geophysics and of Geological Sciences, both of which expelled Taiwan and admitted China, and the International Union of Crystallography, to which Taiwan has never belonged.

WHAT'S BREWING?

A big deal between Suntory, the Japanese spirits and beer firm, and the Chinese appears to be in the works. China has proposed to pay for construction of a \$50 million plant by supplying Japan with malt made at the brewery. Discussions on the proposal were expected to resume in Peking in mid-December.

Agriculture

Grain purchases continue • China to finance agricultural purchases from Thailand with oil sales • China sells soybeans to Japan • Japan and Mexico sell chemical fertilizers • Agricultural machinery show in Peking a success • Italian company lands big tractor deal.

CHINA GOES FOR GRAIN

China's spending spree in the international grain market continued during the fall, with the biggest beneficiary the US. (See Exporter's Notes, p. 36.)

Prospects for continued agricultural sales to China by the US and other nations are good. Chao Fan, vice minister of agriculture and forestry, announced during a visit to Canada in September that China will continue to import grain from Canada, the US, and other countries. India is also a possible grain exporter, according to an Indian business delegation which visited China in August. And the European Economic Community may soon open a wheat export tender which would cover exports of Common Market wheat to China. Among more traditional grain exporters to China, Australia has delayed shipment of 250,000 tons of wheat originally to be shipped to China between January and August until December and January. Thailand may sell corn to China this year if the domestic crop exceeds 2.7 million metric tons, according to a July report.

As the result of heavy rains in Canada this year, the quality of the nation's wheat harvest will be somewhat lower than usual. Canada may thus provide more than usual competition in world markets for lower-quality grades of wheat and barley that are used as animal feed. And animal feed is something that China will be showing an increased interest in. According to Vice Minister Chao, the Chinese agricultural delegation to Canada was particularly interested in British Columbia's livestock artificial insemination methods, since China is stepping up its production of meat, with emphasis on beef.

CHINA'S SWEET TOOTH

China has made several major purchases of sugar recently. Here's a quick

summary: 40,000 metric tons of raw sugar, of either Thai or Philippine origin, purchased in late September for January-March delivery; 10,000 tons of raw sugar sold on September 12 by a Japanese trading house whose identity is not yet known, while several US trading houses also reportedly sold sugar to China in late August and/or early September; 14,000 tons of sugar shipped by Cuba in August. Brazil, which sold some 33,000 tons of refined sugar for delivery by June 1978, is expected to deliver an additional 50,000 tons before the end of the year. There are no definitive reports of Indian sugar sales to China thus far in 1978, despite rumors early in the year as to a possible 500,000-ton sale, but a delegation from the Federation of Indian Chambers of Commerce and Industry in August reported that China is interested in a long-term sugar contract. China's heavy purchases helped boost world sugar values by late September to their highest level since February. And in early September there were unconfirmed reports that the Chinese had purchased as much as 10 cargoes, equal to over 100,000 tons. Those reports probably included the specific sales already cited above, and possibly 50,000 tons of Australian sugar already reported (*CBR* 5:3, p. 69).

THAILAND SELLS \$80 MILLION

China has reportedly agreed to buy \$80 million worth of Thai goods next year in a deal that will be paid for partly with Chinese oil. Thai exports include 100,000 tons of maize, 20,000 tons of kenaf, 30,000 tons of rubber, 20,000 tons of beans, and 50,000 tons of tapioca flour. The two countries concluded a similar, \$21 million deal in June. The new agreement was expected to be formally approved during the November visit of Teng Hsiao-ping.

In a seminal development in Sino-Canadian relations, a Canadian delegation visited China in September to explore the possibility of selling all kinds of seeds, including hybrid corn and cereals. The mission included both government and agribusiness representatives. The Chinese were expected to reciprocate by sending a team to investigate Canadian technology and seed developments. Seeds were also on the agenda of both US Science Adviser Frank Press, on his July visit to China, and US Agriculture Secretary Bob

Bergland, who journeyed to China in November. On November 9 the UN Food and Agriculture Organization announced it is helping China introduce modern seed processing techniques on an experimental basis.

DAIRY PRODUCTS

Denmark has sold 250 tons of butter to China in the first food sale by that country to the PRC. The butter, for industrial use, was shipped September 21. Meanwhile, the New Zealand Dairy Board announced in October that it has sold 2,000 metric tons of whole milk powder and 500 metric tons of butter, worth a total of \$3.6 million. A New Zealand official said China was very interested in his country's pasture management and animal husbandry techniques. He also said China would continue to buy New Zealand's wool, tallow, hides, skins, and forest products.

A Chinese trade delegation to Bangladesh in late August and early September signed two contracts for a total of 20,000 tons of jute. Shipments began in September and were expected to be completed by December.

Some 10,000 tons of linseed oil were shipped to China from Rotterdam on June 3, with an additional 1,200 tons expected to follow shortly thereafter. Another commodity in which China has recently expressed interest is coconut oil. Chinese consumption of coconut oil has been on the upswing in recent years.

A high-powered Chinese fishery delegation visited Japan from October 6 to November 3 to investigate modern Japanese fishing techniques. The team was reportedly most interested in salmon and trout fishing operations off the northern island of Hokkaido. It was also expected to visit a prawn research institute in Yumaguchi City to see how fish breeding, raising, and stocking are conducted. American and Canadian agreement would be necessary for China to begin fishing in Japan's northern territories—a development which undoubtedly would also prompt strong Soviet interest. The Chinese want to expand their fishing operations for domestic consumption as well as earning foreign exchange.

Irish farmers are hoping that a September visit by a Chinese trade delegation will produce a bonanza for them. Animal hides and animal fats, along with technological skills and industrial

equipment, were the main items arousing the delegation's interest, according to CHINATUHSU Deputy Managing Director Pi Ke-ching.

The Japan Institute of Food Distribution System will cooperate with China in promoting rational distribution of foodstuffs. The institute was expected to send an 11-man team to China in November to exchange views on cold storage, inventory control, and computer utilization. China will send a similar delegation to Japan in January.

FERTILIZER SALES BY MEXICO AND JAPAN

Fertimex, a Mexican chemical fertilizer firm, and the Nissho-Iwai American Corporation (NIAC) signed a contract in November for the sale of some \$4 million worth of chemical fertilizers to China. NIAC's parent company, Nissho-Iwai Co., Ltd. of Tokyo, has been selling fertilizer to China for many years, but this is the first time NIAC has been able to export it from Mexico.

China ordered 85,000 tons of urea and 40,000 tons of ammonium sulphate from Japan in September. The new contracts thus bring total Japanese shipments for the July-December period to 485,000 tons of urea and 170,000 tons of ammonium sulfate. The prices, based on an exchange rate of 190 yen to the dollar, are about 5 percent above those agreed to in July. These are the first yen-denominated contracts in the sale of fertilizer to China.

In another agreement, C. Itoh & Co. (America) has arranged the export of phosphate to the PRC. Under the arrangement, New York-based Phosphate Chemicals Export Association Inc., will ship \$13.2 million of fertilizers, reportedly including 900,000 tons of concentrated super-phosphate.

Spurred by reports that China will remain a significant fertilizer importer, other countries have begun mapping their sales strategies. In Ireland, for example, a spokesman for the firm Nitrigin Eireann said the company might be able to sell to China the entire production of its new Marion Point urea plant in Cork. That remark followed a meeting between company officials in Dublin and a Chinese trade delegation. According to one report, the price tag for the package could go as high as \$50 million if negotiations succeed. Switzerland is also

getting into the act. A high-level Swiss delegation recently visited China to discuss possible participation in the setting up of agrochemical production facilities. Details on the mission are sparse, but among the firms that would be involved in any such deal is Ciba-Geigy.

The price tag on the sale of 300,000 metric tons of muriate of potash sold by the Canadian firm Canpotex Ltd. (*CBR* 5:5, p. 54) is now estimated to be at least \$20 million. It is reportedly the largest single purchase of potash ever made by China. The Italian state-controlled firm Anic, previously reported to have sold \$13 million worth of chemical fertilizers this year, will have sold \$16 million worth of fertilizers and rubber by the end of the year, according to an August report. It is not clear whether any new sales have actually been made or whether the discrepancy in figures can simply be attributed to the rubber deal.

AGRICULTURAL MACHINERY SHOW A HIT

The agricultural machinery displayed by foreign firms at the Peking Farm Machinery Show proved to be a smash hit. Participants at the exhibition (October 20–November 3) reportedly sold almost 90 percent of the products they exhibited. Sales made during the show were approximately \$16 million, with the figure swelling much higher when contracts were signed just after the event, according to a report from National Council attendee John Kamm. The big winner, as usual, appears to have been Japan. More than 40 Japanese firms sold some \$1.7 million worth of equipment, though Italian and West German firms were not far behind, with each country claiming sales of \$1.5 million. Chairman Hua Kuo-feng demonstrated the importance he attached to the show through a personal appearance on October 29.

More than 300,000 people visited the show, including some 1,000 Chinese scientists and technicians, while nearly 200 technical discussions were held during the course of the fair. Engineers from Australia, France, West Germany, Italy, Japan, and Rumania went to communes outside Peking to help with the autumn harvest and demonstrate their equipment at the same time. Other countries participating were Canada, Denmark, the Netherlands, Sweden, Switzerland, and the United Kingdom.

China's activity in the agricultural machinery field has not been confined to the Peking show. The Italian group Same Tractori SpA of Treviglio has signed a multi-year pact. In 1979, the first year covered by the agreement, the company will supply some \$60–70 million worth of tractors. The deal, reported November 7, was clinched during the recent visit to China of Foreign Trade Minister Rinaldo Ossola.

But the tractor sale could turn out to be small potatoes—relatively—compared to a deal for one or possibly two tractor plants that Fiat is negotiating with Peking. Fiat had a 30-man mission in Peking in early October and could have a final contract by the end of the year. The deal is also reported to include a factory for the manufacture of engines for agricultural use.

A delegation led by Yu Chen, deputy director of the China Agricultural Machinery Corp., visited Australia in July and August to investigate possible purchases of equipment and technology. The firms visited by the team included Napier Grasslands Pty. Ltd., which displayed a multipurpose materials handling unit called the Mover 3100 at the Peking Agricultural Machinery Exhibition. Another firm hosting the delegation was Connor Shea, which subsequently conducted demonstrations of ploughs, cultivators, and seeders in remote areas of northwest China.

SELLING REPORTS: TEA- TOTALERS; NUTS TO JAPAN

Japanese trading firms contracted to buy between 30,000 and 60,000 metric tons of soybeans, Japanese sources announced October 24. At \$308.63 per ton, the sale will net China \$9.3–18.6 million, though Chinese hopes to sell as much as 100,000 tons apparently were dashed by a disagreement over price. Shipment will take place between January and April.

The Chinese have told India that they are interested in exporting rice and vegetable oils to India. China is already selling tung oil to India but would like to increase the quantity.

China is expected to make a major effort to increase its tea exports to Western Europe following an in-depth marketing investigation by a tea delegation that visited London, Rotterdam, Hamburg, and other European cities from August through October. Another tea delegation subsequently visited the U.S. China's emergence in the tea trade was also noted recently by Pat Moore,

chairman of the New Zealand Tea Council. "They are taking a keen interest in the business and could well pose a threat to other tea-producing countries," he told Sri Lankan businessmen.

Chinese tea—via Secaucus, New Jersey—is being resold in the Orient. The Boston Tea Company, located in Secaucus, buys teas from all over the world, particularly China and India, then blends as many as a dozen of them together before reexporting its products to the Orient. "The time was ripe for a tea-drinking revolution, especially in Japan," says company founder Jerry Jacobs. A tin of Boston Tea Company tea that retails for \$1.75 in New York goes for as much as \$5 in Tokyo and Hong Kong.

Chinese lugworms are one of the hot new items in the Osaka area this year. Japanese fishermen have been using the lugworms since the Japan-China Live Bait Association began importing them in June. The association had sent its researchers to China for several years to study how to gather and transport the marine worms. The worms are particularly abundant in the Luta area of northeastern China and are airlifted from there to Japan via Peking. Another commodity in which China may be able to increase its exports substantially is rabbits. A British processor, Midland Counties Rabbit Co., Ltd., could export another 25,000 dressed rabbits a week to the Continent and the Mideast if only it could get them, according to one company official. China has been helping to fill the gap, he said.

Hong Kong residents can rejoice at the opportunity to taste fresh seedless grapes and Hami lemons. The fruits are airlifted from Sinkiang in northwest China and arrive in Hong Kong less than 24 hours after they are picked, with the bloom still on them.

Japan will import at least 15,000 tons of Chinese chestnuts this year and the total could go as high as 18,000 because of an expected big harvest. The first shipment was expected to arrive in Osaka October 10. The chestnuts will retail at 220–250 yen per 100 grams. The deal was concluded during a trade mission to Japan led by Chi Yu-chien. A poor chestnut crop in 1977 resulted in exports of only 15,770 tons to Japan, far below the originally planned figure of 20,000 tons.

The Tokyo Metropolitan Government decided in late August to purchase 62 tons of prawns at lower prices.

The prawns acquired from China were bought at a price 30 percent below the then market price in Tokyo. In a rather unusual effort to raise foreign exchange, the Chinese have stocked a swimming pool at the Peking International Club with carp. Foreigners are being charged to fish there. But on the pool's first day of operation (November 14), only one customer showed up—a small boy, and he ended up going home emptyhanded.

China's efforts to market Hainan rice chillies are suffering from a limited demand. Prices on the New York market dropped from \$1.32 per pound in early October to \$1.25 per pound a week later. Another Chinese spice, however, was reported doing slightly better. Mid-September prices for Chinese coriander remained steady at \$.24 per pound, compared to \$.22 per pound for Argentina coriander and \$.28 for Rumanian and Moroccan coriander.

Disappointingly slow negotiations at last spring's Canton Fair apparently cost China an opportunity to move in on the Japanese curry spice market. Japanese traders turned to China after the Indian government imposed a ban on curry exports, apparently because of domestic shortages, but a direct plea by Japanese officials to the Indian foreign minister resulted in a pledge from India to satisfy Japanese needs through the end of the year. The Indian government also told a Japanese spice industry mission in September that it will review the entire situation early next year.

Finally, a bumper rice crop in Sri Lanka has prompted the government there to ask both China and Pakistan to defer shipments of rice contracted in late 1977.

Delegations: Agricultural machinery team to Australia (July–August) • Indian delegation to China (August) • Malaysian rubber delegation to China. This followed visit to Malaysia by team from Chinese Rubber Research Institute (August) • Tea delegations to Europe and the United States (August–November) • Chestnut mission to Japan (September) • Japan Urea and Ammonium Sulfate Industry Association to China (September) • Chinese trade mission to Ireland (September) • Chinese team to Canada, led by Vice Minister of Agriculture Chao Fan (September) • Canadian seed mission to China (September) • Delegation to Italy, France, and Spain to study olive production (October) • For the first time ever, a Chinese delegation took part in the World Forestry Congress. The 12-day meeting was held in Jakarta October 16–18 and attended by representatives of 82 countries and 12 international organizations • Chinese fishing delegation in Japan (October 6–November 3) • Japan Institute of Food Distribution System delegation to China (November) • Chinese food distribution team to Japan (January).

Construction Equipment

Japanese cement companies sell 100,000 tons of bagged cement • Du Pont makes explosive sale • UK optimistic about ceramics prospects.

CEMENT SALE

Eight Japanese cement makers reached agreement with China in October on the sale of 100,000 tons of bagged cement. Delivery, mainly to Shanghai, will be completed by December. The deal follows the sale of 40,000 tons of cement in August and September. Companies involved in the sale are Onoda Cement, Nippon Cement, Mitsubishi Mining and Cement, UBE Industries, Sumitomo Cement, Osaka Cement, ASO Cement, and Tokuyama Soda.

NEGOTIATIONS FOR TRADE CENTER CONSTRUCTION

The Japanese construction firm KASHIMA Construction is negotiating to build the 47-story Japanese trade center in Peking. China will own the building and rent space to Japanese companies.

In what may be an unprecedented sale, E. I. du Pont de Nemours in August sold two metric tons of Tovex water gel, a commercial explosive.

A six-member mission from the PRC visited the international exhibit of ceramic plant and machinery, Inter-ceramex '78 at Trentham Gardens in the UK in late September. The delegation reciprocated a visit to China early in the year by British manufacturers which has reportedly resulted in technology sales.

Christopher Hench, Secretary of the British Ceramic Plant and Machinery Manufacturers Association, was most enthusiastic about future trade prospects with the PRC. "There is business to be had for ceramic plant and machinery in China," he said, adding that the UK has "as much of a chance as any other exporting country."

Delegation: • Chinese team to ceramics exhibition in the UK (September).



Xinhua

Chinese consumers admire new fashion wear designed in PRC.

Consumer Goods

China okays imports of color TV sets, watches, synthetic material, and other consumer goods • UK toy deal with Peking • Cigarette exports to China discussed.

LIVING IT UP

A life of luxury?—Well, not quite, though it is certainly true that Chinese consumers, at least in the urban areas, can now purchase foreign consumer goods that were never before available to them. The hottest items are said to be Japanese color television sets, Swiss watches, and Japanese synthetic material. John Kamm, the National Council's Hong Kong representative, recently predicted that total Chinese purchases of consumer goods this year will surpass \$100 million, compared to \$69 million in 1977 and less than \$40 million in 1976. Kamm predicted that cameras will be the next consumer item that China will be buying from overseas.

Kamm theorizes that the Chinese are allowing light industrial imports for two reasons: to demonstrate the government's commitment to higher living standards and to soak up excess purchasing power among newly affluent segments of the population through heavy import duties. The luxury items don't come cheap: 20-inch Japanese

color TV sets go for some \$1,600. Swiss watches have been the exception to the "no foreign import" rule and have been sold in China since 1949. Swiss sources expect that the Chinese will import some two million watches in 1978.

And for those Chinese consumers who can't afford imported Swiss or Japanese watches, there's also good news. Effective September 1, prices on seven brands of Chinese-made watches were reduced by 10 to 20 percent—perhaps to make them more attractive in comparison with imported items.

No American goods are being sold directly on the Chinese market yet, but Peking's commission shops, which specialize in secondhand goods, reportedly boast American and Japanese cameras, Dutch tape recorders, Japanese stereo equipment, and West German electric razors.

Other items affected by the recent liberalization of import controls include electronic calculators and cassette recorders. But along with the decision to import foreign goods in substantially greater quantity, there was also a decision to hike the import duties, effective August 1, from 10 to 50 percent on televisions, from 50 to 100 percent for radios, and from 100 to 200 percent on watches. Luxury imports are expected to account for only about one percent of Chinese purchases from abroad this year.

The British toymaker Dunbee Combex-Marx has reached a major trading agreement with China, according to an October 20 press report, though no details were announced.

Hoping to capitalize on China's nicotine habit is the British firm Carreras Rothman. Top executives of the company's parent, Rothmans International, have visited China to discuss the export of cigarettes. But the company had not received any response to their proposal, at least as of mid-August, according to press reports.

SENSATIONAL!

Trying to think of a Christmas gift for someone who's got everything? The Chinese have the answer—Seagull Soap, Butterfly Shaving Cream, and Budlet Toothpaste. Seekers of new sensations are allegedly fascinated with these toilet delights now being exported by the Chinese. Budlet Toothpaste, for example, supposedly tastes like a mouthful of fresh flowers.

Defense

Wang Chen says China wants 100 Harriers, but still no sale • French missile sale reported • Sweden may sell arms to China • Australian military officials may visit China on study tours.

HARRIER DELAY EXPLAINED

Despite a much-ballyhooed visit to Britain in early November by Chinese Vice Premier Wang Chen, no agreement on the sale of Harrier jets, the principal item on Wang's shopping list, had been announced as of the end of the month. Although estimates as to the number of jump-jets sought by the Chinese vary considerably (*CBR* 5:5, p. 53), it now appears that the Chinese would like to buy 100 of the planes, at some \$8 million each. On November 9 Wang flew to the British Aerospace factory at Dunsford where he observed a short demonstration of the fighter jet, along with the Sea Harrier, the Harrier GR Mark 3, and the Hawk.

One reason for the delay of the sale could be Britain's apprehensions about possible Soviet reaction to the deal. In a November 20 letter to British Prime Minister James Callaghan, Soviet President Leonid Brezhnev spoke of serious but unspecified "consequences" involved in sales of British military equipment to China. That same warning was contained in an interview published in *The London Observer* on November 12. "The pursuit of rather short-term gains could lay the cornerstone of an absolutely new set of international relationships that would make nobody happy," said Georgi A. Arbatov, the Kremlin's top North American expert. He said the sale of the Harriers "would be very unwise, it would not favor détente."

The Harrier sale would have to receive COCOM approval, but a US decision announced by Secretary of State Cyrus Vance on November 3 that the US will not oppose arms sales to China by Western European countries effectively means that COCOM will not block the sale. President Carter had reportedly warned Callaghan previously that the deal could endanger prospects for a new SALT agreement between the US and the Soviets.

Perhaps the real reason for Britain's delay, according to a November 22 edi-

torial in the *Financial Times*, is refusal by the Chinese to comply with the demand by the British government that the Harrier sale will go through only if the Chinese agree to buy all sorts of other British goods. The editorial said Callaghan dropped a hint that such a demand had been made in responding to questions in Parliament on November 21. The editorial warned that British refusal to sell the planes could seriously jeopardize British trade prospects with China in other areas as well. The Chinese are also reportedly interested in buying warships and Rapier missiles from Britain.

The Chinese are said to be especially interested in vertical-takeoff-and-landing Harrier planes because they do not need airports and thus could easily be deployed along the Soviet border and easily concealed.

FRENCH CLAIM MISSILE ORDER

Britain is far from being the only American ally eager to sell arms to China. France has reportedly received an order from China for an arms package worth \$350 to \$700 million, including 15,000 antitank and antiaircraft missiles, some helicopters, and a licensing arrangement under which the Chinese can produce more missiles. The reports published in late October said a contract would probably be completed and signed by the end of 1978.

The French will, however, make the sale contingent on guarantees from Peking that it will not attempt to market duplicate versions of the French weapons in Third World markets. The French believe that they are in a particularly good situation in the Third World because of their relative independence from the superpowers. The Chinese have also shown interest in French rocket propulsion technology, gyroscopes, and computers for guided missiles. Some sources indicate there have been talks about Chinese purchase of the French Iris-60 space computer.

SWEDISH ARMS INDUSTRY TO EXPLORE CHINA MARKET

The Swedish government has given the domestic arms industry permission to seek markets in China, according to the Swedish newspaper *Dagens Nyheter*. The paper said each case would have to be approved separately by the Cabinet, though a war materials inspector

at the Trade Ministry denied the report. Swedish arms sales would not have to receive COCOM approval since Sweden does not belong to COCOM.

China's interest in Swedish weapons was shown last June when a 14-member mission led by Chang Ai-ping, head of the General Staff, spent 10 days visiting Swedish arms factories.

Senior Australian military officials are likely to be making study tours to China in 1979, according to an Australian press report. The Chinese have already given their informal approval to the tours, which would last 10 days and include studies of industrial and economic development as well as trends in military strategy and strength.

Increasing military contact between China and Japan (*CBR* 5:5, p. 62) has prompted one Australian leader who recently visited both China and Japan to predict that "Japan will become a supplier of military equipment to China." An official identified only as a Mr. Hawke, president of the ACTU, cited unemployment in Japan's shipbuilding and iron and steel industries as grounds for his belief that Japan will soon develop an armaments industry and that the supply of arms to China would flow from the increased contact between the two countries.

Despite continuing US statements that it will not sell arms to China, *Electronic Warfare* reported in August that US National Security Adviser Zbigniew Brzezinski told Chinese leaders in May that the US would provide sophisticated intelligence-gathering equipment for deploying along China's border with the Soviet Union. And, according to a report in the *London Observer*, Japan could now become a major channel for "laundered" exports to China of sensitive and strategic American technology.

Delegation: Chinese Vice Premier Wang Chen visited Britain for talks on Harrier jump-jets (November).

Made-in-China semiconductor equipment.



Electronics

Nippon Electric announces computer sales • Fujitsu discusses computer sale • COCOM approves Hitachi computer sale • Japan pins hopes for IC deal on Hungarian precedent • French contracts for aeronautical equipment.

COMPUTER SALES AND NEGOTIATIONS

A Japanese company recently announced the sale of a computer system to the PRC. The sale of a medium-size computer by the Nippon Electric Co. thus becomes the third computer system sold by Japanese companies to China. The company announced on October 6 that it had reached broad agreement with China on the sale of the NEC system 300 of the firm's Acos series 77 computer family. The computer will be used to process foreign trade deals.

The Coordinating Committee for Export Controls (COCOM) must approve the sale before it can go through. In late October, COCOM okayed the sale of a \$3 million computer by Hitachi. The M Series Type 150 II computer will be used for geophysical surveying, including exploration of oil and other mineral resources. Hitachi gained COCOM permission for another computer sale early in the year (*CBR* 5:3, p. 65). That sale involved three computers that will be used for meteorological purposes.

Fujitsu, Japan's largest computer firm, is discussing details with China on the sale of a sophisticated, large-scale computer to the Chinese Academy of Sciences, the company announced November 28. The discussions involve two M-190 units, the largest Fujitsu makes. The computer is more sophisticated than any other model China has imported and would require COCOM approval.

In another computer development, Nippon Steel Corp. is reportedly seeking COCOM approval to export to China a computer for use at a steel mill, presumably the giant integrated Paoshan steelworks in Shanghai.

The Ono Sokki Co. of Japan has sold a simulation and data processing system for automobiles for ¥210 million (US \$1.1 million). The highly

sophisticated electronic system is used in laboratories to analyze automobile performance or design new vehicles. Ono recently sold the same system to Toyota Motor Co.

MORE DETAILS ON COLOR TV PLANT SALE

The deal between Hitachi and Toshiba for the construction of a new color TV plant actually involves two contracts. The first contract, signed July 28, calls for the two firms to supply a ¥15 billion (US \$80 million) cathode ray tube plant with an annual capacity of 900,000 tubes. The second deal, inked August 19, calls for the export of an integrated circuit assembly plant. The contract is worth ¥10 billion (US \$53 million). The integrated circuit plant will require COCOM approval, while the cathode ray tube plant does not. The two companies are basing their hopes for COCOM approval on the grounds that it allowed the sale of a similar plant to Hungary by Fairchild Camera and Instruments Ltd. of the US about two years ago. Most of the work on the integrated circuit plant will be done by Toshiba, with Hitachi assisting, while the roles will be reversed on the cathode ray tube plant.

China has yet to order a third major plant that will be related to the other two. The third plant will be for assembling the color television sets, and China is hoping to work out a production-sharing arrangement as the basis for buying the plant, the price of which is estimated at ¥10 billion (US \$53 million). Companies reportedly competing for the sale are Hitachi, Toshiba, Matsushita Electric, Sanyo, and Sharp. A spokesman for one of the companies acknowledged that it had doubts about the viability of China's buyback proposal, one reason being the problem of how to guarantee quality. The proposal also raises the question of access for the China-made sets to foreign markets.

HONG KONG GROUP IN JOINT VENTURE

A Hong Kong company has concluded several major deals for the manufacture and assembly of sophisticated electronic products in Peking. The agreements differ from other joint production arrangements signed recently in that China will pay 70 percent of the capital costs. In other

agreements, Hong Kong businessmen have been asked to put up 100 percent of the costs.

Asian International Electronics will import parts and equipment from overseas which will be used in China to manufacture cassette tapes, color television sets, and stereo equipment. The company is guaranteed a minimum 20 percent profit on the products, which will be exported from Hong Kong. The biggest venture is the manufacture of top-quality blank tapes, which will be competitively priced and will be suitable for sophisticated stereo equipment, according to H.T. Vong, chairman of the group. The Peking Magnetic Material Plant and the Peking Radio Component Plant will participate in the tape project, which is sponsored by the National Light Industrial Equipment Import and Export Corp. The agreement also allows overseas buyers to have their own names on the tapes.

The television set agreement involves the assembly of color sets using parts imported mainly from Europe. The sets will at first be sold only to overseas Chinese visiting Hong Kong before going on to China. They will be able to give the sets as presents to their relatives and friends in China. The Peking Broadcast and Television Corp. has guaranteed that it will repair and maintain the sets.

The company will also supply key components for stereo systems that will be manufactured in Peking starting in December.

The French firm TRT and its affiliate, OMERA, signed two contracts with MACHIMPEX in June for aeronautical equipment. The contracts were signed during a visit to France by a commercial mission from the PRC.

In other news from France, Thomson C.S.F. has agreed to supply 14 radar installations to China. Ten Chinese technicians and engineers have been familiarizing themselves with the equipment at the company's plant at Brest.

FRANCE AND WEST GERMANY SWAP TV PROGRAMS WITH CHINA

French and Chinese officials agreed to exchange television programs in an agreement signed in mid-September by Central Television of Peking and TFI, one of France's three official channels. TFI said the accord "provides the

means of exchanging news film crews, and programs to improve the Chinese public's knowledge of France and the French viewers' knowledge of China." The network added that China intends to cooperate with other friendly nations along similar lines.

Confirmation of that intention came less than one month later when Central Television signed an agreement with the West German network ZDF on exchanging television films, delegations, reporters, and technicians. Tai Lin-feng, deputy head of Central Television, and Karl Guenther Von Hase, director of ZDF, signed the accord in Peking on October 6.

No information is available on what kind of program will be exchanged.

OLIVETTI WINS CHINA CONTRACT

The Olivetti Company reported in late October that it has signed a contract to supply China with an information system including several terminals. The Italian business machines group said the agreement was signed with China Resources Agency in Hong Kong. The value of the sale was not disclosed.

Delegations: Trade mission to France (June) • New China News Agency team, hosted by UPI, visited Compugraphic Corp. of Wilmington, Delaware, to inspect computerized typesetting equipment (August) • Four Chinese representatives attended the 1978 International Congress of Photographic Science at the Rochester Institute of Technology (summer).

Finance

UK banks sign \$1.2 billion credit agreement • France, Italy, Japan, and Switzerland hold talks with Peking on massive loans to finance Chinese imports • Teng says China is open to direct governmental loans • Peking seeks \$100 million worth of UNDP aid • EEC mission may result in \$2 billion Eurodollar loan • West German bank eager to finance \$14 billion steelworks in Hopeh.

CHINA TO GET \$1.2 BILLION IN UK LOANS

Seven British banking groups signed a \$1.2 billion loan agreement with

China on December 6. Britain's Export Credit Guarantee Department will guarantee 85 percent of the loans. This is the first time that China has accepted government-backed credits from a Western country. The terms will be

The credit line is the first to be five years at 7.25 percent interest. negotiated by the Chinese and will be a major incentive for British exporters to go ahead with proposed export contracts. The banking groups are Barclays; Midland; National Westminster; Glyn's and the Royal Bank of Scotland; Standard and Chartered; Williams and S. G. Warburg and Lloyds International; Kleinwort Benson and the Bank of Scotland. Midland and National Westminster are offering the largest credits, \$400 million and \$300 million, respectively, while the other groups are lending sums ranging from \$50 million to \$150 million.

To qualify under the new agreements, a project must have a minimum value of \$5 million and be started within the next 18 months. The items to be financed are ordinary capital goods bought from British suppliers.

ECGD expects that some of the credit will be used quite quickly, while negotiations are also taking place to prepare a simplified buyer credit document which could be used as a basis for future agreements.

FRANCE TO GIVE \$6.8 BILLION IN EXPORT CREDITS

A trade agreement signed in Peking on December 4 commits France to provide \$6.8 billion in export credits over the next 10 years. The interest rate is thought to be about 6.5 percent. Among the exports that will be financed through the credits are two atomic power plants that would reportedly cost a combined total of \$4.5 billion.

Italy has reportedly offered China a \$1 billion, eight-year credit line to finance a series of major Italian ventures in China, including a proposed \$600 million agricultural machinery deal by Fiat. Details of the loan, which carries a 7.75 percent interest rate and which is to be paid back over a four-year period, were released in late October during a visit to China by Italian foreign minister Rinaldo Ossola. A delegation of Italian bankers is expected to visit China in December to continue discussions on the loan. As part of its efforts to expand and make

**RMB: DOLLAR RATES AS OF
NOVEMBER 1978**

Date		RMB/US\$	US\$/RMB	RMB/US\$ % Change
Sept. 21	Bid	1.6936	59.0458	
	Offer	1.6852	59.3401	
	Median	1.6894	59.1926	-0.40
Oct. 4	Bid	1.6885	59.2242	
	Offer	1.6801	59.5203	
	Median	1.6843	59.3718	-0.30
Oct. 5	Bid	1.6801	59.5203	
	Offer	1.6717	59.8193	
	Median	1.6759	59.6694	-0.50
Oct. 12	Bid	1.6734	59.7586	
	Offer	1.6650	60.0601	
	Median	1.6692	59.9090	-0.40
Oct. 26	Bid	1.6319	61.2783	
	Offer	1.6237	61.5877	
	Median	1.6278	61.4326	-2.50
Oct. 27	Bid	1.6220	61.6523	
	Offer	1.6140	61.9579	
	Median	1.6180	61.8047	-0.60
Oct. 31	Bid	1.6042	62.3364	
	Offer	1.5962	62.6488	
	Median	1.6002	62.4922	-1.10
Nov. 3	Bid	1.6443	60.8162	
	Offer	1.6361	61.1210	
	Median	1.6402	60.9682	+2.50
Nov. 9	Bid	1.6345	61.1808	
	Offer	1.6263	61.4893	
	Median	1.6304	61.3346	-0.60
Nov. 17	Bid	1.6410	60.9385	
	Offer	1.6328	61.2445	
	Median	1.6369	61.0911	+0.40
Nov. 18	Bid	1.6475	60.6980	
	Offer	1.6393	61.0016	
	Median	1.6434	60.8495	+0.40
Nov. 24	Bid	1.6409	60.9422	
	Offer	1.6327	61.2482	
	Median	1.6368	61.0948	-0.40

Italian goods more competitive in the China market, Italy recently opened a foreign trade office in Hong Kong. Italy's four largest banks—Banca Nazionale del Lavoro, Banca Commerciale Italiana, Credito Italiano, and Banco di Roma—have reportedly either opened representative offices in Hong Kong or are considering doing so.

**JAPANESE FINANCING TALKS
CONTINUE**

Japanese Finance Ministry officials have rejected US criticism of a Japanese proposal to grant China a loan

with an interest rate of 6.25 percent, far below the 7.25 percent set by the OECD "gentleman's agreement" for export loans to developing countries. The Japanese contend that the proposed \$1-2 billion ExImBank loan is intended to help China develop its oil and coal resources, rather than to finance Japanese exports to the PRC.

Foreign banks are undoubtedly skeptical about Japan's claims that the "developmental" loan would not be tied to Japanese exports. The *Financial Times* reported November 30 that, in the event such a deal is concluded, UK companies would be urged to test the

veracity of Japanese claims by applying to make use of the loan facility.

Peking has recently taken to insisting that Japanese loans be denominated in dollars rather than yen. The reason for this is the falling dollar and rising yen, which have made Japanese currency exchanges much more expensive for foreign borrowers. The Chinese have also said they prefer to finance imports from West Germany with dollars rather than deutschmarks.

In another financial development, Japan will extend \$10 billion in loans to Peking for the development of China's Pohai Bay oil resources, according to an October 17 report in the *Asahi Evening News*. The article said Minister of International Trade Toshio Komoto disclosed the plan on October 16, but it did not give any details of the financing plan. But a subsequent report said Komoto indicated four possible means by which Japan could provide financial assistance to China:

- Export finance by the ExImBank
- Development loans by the ExImBank
- Deposits with the Bank of China by private Japanese banks
- and Overseas Economic Cooperation Fund (OECF) loans.

In response to a statement by Teng Hsiao-ping that China is now open to the possibility of OECF loans, which China has previously rejected on the grounds they would constitute direct governmental aid, the Japanese government has begun studying how such loans could be extended. Interest rates on OECF loans would be 3 to 4 percent, and the term about 20 years.

Komoto said Japan is now studying the possibility of using OECF money to finance construction of hydroelectric plants on the Yellow and Yangtze Rivers. OECF aid reportedly also might be considered for building port and railway facilities in connection with a joint project to develop undersea oil resources in the Pohai Gulf. And two delegations of Japanese private bankers visited China in late October and again in early November to discuss possible future loan syndications. The first syndicate loan, which would finance exports of \$1.5-2 billion, would be made over a period of 5-8 years at an annual interest rate of about 10 percent (the ruling Eurodollar rate plus 0.5 percent commission). Japanese bankers reportedly estimate China's repayments for short-term borrowing and plant imports at \$755 million in 1978,

\$655 million in 1979, and \$649 million in 1980.

CHINA SEEKS UN AID

In an unprecedented move, China has asked the United Nations Development Program for \$100 million in aid. China has hitherto rejected all foreign aid, but now has not only gone to UNDP but has reportedly also approached the World Health Organization and UNESCO. China has contributed \$7.5 million to UNDP since it joined the agency in 1972.

Eurodollar loans of up to \$2 billion may be in the works as a result of a high-level EEC mission to China in September. Helmut Haeusgen, president of the Federation of European Banks, said the Chinese "will be hard negotiators, but they will do it in a way that they will be able to repay what they get." He added that the Bank of China could discuss straightforward loans at a fixed rate. Another member of the EEC team, Baron Lambert, president of Banque Bruxelles Lambert S.A., said China will probably borrow between \$500 million and \$2 billion in a syndicated credit for five to seven years. He stated that China will obtain margins on its loan at least equivalent to the lowest yet accorded other Communist countries in their borrowing. He said China deserves and expects low credit margins because of its small foreign debt total and prudent money management.

The delegation met with Chairman Hua Kuo-feng and Vice Premier Li Hsien-nien. The two sides agreed that the joint Sino-European Commission mentioned in the commercial agreement signed last February will meet for the first time in Peking early next year. EEC President Roy Jenkins will make an official visit to China in the spring. They also agreed to exchange economic experts to study co-operation projects, though Vice Premier Li told the group that a two-year period is necessary before China's economic

construction program can really get off the ground. The possibility of European industrial groups setting up branch offices in China was also mentioned.

They may have plenty of company. One of the banks that feels it should be among the first with a Peking office is Commerzbank, West Germany's third largest bank, which has long enjoyed a close relationship with the PRC. Japanese bankers visiting China this fall also reportedly talked about opening offices in China.

WEST GERMAN FINANCING— A BIG IF

West Germany's Dresdner Bank is prepared to head up a consortium to finance the proposed \$14 billion integrated steelworks in Hopeh, but bank chairman Dr. Hans Friderich says a firm offer will be made only if it can be supported by government-backed guarantees. The government, however, will only guarantee deutschemark credits, while the Chinese have been asking for dollar credits.

In other financial developments, Switzerland is reportedly negotiating a \$1.2 billion loan to China, while a Chinese economic and financial study mission led by Finance Minister Chang Ching-fu visited Rumania in October.

In Hong Kong, the Bank of China and the other Peking-controlled banks broke ranks in October with the Exchange Banks Association—the cartel which coordinates borrowing and lending rates—by raising rates on most RMB term deposits by 1 percent. The Chinese banks accept term deposits in Hong Kong dollars which are then converted into Chinese currency for the duration of the deposit. Depositors receive a slightly higher interest yield than on normal Hong Kong dollar deposits, while having a guarantee against any exchange rate loss. At the same time, China gains an added pool of convertible currency in its foreign reserves.

Delegations: Dresdner Bank Chairman Dr. Hans Friderich to China for discussions on financing proposed integrated steelworks in Hopeh. • EEC mission to China led by Wilhelm Haferkamp, vice president of the EEC Exterior Relations Committee (September) • A 20-member mission from Japanese commercial and long-term credit banks for talks with the People's Bank of China and the Bank of China (Oct. 16-27) • Bank of Tokyo President Yusuke Kashiwagi led mission to China (Oct. 30-Nov. 6) • British industrial mission to China led by Lord Roll, chairman of S.G. Warburg (October) • Italian bankers to China for discussions on proposed syndicated loan of \$1 billion (December).

Iron and Steel

West Germany, UK, and Japan bidding for \$14 billion steel mill in Hopeh • British Steel and Davy get engineering contract for Shoutu mill in Peking • Japanese steel-makers set up liaison group to handle China business • Nippon Steel signs \$2 billion equipment contract for Paoshan plant in Japan to ship 2.5 million tons of steel in 1st half of 1979 • China will buy at least 1.5 million tons of Brazilian steel.

INTEGRATED STEELWORKS

West Germany apparently continues to hold the inside track in the race to get a contract for a huge integrated steelworks that the Chinese want to build at Chitung in Hopeh province. But British and Japanese consortia also hope to land the contract for the mammoth plant, which will have an annual capacity of six million tons by the time the first stage of the project is completed in 1985. After the second stage is completed, capacity will be 10 million tons. The total price for the project is estimated at some \$14 billion.

A West German consortium led by Schloemann-Siemag announced on October 14 that it had been asked to bid on the project, but at a press conference in Bonn one month later it was disclosed that no firm orders are expected until the second half of 1979. Schloemann-Siemag Executive Chairman Heinrich Weiss said that representatives of the consortium, which includes Thyssen and Siemens, were in Tientsin at the time discussing technical aspects of the project in preparation for submission of a tender. If the Germans get the order, Dresdner Bank is prepared to finance the deal.

The British Steel Corporation told the Chinese in early October that it would be happy to work on the project if asked. A Chinese technical mission was expected in Britain late this year to assess the British capability for handling such a project. British Steel, Davy International, and GEC (which provides electrical installations) will be among the companies visited.

The Chinese have also discussed the project with five major Japanese steel-

China's premier steel mill at Anshan.



Xinhua

makers: Nippon Steel, Sumitomo Metal, Nippon Kokan, Kawasaki Steel, and Kobe Steel. Nippon Steel Chairman Yoshihiro Inayama announced the Chinese request for assistance from Japan on September 30. Inayama discussed the project with Minister of Metallurgical Industry Tang Ke, Vice Premier Li Hsien-nien, and Foreign Trade Minister Li Chiang. Nippon Steel is also constructing a giant integrated steelworks at Paoshan, outside Shanghai. But the new Chitung plant will be even bigger than the one at Paoshan and will be equal in capacity to Japan's largest—Nippon Steel's Kimitsu steelworks.

The new steelworks will be equipped with basic oxygen furnaces, continuous casters, hot strip and cold strip mills (steel rolling equipment). The project also provides for the development of iron ore resources near the plant site with US cooperation. Since Chinese iron ores are generally of low quality, an ore concentrating plant will be built to improve the ore's quality.

British hopes for winning the Hopeh plant contract were bolstered in early October when British Steel Corporation and Davy International signed a contract with the Chinese for an engineering study to modernize and develop the Shoutu steel plant in Peking. The order follows a recent visit to China by representatives of BSC, Davy International, and GEC.

JAPAN STEEL CONSORTIUM

Five large Japanese steelmakers have set up a special liaison group under the Japan Iron & Steel Federation to help the Chinese build up their steel facilities. The idea for the consortium apparently developed after the Japanese learned that Peking had asked Schloemann-Siemag of West Germany to submit a request for the giant steel mill planned for Chitung in Hopeh. The companies are Nippon Steel, Nip-

pon Kokan K.K., Kawasaki Steel Corp., Sumitomo MI, and Kobe Steel.

In addition to bidding on the Chitung mill, the companies will offer to assist the Chinese to expand their four existing steel mills at Anshan, Shihchingshan, Penhsi, and Wuhan. The liaison group, to be composed of the company presidents and other officials concerned with China projects, will reportedly decide which of the five steelmakers will undertake which project and then inform the Chinese of their decision.

Capacity at the Anshan mill, now some seven million tons annually, is expected to be increased to nine million, while capacity at Shihchingshan is expected to grow from 1.5 million to 5 million tons. The Chinese are also reportedly considering major expansion programs for their mills at Penhsi and Wuhan, and are planning a new mill at Anshan with a 6-million-ton annual capacity.

NIPPON STEEL ANNOUNCES \$2 BILLION EQUIPMENT SALE

Nippon Steel Corp. announced the sale of \$2 billion worth of equipment in connection with the Paoshan steelworks on December 5. NSC and China reached basic agreement on the deal early in the year, but the prolonged negotiations could make it exceedingly difficult to finish construction of the first stage of the plant by 1980, as the Chinese had hoped. Annual capacity after completion of the first stage will be three million tons.

One reason for the delay apparently was a dispute over price, while NSC's failure to designate Japanese manufacturers for nine of the 19 facilities at the plant also contributed to the delay. And, according to one Japanese trade official, the need to obtain COCOM approval for 10 computers that will control the entire plant has also slowed things down.

NSC had hoped to provide China with estimates for all facilities of the 19 sectors by early September, but as of mid-October it apparently had not presented any of the estimates. An October 17 report in the *Japan Economic Journal* said, however, that NSC would be submitting estimates for three major facilities "shortly." The facilities are a ¥100 billion coke oven plant, a ¥60 billion blast furnace, and a ¥40 billion basic oxygen furnace shop. The paper said the total

cost of the project will be ¥480 billion (US \$2.5 billion) though the *Asahi Evening News* reports the cost will be ¥600 billion. NSC itself will be designing and manufacturing facilities for 10 sectors, while companies designated by NSC will handle the other nine sectors, which include port and harbor facilities, an oxygen generation plant, and power and communications equipment. NSC may send as many as 1,000 of its employees to help build the plant.

Meanwhile, NSC and four other Japanese firms have reportedly reached agreement with the Chinese on construction of rolling facilities at Paoshan. NSC will extend technical guidance on mill design and operations, while Ishikawajima-Harima Heavy Industries will manufacture major rolling units, and Toshiba will manufacture electronic equipment and systems. Mitsui & Co. and Asahi Trading Co. will handle export of the BOF shop. Asahi is also expected to work with C. Itoh & Co. on export of the blast furnace, while Mitsubishi and Trinity Development will take care of exporting the coke oven plant. The volume of China business has prompted NSC to ask permission to open a representative office in Peking.

Chinese Vice Premier Teng Hsiao-ping took a look at what his country can expect when he visited NSC's giant Kimitsu steel mill.

DAIDO TO GIVE TECHNICAL ASSISTANCE

Japan's largest specialty steel manufacturer, Daido Steel Co., announced in late September that it will help China modernize six specialty steel mills in Peking. The company will provide equipment for factory expansion and offer technical guidance on factory streamlining and pollution control. China hopes to boost special steel production from the present 270,000 tons to 700,000 tons in the near future in order to meet growing demand from its domestic auto and railway rolling stock manufacturing industries.

CHINA MAY INVEST IN JAPANESE STEEL PIPE INDUSTRY

China may invest in Japan's steel industry so as to increase Japanese production of steel piping, which Peking wants to use for transporting oil. An October 12 report in the *Mainichi Daily News* said Chinese trade authori-

Hand-finishing at Talien Glassworks.



Xinhua

ties have broached the subject of such investments with officials of four major Japanese steel companies—Sumitomo MI, Nippon Kokan K.K., Kawasaki Steel, and Nippon Steel. The inquiry represents a complete reversal of past instances of Sino-Japanese economic cooperation deals. Such deals have called for the Japanese side to invest money, technology, or materials in China's industrial development on a production-sharing basis. Negotiations for exports of Japanese seamless oil piping were expected to begin in late November.

20% PRICE INCREASE FOR JAPANESE STEEL

Chinese and Japanese steel negotiations reached agreement in early November on the sale of 2.5 million tons of Japanese steel to China in the January-June 1979 period. The agreement calls for an average price increase of 20 percent over the July-December 1978 period and will thus bring export prices to China more in line with the prices for steel exports to other world markets, though the Chinese will receive a considerable discount.

The 20 percent average increase follows a 22 percent rise for the July-December 1978 shipments, which will total about 2.6 million tons. Shipments for the first half of 1978 were also 2.6 million tons; the price increase then over the previous half-year was 15 percent. The new agreement was announced on November 6, just one week after the negotiations began.

Japanese electric furnace steel manufacturers went to the Canton Trade Fair this fall with great expectations. The Chinese were expected to order more than 150,000 tons. And by next year, Japanese companies hope to sell some 600,000 tons. Japanese steel firms also report strong demand from China for small steel bars, apparently reflecting the boom in construction of big hotels for foreign tourists as well as an active domestic housing market in the Tangshan area in the wake of the devastating 1976 earthquake.

CHINA TO BUY \$500 MILLION OF BRAZILIAN STEEL

China has agreed to buy at least 1.5 million tons of steel worth some \$500 million from Brazil. This amount covers the first three years of a five-year term set in a memorandum signed November 1 in Rio de Janeiro by a

MINMETALS delegation and Siderbras, the Brazilian state steel agency. Some 500,000 tons of semi-finished steel products, heavy and medium sections, tubes, wires, and special steels will be shipped to China next year by either state-run or privately-owned Brazilian steel companies. The Brazilians also hope to sell up to 15 million tons of iron ore to China on a long-term basis.

Austrian Defense Minister Otto Roesch, who toured China in August, said on his departure that Austria is likely to supply high-level technology to China, particularly in steel production. Roesch said Austria is capable of providing the type of assistance the Chinese desire for their steel industry.

Hitachi Shipbuilding and Engineering Co. believes that it will receive an order for ¥40 billion (US \$210 million) worth of iron-manufacturing equipment for the iron mill. Hitachi hopes to supply three sets of continuous casting equipment, each priced at ¥10 billion, and four sets of sintering equipment at ¥2 billion per set.

India's Minerals & Metals Trading Corp. hopes to receive a sizable order for iron ore from Peking by early 1979 at the latest. The Chinese have completed tests on a trial shipment of 32,000 tons of ore they bought on an experimental basis in September.

Australia and China had not reached any agreement on long-term purchases of iron ore, but Australian officials are optimistic that such an accord will soon be reached. Deputy Prime Minister Doug Anthony expressed hope that iron ore exports to the PRC in 1978-79 will reach four million tons.

SWISS FIRM TO SEND SPECIALISTS TO CHINA

Hayek Engineering AG of Zurich will be sending technical experts to China for two weeks to advise the Chinese on plans for expanding their steel industry. The invitation was extended to the firm by Minister Tang Ke during the recent visit to China of Swiss Trade Secretary Paul Jolles.

Delegations: Sumitomo MI team to China for final negotiations on seamless steel pipe plant at Paoshan (August) • John Lysaght Ltd. of Australia delegation explained its new Westernport mill to Peking (August) • Chinese Society of Metals team visited UK (September) • Another Sumitomo MI team visited China for talks on construction of new steel mill at Anshan (October) • Steetley Co. (UK) sent teams to Peking for high-level technical talks (October) • Teng Hsiao-ping visited Nippon Steel Corp.'s Kimitsu mill (October) • Chinese technical mission assessed UK steel mill capability (late 1978).

Machinery and Machine Tools

Five Japanese companies report machine sales to China.

BORING MACHINE SALES

Tone Boring Co. announced on October 18 that it will export 40 boring machines worth ¥2.1 billion (US \$11 million) to China. The Niigata-based trading house Niigata Boeki Ltd. arranged the deal, which represents the first boring machine sale by Japan to China. Peking has also placed an order for 10 numerically-controlled milling machines, a vertical machining center, a horizontal machining center, and an electric discharge machine (EDM) from Makino Million Machine Co. of Japan. The contract is worth some ¥400 million (US \$2.1 million). Makino had supplied more than 1,000 machine tools to China but since 1976 Chinese buying had become almost nonexistent.

Kurita Machinery Mfg. Co. has received an order from Peking for four Kurita-type full automatic filter presses totaling ¥170 million (US \$900,000). Two of the presses will have 100 sq. m. capacity. The presses are expected to be used by a chemical plant in Hunan province.

Nippon Yusoki Co. has won a ¥60 million (US \$300,000) order from Peking to supply 57 battery forklifts of five models on a yen settlement basis. The contract was reported October 31. The company had received a similar order for 11 battery forklifts worth ¥20 million at last spring's Canton Fair.

Toshiba Machine Co., Ltd., has beaten out Mitsubishi HI in the race for two ultra-large plain milling machines worth a total of ¥500 million (US \$2.6 million). Although China can produce smaller all-purpose machine tools, it is not yet able to make larger machine tools required for the production of heavy machinery.

Machine tools were reportedly on the agenda of Chinese Foreign Minister Huang Hua during his October stop-over in Italy. Meanwhile, China's interest in acquiring jet technology may open machine tool markets, according to Eitaro Murai, managing director of the Society of Japanese Aerospace Com-

panies. A 16-member team led by the society toured China in October.

Delegations: Chinese team inspected cigarette-making machinery produced by Molins, the world's leading maker of cigarette machinery (August) • Delegation from the China Council for the Promotion of International Trade toured factories of Essco Collins Ltd., Shannon Wire Weavers Ltd., Boart Hart Metals, and other companies in Ireland (September) • Japanese machinery company representatives took part in mission to China sponsored by the Japan-China Association for Economy and Trade (September) • Chinese machinery delegation to Japan (October) • Machine-building team to Rumania and Yugoslavia (October).

Metals and Minerals

German firms land giant nonferrous deal • Japanese companies win copper smelter contract • China inks copper pact with Chile • China buys \$7 million of aluminum from UK • Peking seeks Japanese mint technology.

GERMAN FIRMS GET CONTRACT FOR 22 METALS PLANTS

Two West German companies will build 22 metals processing plants in China over the next several years. The agreement, worth "several billion deutschmarks," was reached in Peking on November 10 by the Chinese Ministry of Metallurgy and the Frankfurt company Metallgesellschaft and its heavy engineering subsidiary, Lurgi.

Lurgi plans to build the 22 processing plants for all major nonferrous metals in several Chinese provinces. Metallgesellschaft and other unspecified firms will provide technological know-how. The accord also calls for Metallgesellschaft to market Chinese ores and metals over the next 15 years as well as to explore iron ore deposits. Individual contracts for the projects had not been signed as of mid-November, though work had begun on contracts for the first plants. The nonferrous metals involved would probably include copper and lead.

SUMITOMO WILL BUILD COPPER SMELTER

Sumitomo MI announced in early December that it and two other Japa-

nese firms have signed a \$116.8 million contract to build an integrated copper smelter in Kiangsi Province. The plant will have an annual capacity of 90,000 tons and will produce 360,000 tons of sulfuric acid as a byproduct. All equipment and facilities for the project will be supplied by Sumitomo MI and the other two companies, Sumitomo Shoji Kaisha Ltd. and Sumitomo Shipbuilding and Machinery Co.

COPPER WARMS TIES TO CHILE

Chile will supply at least 30,000 tons of copper annually to China in 1978, 1979, and 1980, the Chilean State Copper Corp. (CODELCO) announced in Santiago on October 6. The value of the contract is estimated at \$46 million annually. The copper will be blister and electrolytic, which may be used for cathodes or wire bars. China's copper purchases from Chile last year were estimated at 10,000 to 17,000 tons.

China is also reported to be interested in buying Chilean molybdenum. Talks have begun on a future molybdenum quota for China, even though all of Chile's output is committed to other buyers.

The copper agreement, reportedly the largest ever reached by Chile and China, was signed by MINMETALS Manager Tsao Chung-shu, who arrived in Chile September 25. A Chinese trade mission was expected to follow shortly thereafter for further talks, while Chilean Foreign Minister Hernan Cubillos traveled to China in mid-October. Cubillos announced in Peking on October 19 that the two sides had agreed to further expand bilateral trade.

ALUMINUM SALE BY UK

British Aluminum has sold aluminum worth some \$7 million to China for delivery by the end of the year, the company announced in mid-October. It was the firm's first sale to China since 1975.

China could itself become a major aluminum producer, according to *Engineering & Mining Journal*. The magazine, in its August issue, reports that a Hungarian authority has estimated China's bauxite reserves at 1.25 billion tons, or more than 8 percent of world reserves. The US Bureau of Mines concurs in the estimate but contends that the quantity of workable reserves is only slightly more than 100 million

tons. Another publication, the *Mining Annual Review*, reports that China is expected to become an important worldwide supplier of aluminous raw materials for synthetic mullite.

CHINA TURNS TO INDIA FOR CHROME

China's break in relations with Albania has prompted a turn to India as a possible source of chrome. An Indian delegation was expected to visit Peking late this year, with a possible initial sale of 30,000 tons envisaged.

MAKING A MINT

Keng Tao-ming, vice chairman of the People's Bank of China, told visiting Japanese businessmen on September 12 that China hopes to introduce Japan's advanced mintage technology into relevant Chinese industries. Keng reportedly hopes to send a technical mission to the Osaka Mint Bureau. Meanwhile, China has reportedly shown interest in the possible purchase of a zinc smelting plant and a carbide tool manufacturing plant.

EEC WANTS TO BUY CHINESE URANIUM

The European Economic Community is interested in negotiating uranium purchases from China to help fuel its nuclear power stations. EEC External Affairs Commissioner Wilhelm Haferkamp reported in early October after his return from China. Haferkamp acknowledged that strict rules designed to guard against nuclear proliferation will create some complications.

Delegations: MINMETALS team to Chile (September-October) • Chile's foreign minister, Hernan Cubillos, to China (October) • West German firm Metallgesellschaft to Peking (November).

Chinese one-cubic meter hydraulic excavator.



Mining Equipment

Mitsui Miike wins order for eight sets of coal mining equipment • UK company announces contract • Japan may help develop coal mines in Shantung and Shansi.

MINING EQUIPMENT CONTRACTS

Mitsui Miike Machinery Co. has received an order from Peking for eight sets of coal mining equipment to be delivered between March 1979 and January 1980. The company announced the ¥12 billion (US \$63.2 million) deal in Tokyo on October 12. The equipment, which includes road cutters and 49 road headers, will be installed at the colliery in the Tatung area in Shansi province. The mine has an annual capacity of 20 million tons.

China has also asked the company to provide technical assistance in developing another mine. The firm will send engineers and negotiators to Peking for talks on the proposed help and possible sale of more equipment.

Another big order has been revealed in connection with China's ambitious schemes for expanding its coal mining industry. Anderson Strathclyde of the UK has received a \$26 million contract to supply coal cutting machines and face conveyors. The orders are expected to be completely filled by March 1980. The deal was disclosed shortly after two other British firms, Gullick Dobson and the Dowty Group, confirmed orders from China (*CBR* 5:5, p. 71).

JAPANESE COAL MISSION DISCUSSES MORE PROJECTS

Japan may be getting involved in China's coal development program in a big way. An 11-man team from the Japan Coal Association that visited China for two weeks beginning September 27 discussed the possibility of cooperating in the development of two coal mines in Shansi and Shantung provinces. Much of the coal the Chinese hope to mine at the sites would be exported to Japan, in accordance with the Sino-Japanese Long-Term Trade Agreement.

The mission, led by Shingo Ariyoshi, president of Mitsui Mining Co., surveyed the planned sites. The caloric nature of the coal in Shansi and Shantung is relatively high as coking coal and extensive production appears probable. Ariyoshi had led a similar mission in June.

China reportedly originally planned to finance the big new coal mines to be developed by West Germany, the UK, and possibly Japan through some kind of barter arrangement, but, according to a September 30 report in *The Economist*, it may now be willing instead to adopt a more conventional form of financing—such as repaying medium-term loans in hard cash.

AUSTRALIAN, BRITISH MINING TALKS

A three-week visit to Australia in October by Hsu Chih, vice minister for metallurgical industries, who toured the US in September, has sparked hopes in Canberra for substantial exports of mining and mineral processing technology. Foreign Trade Minister Li Chiang also visited Australia in October. A delegation in September led by Pi Yi-ming, deputy managing director of MINMETALS, signed large orders for iron ore, aluminum, lead, and iron and steel. Australian exports of minerals and metals to China in 1977 and 1978 totaled \$150.9 million, according to Deputy Prime Minister Doug Anthony.

The China Coal Society has asked British coal mining companies to visit China to discuss continuous yearly equipment purchases. One delegation was expected to leave in November, while the other will go in March. Some 30 companies will be represented on the visits.

Another British firm, Steetley, was asked by the MINMETALS team to give a presentation of its seawater magnesia technology in China in October. The company is optimistic that sales will result from the seminar. The Chinese are also interested in the firm's refractory manufacture and dolomite quarrying and processing techniques.

Delegations: Hsu Chih, vice minister for metallurgical industries, to Australia (September) • MINMETALS team to Australia (September) • Japan Coal Association team to China (September-October) • China Coal Society team to US (September-October) • Steetley, a UK firm, to give technical seminar on sea water magnesia technology (October) • British coal mining companies to China (November and March).

Petroleum and Petrochemicals

Japan claims agreement with China on Pohai development • Italian firm buys Chinese crude • Japanese power companies resist Chinese crude, possibly jeopardizing long-term agreement • Norwegians offer package deal on petroleum equipment • Mexico and China to exchange oil technology • Polyol process accord • UK and Japan expect plant orders.

CHINA AND JAPAN REACH OIL ACCORD

China has agreed to give Japan exclusive rights for exploration, development, and production of oil resources in a 20,000 sq. km. section of the Pohai Bay. A 15-member technical delegation from the Japan National Oil Corporation (JNOC), a government agency, arrived in mid-December, but final arrangements were not expected to be made until January at the earliest.

The Japanese will finance the costs of development—machinery alone is expected to cost \$10 billion—and will be compensated in crude oil shipments when and if the fields in water 40 to 200 meters deep begin producing. The Japanese sector, slightly more than one-fourth of the entire 75,000 sq. km. Pohai Bay area, could begin producing as much as two million tons annually by 1980, with production possibly reaching 30 million tons a year by 1990. It is estimated that China's shipments to Japan in return for its investment would be some 100 million tons.

Other countries recently reported to be engaged in possible oil exploration talks with China are Italy and Canada. The Agip affiliate of Ente Nazionale Idrocarburi, the Italian state oil group, is said to be engaging in discussions with Peking regarding oil and gas exploration both onshore and offshore. W.H. Hopper, president of Petro-Canada, reportedly was asked by China on a recent visit to Peking to make a firm proposal regarding offshore petroleum exploration. Hopper said the Chinese made a similar request of Ranger Oil, also of Canada.

Vice Premier Wang Chen told British Energy Secretary Anthony Wedg-



Pump station on new Linyi-Nanking oil pipeline.

wood Benn in November that British oil interests may be asked to help develop one of China's new oil fields.

Brazil's Minister of Mines and Energy, Shigeaki Ueki, has confirmed reports that China and Brazil have reached agreement on a major trade deal involving exports of crude oil from China to Brazil and imports by China of Brazilian iron ore, pig iron, and steel products.

FRENCH PETRO-GAZ EXHIBITION

More than 60 companies took part in an exhibition of French technology in petroleum, natural gas, and petrochemicals from November 29 to December 8. Foreign Trade Minister Li Chiang and his French counterpart, Jean Francois Deniau, cut the ribbon to inaugurate the exhibition in Peking. French and Chinese specialists held 70 technical discussions during the show. Companies participating included Elf-Aquitaine and Total, which showed their drilling and offshore production technologies. The exhibition follows recent visit to China by the director of fuels from the French Ministry of Industry and a delegation of French oil company officials.

CHINA'S OIL: EVERYBODY'S BUYING

An Italian trading concern says it has become the first West European firm to buy significant quantities of crude oil from China. Tecntrade SpA of Rome signed an accord in early November for "a substantial quantity" of petroleum during 1979. One of its major customers will be an Italian refiner, Garrone SpA. The amount Garrone will buy is not yet clear, with reports ranging from 100,000 to nearly 700,000 tons next year. Tecntrade has said that it will obtain large amounts of petroleum on a continuing basis for at least one year.

Coastal States Gas has announced that it will become the first American

company to import Chinese crude in the US. The company signed an agreement in Peking in mid-November to buy more than 3.6 million barrels of crude. (See Importer's Notes, p. 56.)

Thailand will receive 600,000 tons of crude and 240,000 tons of high-speed diesel fuel as part of an agreement disclosed in early November. The oil will serve as partial payment for Chinese purchases of \$80 million worth of Thai agricultural and other goods. Thailand also reportedly expects help from China in developing its shale oil deposits, according to an August 12 report in *The Oilman*. The report said Thai experts have already visited China to discuss the project.

A Chinese trade delegation to Turkey in September offered to sell crude oil to that country.

Japan's Maruzen Oil Co. has bought 20,000 kiloliters of fuel oil from China for supplementary power units, such as power generators in ocean-going ships. Despite the plans of Toshio Komoto, Minister of International Trade and Industry, to substantially increase purchases of Chinese oil, nine electric power companies in Japan formally advised the government in September that they do not want to buy more crude from China. Among the reasons given for opposing increased Chinese crude imports, according to the October 3 *Asahi Evening News*, are the high nitrogen oxide content of Chinese crude and existing contracts with suppliers from Southeast Asia which might have to be altered if Komoto's plan goes through. Eighty percent of the crude consumed by the power industry reportedly comes from Southeast Asia. The nine companies consumed 27.2 million kiloliters of Chinese crude in 1977, one-third of the total oil imports from China (all from Taching). The report said the companies also refuse to buy Shengli crude because they contend its sulfur content is too high. The companies also pointed out that they expect their oil consumption to drop from 72 million kiloliters in 1977 to 50 million by 1990.

The opposition from the power companies thus endangers the prospects for Japan keeping its side of the bargain for the two countries struck last February for long-term trade development. The agreement calls for Japan to import 15 million tons of Chinese crude in 1982 and 30 million tons by 1985.

The *Japan Economic Journal* reported October 10 that Komoto has virtually abandoned his efforts to persuade the power firms to boost purchases of Chinese crude. The paper predicted that his action would have "not a few repercussions" on Sino-Japanese trade.

Komoto had reportedly decided in July to construct two pilot plants for cracking residual oil, which accounts for 70.5 percent of the crude from Taching and 76 percent of Shengli crude. By contrast, residual oil makes up only 44 percent of Arabian light crude. The two plants will reportedly cost ¥20 billion (US \$100 million).

No such problems have been reported in Hong Kong, where imports of Chinese petroleum products during the first half of 1978 rose 90 percent over the corresponding period in 1977. China had a 22 percent share of the local market for petroleum products during the period.

AKER GROUP SEEKS PACKAGE DEAL

Norway's Aker Group has presented the Chinese with a package proposal for sales of petroleum equipment and related facilities, including a plan to build a whole yard for the construction of Aker H-3 semisubmersible rigs. The proposal was submitted after Aker officials and representatives of two other companies gave a four-day technical seminar in May. The facilities would probably be used in offshore exploration in the South China Sea. Aker's parent company, Fred Olsen, sold an Aker H-3 rig, the *Borgny-Dolphin*, to China in July 1977 (*CBR* 4:5, p. 38).

Mexico and China are planning to exchange petroleum technology, a PEMEX official reportedly said after the October visit of President Jose Lopez Portillo to China. The official said the Mexican state oil company is basically interested in a Chinese technique used in producing ammonia. Another report said that China intends to buy oil refinery equipment from the Mexican Petroleum Institute.

The Societe d'Etudes de Recherches et de Constructions Electroniques has received a 65 million franc (US \$15 million) order for petroleum exploration laboratory materials.

DAINIPPON INKS POLYOL ACCORD

Dainippon Ink & Chemicals, Inc., and Western Japan Trading Co. have

signed a ¥200 million (US \$1 million) polyester polyol process export agreement with TECHIMPORT. The DIC technique will be incorporated in a polyol plant with annual capacity of 3,600 metric tons, which will supply raw materials to the projected synthetic leather facility (exported earlier by Kuraray Co. and Western Japan) in Shantung.

DIC will guide China in both basic and detailed design work and will also recommend polyol plant makers. DIC will train Chinese plant engineers.

Chiyoda Chemical Engineering & Construction Co. anticipates several large plant orders from China next year. The company last year received a ¥5 billion (US \$26 million) Chinese order for a natural gas refining plant.

MEXICO AND BRITAIN LOOK TOWARD INTERACTION IN PETROCHEMICALS

In other news, Mexico and China plan to invest in each other's petrochemical plants. That agreement was reached during the October visit to China of Mexican President Jose Lopez Portillo.

The Harrier jump-jets weren't the only item on Vice Premier Wang Chen's shopping list when he visited Britain in October. Wang also reportedly discussed possible petrochemical plant purchases.

CHINA BUYS IRANIAN OIL

China imported 300,000 tons of Iranian oil in 1977, according to an August 30 *Financial Times* article. The purchase may have been prompted in part by Chinese hopes of Iranian participation in Chinese oil development. The Chinese have also reportedly made some oil purchases from Iraq and Algeria.

OIL FOR THE EEC

China is interested in exporting oil to the EEC, Wilhelm Haferkamp, EEC External Affairs Commissioner, said upon his return to Europe after visiting China in early October.

Delegations: Technical seminar by Norway's Aker Group and other companies (May) • An eight-man Chinese team recently visited the Hartlepool works of Steetley and Company. The plant makes magnesium oxide, which is used in the firing of high-temperature bricks and cement for the steel industry • Norway's Oil and Energy Minister, Bjartmar Gjerde, to China (November) • Chinese technical delegation to US drill bit manufacturers (November-December).

Pharmaceuticals, and Medical Instruments

Radio isotope sale possible • Medical technology exchanges seen.

PROSPECTS FOR US AND EUROPEAN SALES

A group of American health care experts who visited China over the summer believe that the US and China will exchange medical information and technology. Val J. Halamandaris, special counsel to the House Select Committee on Aging, said Chinese expertise in areas such as microsurgery could be exchanged for American medical technology. Jack MacDonald, executive vice president of the National Council for Health Care Services, said China is "keenly interested" in American products.

A Chinese health care delegation that visited Britain in June observed a nuclear medicine scanner at the Edinburgh Laboratories of Nuclear Enterprises, where they saw advanced ultrasonic scanners for medical diagnosis and gamma camera equipment used for investigations into cancer. Another medical delegation in September, led by Ling Tung, a member of the standing committee of the China Drug Society, visited several British pharmaceutical firms on a fact-finding mission which could lead to some lucrative contracts. The mission visited Jencons (Scientific), where it inspected laboratory equipment; and Smith, Kline and French, where the scientists examined the firm's research and drug production facilities. The team also visited the pharmaceutical giants Glaxo and Beechams and attended the Sixth International Symposium on Medicinal Chemistry held in Brighton.

INDIA WOULD SELL RADIO ISOTOPES

Indian Prime Minister Morarji Desai said August 25 that his country would be willing to sell radio isotopes to China. Peking reportedly imports some 80 percent of its radio isotopes, mainly for medical research purposes.

Delegations: Chinese teams to the UK (June and September) • US team to China (summer).



High energy physics researcher in PRC.

Xinhua

Power

US will OK A-plant sale by France if safeguards are met • Mitsubishi claims contract for thermal plant at Paoshan • Delegations everywhere • China may buy solar equipment from Australia.

FRANCE WILL SELL 2 A-PLANTS IF US GIVES OK

France will sell two 900,000 kw. atomic power plants under the terms of a \$14 billion, seven-year trade agreement signed in Peking December 4. The sale by Framatome would hinge on China's agreement to use the technology only for peaceful purposes. Since Framatome uses technology licensed by the Westinghouse Electric Corp. in constructing atomic power plants, the sale would have to be approved by the White House under COCOM regulations. The White House issued a statement in late November saying it would not oppose the sale if France and China would agree to ensure that plutonium is not extracted from spent fuel to use in nuclear weapons. The two plants would reportedly cost a total of \$4.5 billion.

The White House statement leaves open the question of whether the PRC would have to sign the Nuclear Non-proliferation Treaty to get the plant. More importantly, it does not at all deal with the specific types of safeguards that France and Peking would have to work out in order to comply with US standards.

MITSUBISHI GETS THERMAL POWER PLANT DEAL

Mitsubishi Heavy Industries and Mitsubishi Electric have apparently received a \$190-200 million contract to construct two large thermal power plants for the Paoshan steelworks outside Shanghai. The project reportedly calls for construction of thermal power units with total power capacity of 700,000 kw. Part of the fuel for the plants will be supplied by waste gas from furnaces at the steelworks. The deal was reported in the press on November 13.

Mitsubishi faced stiff competition from Hitachi and Toshiba for the contract. The Chinese made inquiries to all three companies about the plants last spring.

The first plant will be completed by June 1981 and the second by the end of 1981. Also reportedly aiding in the project will be the Tokyo Electric Power Services Co., which said back in August that it had signed a ¥410 million (US \$2.1 million) contract for design and engineering services for the power station.

Mitsubishi Electric's role in the sale is not yet clear, but it will probably be involved in supplying gas insulated substations, which reportedly require far less space than ordinary substations and are supposedly very efficient in transformation of ultra high-voltage electricity.

China is also reportedly negotiating with Japan regarding the supply of hardware and technology for Peking's proposed hydroelectric power stations on the Yangtze and Yellow Rivers. Meanwhile, Italian Foreign Trade Minister Rinaldo Ossola said after his journey to Peking in early November that Italy's state electric power agency, Enel, has a good chance of getting Chinese contracts, while Vice Premier Wang Chen may have discussed purchases of thermogenerating equipment on his November mission to the UK. The British power transmission firm, Renold Ltd., sent a group of four technical experts to China in August for discussions on possible sales.

Responding to a question in Parliament as to whether India would be prepared to supply heavy water nuclear technology to Peking in return for Chinese know-how on uranium enrichment, Prime Minister Morarji Desai said India has no plans to export its nuclear technology.

AUSTRALIAN SOLAR ENERGY SALE

A visit to Australia in late August and early September by eight Chinese solar scientists could result in the sale of Australian solar equipment to the PRC. Dr. Lo Wei-chiu, leader of the delegation, said he intended to place an order for solar equipment when he returned to China, though he did not specify what type of equipment or how much he intended to purchase. Lo said that China was on a par with Australia in the use of solar energy.

Chairman Hua Kuo-feng reportedly promised to aid Yugoslavia to develop nuclear technology for peaceful purposes during his August visit to that country.

Delegations: Maurice Legrand, director of gas, electricity, and coal in the French Ministry of Industry, led an electric power delegation to China and met Chien Cheng-ying, minister of water conservancy and power • Chinese solar scientists to Australia (August-September) • Dr. Edmund Wilson and Mr. Werner Pirkel of the European Center for Nuclear Research in China for a friendly visit and to help work at the invitation of the Institute of High Energy Physics (October) • Paul Desmarais, chairman of the Power Corporation of Canada, led an industrial and commercial mission to China and met with Vice Premier Yu Chiu-li (October) • Vice Premier Fang I, in West Germany to sign an accord on cooperation in science and technology, visited the Unterweser nuclear power plant near Bremen (October) • An American technical delegation accompanying Energy Secretary James Schlesinger discussed cooperation in hydroelectric power, high energy physics, and other areas (October-November).

represent the first time a major West German company has taken advantage of China's new policy accepting countertrade.

Manfred Bohnen, president of the West German leather firm Konrad Hornschuch AG, said the Chinese tentatively accepted the proposals, which were made through Admix Trading AG, a joint venture between Hornschuch and China Trade Corp. of New York.

One proposed factory would produce polyvinyl chloride foils, used in such products as wall coverings, shower curtains, and table cloths. The plant would require an investment of \$8.4 million and would have an annual capacity of 36 million yards of foil. The artificial leather factory, which would cost about \$12.6 million and employ some 300 people, would have an annual capacity of 7.5 to 8.7 million yards.

The plan calls for Hornschuch to receive 50 percent of the annual production of both plants for the first five years of their operation, by which time Bohnen said the entire investment should be amortized.

Bohnen said the plant would import some raw materials such as PVC and polyurethane, the main raw material for artificial leather, and which China does not produce at all. He said the Chinese recommended that the foils factory be built in Talian and the leather plant in Shanghai.

HONG KONG FIRM IN JOINT VENTURE WITH CHINA

A Hong Kong holding company has contracted with China for construction of a wool spinning mill in Chu Hai, an area just across the border from Macao. The factory will employ about 200 workers, almost all of them Chinese. The plant, to be built by Novel Enterprises, will produce top grade cashmere, angora, and wool blend yarns with modern spinning and carding equipment to be imported from Europe by the financiers at a cost of some \$1.5 million.

The plant's wool yarn output will be used by mills in Hong Kong and Macao to make high fashion knitwear for worldwide distribution. Novel Enterprises will lose all rights to the plant's output after five years. Novel plants in Hong Kong and Macao will receive about \$26 million worth of yarn during the first five years of the plant's

Textiles

West German and Hong Kong firms announce buyback agreements • Inquiries continue on polyester plants • China may buy nylon tire cord plant • Hanae Mori blouses to be made in China • Pierre Cardin hopes Chinese will wear his clothes • Japanese firms switch from Korean to Chinese underwear.

WEST GERMAN FIRM TO BUILD TWO PLANTS IN CHINA

A West German company reached basic agreement in early November on a plan to build two textile factories in China at a total cost of some \$21 million. The plants, which will make adhesive foil and artificial leather,

operation. The plant will produce about 1.2 million pounds of yarn annually and is scheduled to begin operating in April.

FIBER PLANT INQUIRIES

Unitika Ltd. of Osaka received an inquiry in September from China for a polyester fiber plant and a cotton spinning and weaving plant. Unitika President Shinrokuro Kodera said China also wants the company to co-operate in remodeling cotton spinning plants in Peking and Tientsin. The value of the deal is estimated at ¥20 billion (US \$105.3 million).

Kodera said China hopes to import an integrated polyester fiber plant with spinning, draw-twisting, and packaging equipment, with a daily capacity of 80 tons, and a cotton spinning and weaving plant with 130,000 spindles. The Peking and Tientsin plants to be remodeled each have about 100,000 spindles. Three other Japanese textile makers, Kanebo, Hitachi, and Toyobo, and West Germany's Hoechst AG have also received inquiries about the sale of polyester plants.

In another possible plant sale, Asahi Chemical Industry Co. has received an inquiry from Peking about the export of a nylon-66 tire cord plant. The inquiry was received after a Chinese fiber mission toured Asahi's nylon tire cord plant in Nobeoka early in the year. Several US companies may also be in the running for the plant.

The British firm, Courtaulds, is hoping to receive an order from China for an acrylic plant. A senior Chinese delegation visited the company early in 1978.

CHINA MAY BUY USED SPINNING EQUIPMENT

Mitsubishi Rayon Co. officials have held talks with China on the possible sale of 18,000 used spindles for acrylic spinning. The equipment would come from the Mitsubishi subsidiary Dia Textile, which recently closed a 20,000-spindle mill in Gifu City. If the Chinese were to construct a new spindle facility, it would probably cost them some \$1,000 per spindle, whereas the Mitsubishi people say they would be willing to sell the equipment for less than half that price. The initial talks were held in late September.

A delegation of 16 trading companies from Osaka led by the execu-

tive director of the Marubeni Corp. visited China from December 1 to 9. The mission, invited by CHINATEX, visited sewing factories and apparel design institutes in Peking and Shenyang. The mission exchanged views and technical know-how on business management and quality control in order to expand a new form of textile trade between the two countries—bonded processing trade.

HIGH FASHION

Hanae Mori, the world-famous Japanese fashion designer, will design blouses to be made in Shanghai and sold in Japan. Ms. Mori signed the two-year contract during a five-day visit to China in September. The hand-embroidered silk blouses will be available in 35 designs and will sell for upwards of \$50. Linen and cotton blouses may be added later. Comparable goods are not made in Japan because of the prohibitive cost of labor.

Ms. Mori said she discovered "embroidery techniques in China found nowhere else in the world." Some 30,000 blouses will be delivered to Japan in 1979, and that figure will probably increase in 1980.

Ms. Mori may soon have some competition. French designer Pierre Cardin was expected to leave for China November 27. Cardin said he is interested in designing a collection that would be made entirely from Chinese materials, particularly silk. His primary interest presumably is in designing clothes to be made in China for export, though he also was quoted as saying that it is not impossible that Chinese in the not-too-distant future will be wearing Pierre Cardin clothes.

On a less glamorous note, the Fukuoka Corp. announced in October that it will start producing knit cotton underwear in China early next year for importation to Japan. Initial plans call for shipment of one million pieces of cotton underwear to Japan annually. The company will bring knitting and sewing machines to an apparel factory in Shanghai where the work will be done. A spokesman said the firm has no plans to export the underwear to third countries.

In a related development, the Osaka supermarket chain, Jusco, has signed a contract with a sewing mill in Tsingtao to buy women's and children's underwear produced in accordance with the firm's specifications. The deal calls for

the factory to enlarge its production lines and receive supplies of some necessary parts and accessories. Jusco plans to import in 1979 some 1.6 million pieces of underwear from the Tsingtao and other Chinese sewing mills.

Another supermarket chain, Izumiya, is also beginning to buy underwear from China. The chains are switching to China from South Korea because of higher labor costs in Korea, which has dominated Japanese imports of underwear. Izumiya has arranged with a Peking sewing mill to import 500,000 pieces of Chinese underwear.

According to the *Japan Times*, the companies may have some difficulty marketing the Chinese underwear, which is said to be less fashionable than Korean products. The companies will be sending experts to China to solve the problems, which include poor dyeing techniques.

GUNNYBAGS, YARN, AND RUBBER

China will buy five million gunnybags, 10,000 tons of synthetic yarn, and 30,000 tons of rubber from Thailand in 1979. Meanwhile, Chinese rubber purchases from all foreign markets during the first nine months of 1978 amounted to an estimated 125,000 tons.

CHINA BUYS SUDAN CLOTH

China will buy 70,000 bales of short and medium staple cotton from Sudan and will also take an option on an additional 70,000 bales of staple varieties. The contract was part of a trade agreement reportedly signed in Peking in September.

CARPETS TO UK

Chinese carpet sales to the UK have skyrocketed substantially. *Carpet Review* reports. Sales during the first half of 1978 amounted to some \$11.2 million, double the 1977 figure. The increase in quantity was from 72,000 square meters in 1977 to 177,000 in 1978.

TEXTILES PLANT FOR NORTH YEMEN

China will reportedly build a cotton textile factory in North Yemen under a five-year agreement signed in August. A similar textile factory built by the Chinese in 1964 processes cotton grown in North Yemen.

Delegations: Executives of Oxford Industries in Atlanta to China to survey manufacturing possibilities there (early 1978) • Unitika Ltd. team to China for talks on sales of fiber production and spinning facilities (September 1-13) • Japanese fashion designer Hanae Mori to China (September) • French fashion designer Pierre Cardin to China (late November) • Sixteen Osaka trading companies visited sewing factories and apparel design institutes in Peking and Shenyang (December 1-9).

KAWASAKI WINS \$100 MILLION CARGO SHIP ORDER

China signed a contract in early November with Kawasaki Heavy Industries of Japan for eight new cargo ships valued at more than \$100 million. The contract, signed in Hong Kong by Yuan Keng, newly appointed vice president of China Merchant Steam Navigation, and Zenji Umeda, president of Kawasaki, is the biggest single order for new vessels ever placed by the Chinese.

The first vessel will be delivered next October, while the others will be delivered one at a time every two months after that. Five of the vessels are in the 6,000-ton range, while the other three are in the 12,000-ton range. The vessels are all of the roll-on, roll-off type (ro-ro), and are designed to enable road-haulage vehicles, trucks, and trailers carrying containers to drive on or off the vessel over a ramp or link span. This eliminates the need for cargo handling and permits quick turnaround.

Yuan, who represents the Peking-based company in Hong Kong, said the vessels will carry dry cargos and that payment will be made in US dollars. He also said the company will become involved in building and selling ships and added that China will modernize five ports, which he did not identify. He said that container wharves are being constructed at Tientsin and Shanghai.

CONTRACTS FOR SWEDEN AND PAKISTAN

In other shipping deals, China has bought three bulk carriers from the Swedish state shipbuilding concern Svenska in a deal worth around \$36 million. The ships are open-hatch vessels of about 44,500 dwt. China will buy 10 ships from Pakistan over the next five years under an agreement signed in Pakistan in late September. MACHIMPEX and the Karachi Shipyard and Engineering Works will hold discussions annually concerning implementation of the deal. The vessels will be about 4,000 dwt.

HITACHI CLAIMS SHIPYARD DEAL

China has asked Hitachi Shipbuilding to construct a shipyard in China with the capacity to build 100,000 dwt. cargo vessels, Hitachi President Takao Nagata announced in early December.

Technical details and prices will be settled in relevant contracts to be concluded during the annual talks.

The new deals thus represent the continuation of China's big spending spree of recent years. The total value of secondhand ships acquired over the past several years is now estimated at \$700 million, compared to \$600 million spent on new vessels. But even shipping experts have not been able to estimate the size of China's merchant fleet. Many of the vessels are under the Panamanian flag.

BRITISH SHIPBUILDERS GIVE TECHNICAL SEMINARS IN CHINA

A high-level team led by Sir Anthony Griffin, chairman of the state-owned British Shipbuilders, gave 18 technical seminars during a 10-day visit to China in October. Sir Anthony said the Chinese would like to cooperate in research and technical development in modernizing their shipyard technology. He also announced that bilateral talks would be continuing immediately, and other reports noted that British Shipbuilders will be submitting bids on some 30 vessels sought by the Chinese, including 10 ro-ro ships, 12 cargo vessels, two transports and six multi-purpose freighters. Japanese firms were also bidding on the ships, though it is not clear whether the UK's hopes of landing a contract for the ro-ro vessels have been dashed by the order given to Kawasaki HI, or whether the Chinese are now seeking still more ro-ro ships. Meanwhile, the chairman of the privately owned Wear's Austin and Pick-

Hsiangyu Railway, China's newest, from Hupeh to Szechuan.



Transportation

Dutch group lands \$2 billion port contract • China's ship-buying spree continues, with biggest order going to Kawasaki for eight ro-ro vessels • Hovercraft service between Hong Kong and Canton begins • Japan and France hold aerospace talks with China • Railway talks with UK, Japan, and others • Concorde to China?

DUTCH CONSORTIUM GETS \$2 BILLION PORT JOB

A group of Dutch contractors and dredging companies signed letters of intent with China in mid-October to build a coal port on the Yangtze River and to dredge a channel in the mouth of the river. The order is valued at \$2-3 billion and would take some six years to complete. The deepwater port would be built at Lienyunkang, some 400 miles from Shanghai. The dredging project would provide better access to both Shanghai and Nanking and would enable the river estuary to accommodate vessels up to 50,000 dwt.

The order apparently resulted from a recent mission to China led by Johan H. Wijsman, managing director of the Netherlands center for trade promotion, a government-subsidized export promotion organization. Companies taking part in the project include the Bos Kalis Westminster Group and the Volker-Stevin Group. Nedeco will design the project, while IHC-Holland will supply plant and equipment. The Chinese reportedly hope to barter coal to pay for at least part of the project's cost, while the Bank of China has asked the Amsterdam-Rotterdam Bank to organize a syndicate to help finance the project.

ersgill, was expected to visit China in December. The invitation apparently means that the Chinese are interested in the firm's "off the peg" designs, the SD 14 and the SD 18 cargo vessels.

MORE JAPANESE ORDERS

Kyoho Tsusho Kaisha said October 21 it has received an order for a \$1.7 million high-powered ocean tug winch from China's Talien Red Flag Shipyard. The company has also reportedly obtained a tentative order for towing and anchor handling winches for six 12,000-horsepower oceangoing tugs and supply boats. Nippon Kokan Kaisha announced in late October that it had received an order from MACHIMPEX for a ¥1.6 billion (US \$8 million) self-driven bucket-type dredger for delivery next November. The ship is capable of dredging 750 cubic meters per hour. Equipped with a 1,400-ps engine and a 700-kilowatt generator for propulsion, it is designed to have a trial speed of about eight knots. Its dredging machinery will consist of a string of 79 buckets, each capable of scooping 0.5 cubic meters of earth. In another order, China Ocean Shipping Corp. recently bought the 10-year-old Kofukusan Maru from the Mitsui O.S.K. Line.

Regular monthly cargoliner service between China and Japan, originally expected to begin in late June, finally got underway in late October. China will operate one ship a month from Shanghai on each of four different routes. They are between Shanghai and Yokohama-Kawasaki, Kobe-Yokohama, Moji-Nagoya, and Kobe-Osaka. Representatives of the Chinese and Japanese shipping industries held talks in Tokyo in mid-November regarding possible further expansion of shipping activity between the two countries.

HOPES FOR GREECE

A September visit to Hellenic Shipyards, Greece's largest shipbuilding facility, by Chinese Foreign Minister Huang Hua has raised hopes in Greece of orders from China. Hellenic owner Stavros Niarchos told Huang he hoped his company would get Chinese orders, including repair jobs for China's existing fleet. The tour of the yards included a preview of the first of six 400-ton fast missile-carrying gunboats being built for the Greek navy under license from France's Constructions Mechaniques.

Yugoslavia has received an order

from China for five 5,100 dwt. bulk carriers to be delivered between 1979 and 1980. The vessels will be 15.2 meters wide and 107 meters long. Ships have been Yugoslavia's principal export to China since the return to normal relations in 1970, while Chinese exports have included coke and bauxite.

HONG KONG-CHINA FERRY SERVICE BEGINS

Ferry service between Hong Kong and Canton began operating November 17 for the first time in 30 years. The new hovercraft ferry service will cover the 75-mile route three times daily. The 63-seat, diesel-powered ferry averages 30 knots and reportedly cuts 4½ hours off the train trip. The fare is about \$14 one way.

HEALTH PROBLEMS

A Chinese ship laden with 700 tons of talcum powder was turned away from the Royal Docks in Newham, England, last August because of press reports about possible health hazards. Government inspectors found levels of talcum dust around an unloading area and aboard the ship to be far above safety limits. Laboratory tests subsequently found the dust to be non-toxic, but the results of the test were made known only after workers refused to handle the cargo. Certain types of talcum powder dust can reportedly cause a crippling long-term disease if inhaled, similar to the hazards posed by inhalation of asbestos.

SINO-JAPANESE AEROSPACE RELATIONS: TAKING OFF

China wants to buy Japanese YS11 aircraft and to send students to Japan to learn aviation technology, Japanese sources revealed on September 29. Japan stopped production of the plane in 1972, so only used planes can be exported. The Chinese reportedly want to use the YS11s, which have a durability of 20 years, as cargo aircraft. COCOM approval would not be required for the deal. The Chinese expressed their desire to buy the planes to a 15-member team from the Society of Japanese Aerospace Companies which visited China in September.

That could be just the beginning of an exciting new era in Sino-Japanese aerospace relations. Another big step could occur next November at Japan's international aerospace show. Key Chinese officials will almost certainly be

invited, and prospects for Chinese participation in future shows will be discussed. A 30-member aerospace study group from China visited Tokyo last summer. The team, led by Jen Hsin-min, assistant chief of China's aerospace research center, visited Japan's satellite launching center in Tanagashima Island and other research centers.

SINO-FRENCH COOPERATION

"Mutual benefit" is the only condition for cooperation in space between France and China. That's the message conveyed to Chinese Vice Premier Fang I on October 16 by Pierre Aigrain, French secretary of state in charge of research. The high-level science and technology delegation led by Fang visited the National Center of Space Studies in Toulouse and reportedly received "much information" about space research in France. Fang also visited the A-300 Airbus factory in Toulouse and entered the fuselage of an airbus on the assembly line.

China's interest in the Airbus indicates the potential for foreign aircraft exports. China has no civil aviation manufacturing industry, but its aerospace needs are likely to range more widely because of expanding domestic and international networks. In addition to possible aircraft purchases, such as the negotiations for five Boeing jumbo jets (see Exporter's Notes), China is also likely to need a whole range of advanced air traffic control equipment, avionics systems and such items as aircraft test equipment.

CONCORDE TO CHINA?

One of the most intriguing possibilities now being discussed is Concorde flights into China. British Airways chief executive Ross Stanton said in November that Concorde service to China, via Southeast Asia, "is the sort of route where it could really put us ahead of the competition." Stanton said that any BA service to China would most probably begin with subsonic flights via Hong Kong. "China is opening up at an impressive rate, and there is a big potential market for business travelers, followed by a developing flow of tourists as the facilities they need are developed."

AIR ROUTES

KLM Royal Dutch Airlines hopes to start flying into Peking by mid-1979. Dutch officials said they hoped to reach

an agreement when a Chinese delegation visited Amsterdam in late November. Canada Pacific Airlines also hopes to reach an accord next year for regular air service to China.

Both Japan Air Lines and CAAC began making four weekly flights between Peking and Tokyo on November 1, while CAAC recently doubled its weekly air link to Paris via Karachi. The first air passenger service in 29 years between Hong Kong and Canton began on October 12. Two flights daily with a maximum single fare of about \$50 for the 100-mile, 25-minute trip continued during the month-long Canton Trade Fair. China has reportedly received permission from Bangkok for weekly flights over Thai territory to Cambodia. The agreement was reached during Teng Hsiao-ping's October visit to Thailand.

China has reportedly purchased four DHC6 Twin Otters. It has also ordered multimotor panels for controlling the auxiliary motors on aircraft wheel dynamometers which tests wheels and tires under simulated load conditions. The \$40,000 order from the Cutler Hammer Europa company in the UK was due for delivery at the end of September.

UK, JAPAN EYE RAIL CONTRACTS

China's Ministry of Railways has asked the state-owned British railways to develop outline proposals for modernization and electrification of the 146-km. rail line linking the border town of Shumchun with Canton. That request was made to British Railways Chief Executive I. M. Campbell during a two-week visit to China in October at the invitation of the Chinese government to examine rail operations. Campbell said the delegation held technical talks on subjects ranging from the modernization of trunk lines for high speed passenger and freight operations to the continuous movement of bulk freight. Campbell said Chinese technicians will be coming to study at the British Railways technical center and that he would be presenting detailed proposals for further cooperation to the Chinese by the end of December.

Campbell said the Chinese expressed interest in complete systems for bulk loading and unloading of coal, oil, and minerals which the British already have in operation. He said they also ex-

pressed interest in specially designed freight wagons, equipment to improve curve speed, track design for minimum maintenance and computerized signaling and switching.

Nippon Sharyo Seizo Kaisha announced September 22 that China has asked it to help modernize and expand the Changchun rolling stock plant and in training engineers. The company, Japan's largest rolling stock builder, was expected to submit a bid for expanding the plant and providing 100 air-conditioned passenger coaches by the end of September. The Chinese have also placed similar inquiries with French, West German, Canadian, and Swedish rolling stock builders, along with three other Japanese firms—Hitachi, Kawasaki HI, and Tokyu Car Corp.

The high-level Chinese railway delegation that toured Western Europe during the fall visited a railway repair factory, an automatic control center, and a locomotive and vehicle building

factory during its French tour September 20 to October 2.

STEAM TURBINE CONTRACT TALKS

Rumania's largest heavy machinery plant is negotiating a contract for supply of a 330-megawatt steam turbine to China, according to a late summer press report. 完

Delegations: Foreign Minister Huang Hua inspects Hellenic Shipyards in Greece (September) • Society of Japanese Aerospace Companies to China (September) • Chinese aerospace group to Japan (September) • Vice Premier Fang I to Europe (October) • British shipbuilders give technical seminars in China (October).

Corrections

The word "agent" in the second paragraph of the Kaiser Engineers article (CBR 5:5, p. 4) should have been replaced with the words "Chase Pacific."

The article on China's new industrial corporations in CBR 5:5 did not name two recently-appointed ministers. They are Yao I-lin, the new Minister of Commerce, and Chien Min, who succeeded the late Wang Cheng as head of the Ministry of Machine Building. These new ministers were, however, mentioned in Economic Notes.

21 EASY CHINESE LESSONS FOR THE AMBITIOUS CHINA TRADER

Scientific and Technical Chinese, Vols. I and II, by Kung-yi Kao, Thomas Fingar, Carl Crook, Ernest Chin. 417 pp.

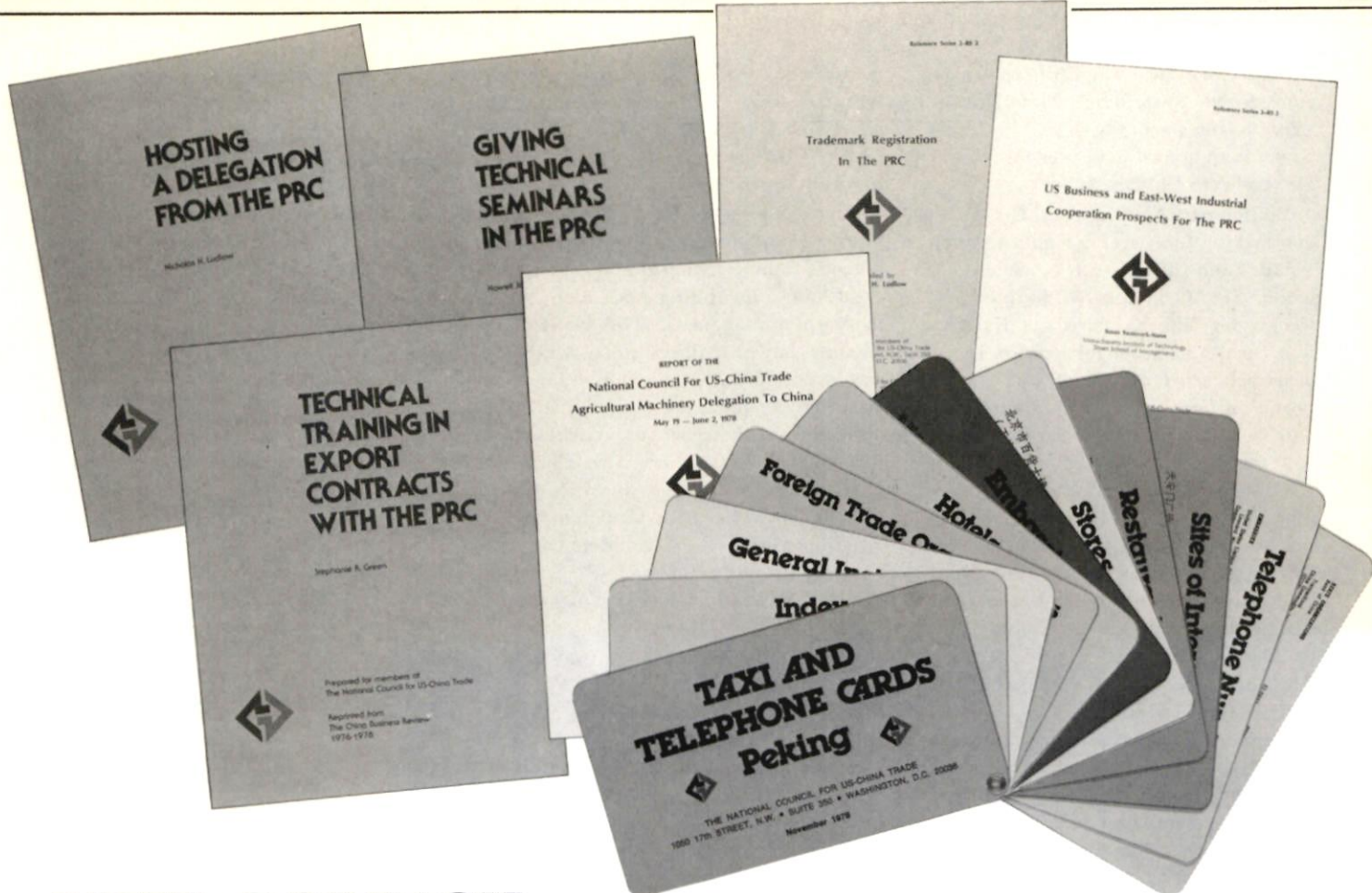
The rapidly increasing number of scientific and commercial contracts between the US and China has heightened the demand for translators, analysts, and technical specialists familiar with the specialized terminology of science and technology in the People's Republic of China. *Scientific and Technical Chinese* will help to meet this need. Prepared by Stanford University's United States-China Relations Program with support from the Office of Education, US Department of Health, Education, and Welfare, the textbook consists of 21 lessons and three sets of readings from recent Chinese sources.

Each lesson has been divided into four parts: (1) 4,000-5,000 character essay or "briefing" on a particular field of science or engineering; (2) questions for written practice or classroom discussion; (3) a review of new material presented

in question-and-answer format; and (4) a vocabulary list with new terms in the order in which they appear in the text. There is also a composite English-Chinese glossary of all new technical terms.

Selections from recent Chinese sources illustrate the kind of material being published in each of the three general fields and provide reinforcement for vocabulary introduced in earlier lessons.

The text is being distributed to several language teachers and university centers of Chinese studies for purposes of test teaching and revision prior to formal publication. Although not yet available for general sale, a limited number of photocopies can be obtained, at cost, from the United States-China Relations Program at Stanford. Total cost of the two-volume set (photocopying, binders, handling, and postage) is \$25.00. Inquiries should be sent to the United States-China Relations Program, Building, 160, Stanford University, Stanford, California 94305.



NEW COUNCIL PUBLICATIONS: Resources for doing business with a changing China market

As 1978 rolls into 1979, the China market is heading for new horizons. The basic conventions that have guided businessmen for years in their dealings with the Chinese are being dismantled.

With the rules of the China market in flux, information on individual market sectors and viable strategies to enter them become increasingly rare commodities. The National Council, as the focal point for US-China trade, strives to provide the most up-to-date information and advice through its publishing arm. The latest crop of market studies, practical handbooks, and monographs is described below.

HOSTING A DELEGATION FROM THE PRC, by Nicholas H. Ludlow (17 pp. reprinted from *The China Business Review*, Vol. 5, No. 5, Sept.-Oct. 1978). \$5 (\$3 each for 25 or more copies).

There are a thousand things that can go wrong with a delegation, and perhaps as many things that can go right. Summing up the National Council's four years and 45 delegations worth of experience, *CBR* Editor-in-Chief Nicholas Ludlow presents guidelines for hosting delegations from China. Background research, correct identification of the

objectives of the group, developing a strategy supportive of the Chinese aims (and fruitful for the host company), blueprints for presentations, plant tours, protocol at banquets, and how to work with Chinese-language interpreters are among the topics covered.

GIVING TECHNICAL SEMINARS IN THE PRC, by Howell Jackson (20 pp., reprinted from *The China Business Review*, Vol. 5, No. 1, Jan.-Feb. 1978). \$5 (\$3 each for 25 or more copies).

Based on a survey of US companies, the A to Z of giving technical presentations in China is presented here, from the various tactics used to win an invitation to China to the results that may be expected from a well-done production.

Howell Jackson, formerly Assistant Editor of *The China Business Review*, analyzes the factors that contribute to success: putting together the right company team; guidelines for preparing technical materials; use of visual aids and translations; and how to assess the Chinese audience at a seminar. Information on how to start the ball rolling, whom to contact to arrange a technical seminar, and checklists for preparing to give a seminar, the presentation itself, protocol, and travelers' tips are also included.

TECHNICAL TRAINING IN EXPORT CONTRACTS WITH THE PRC by Stephanie R. Green and Alistair Wrightman (33 pp., reprinted from *The China Business Review*, 1976-1978). \$5 (\$3 each for 25 or more copies).

With China prepared to take a major plunge into cooperation arrangements and partnerships with foreign enterprises, the issues raised by the prospect of day-to-day interaction between Chinese and foreigners become important to all those involved in the China trade. How do the Chinese

react to the individualistic environment of the US corporate enterprise, with its management sophistication and highly specialized production? And how do US engineers and CEOs on long-term assignments to China enjoy the working conditions, cope with the language barrier, and come to a meeting of minds with their Chinese counterparts?

Stephanie R. Green, *CBR* deputy editor, whose writings on the China trade have ranged from shipping to the Chinese petroleum industry, describes in a series of three articles how Chinese and American technicians have learned to live and work with each other. A Japanese perspective on technical assistance contracts is provided by Alistair Wrightman, Tokyo correspondent for *CBR*.

REPORT OF THE NATIONAL COUNCIL FOR US-CHINA TRADE AGRICULTURAL MACHINERY DELEGATION TO CHINA, May 19-June 2, 1978, by John Kamm (80 pp., NCUSCT, Oct. 1978). Available to members only. \$20.

The latest of the National Council's PRC market studies, this trip report of a delegation from the US agricultural machinery industry, written by escort officer John Kamm (the Council's Hong Kong representative), portrays the decision-making process within a major new entity responsible for imports of foreign agricultural equipment, the China Agricultural Machinery Corporation. Focusing on the factories and communes visited by the Council team, author Kamm provides a detailed description of management, operations, and output of some of China's premier agricultural equipment plants and commercial farms.

Three appendices provide information on 1978 prices of farm equipment in China, officials of the China Agricultural Machinery Corporation and other organizations met by the group, and on end-users attending technical presentations on the lines of products promoted by the delegation.

US BUSINESS AND EAST-WEST INDUSTRIAL COOPERATION PROSPECTS FOR THE PRC, by Susan Swannack-Nunn (92 pp., NCUSCT, Oct. 1978). \$20. Free to members of the National Council.

Countertrade and other forms of cooperation are almost as new an experience for US companies as for the Chinese. In this valuable new monograph, Susan Swannack-Nunn of MIT's Sloan School of Management explains the reasons why China has chosen the countertrade option, and explores the possible involvement of US companies in countertrade contracts with the PRC.

The author describes each of the varieties of countertrade in detail, developing a typology of East-West Industrial Cooperation Arrangements (ICA). To assess the interest and experience of US firms in ICA with China, she conducted a survey of 56 US firms involved in ICA. The results of her survey lead Ms. Nunn to conclude that the PRC market has prospects "for industrial cooperation exceeding that of any single Eastern European country or the USSR."

TRADEMARK REGISTRATION IN THE PRC, compiled by Nicholas H. Ludlow (50 pp., NCUSCT, Oct. 1978). \$20.

On March 4, 1978, the China Council for the Promotion of International Trade wrote the National Council advising US companies that the registration of US trademarks in China would henceforth be permitted "based on the principle of reciprocity."

Over the months since the restrictions governing the registration of US trademarks were withdrawn (US law has no comparable barriers to the registration of PRC trademarks), the National Council has developed considerable expertise in the process of assisting US companies.

Collected in this handbook is a complete set of PRC trademark regulations, application forms for trademark registration, a schedule of processing fees, a list of the procedures and requirements for filing trademark applications in China from the US, and background on the PRC philosophy toward industrial property rights, patents, and trademarks.

CHINA'S FOREIGN TRADE CORPORATIONS, ORGANIZATION, AND PERSONNEL, Vol. 1, by Jeffrey Schultz (over 200 pp., NCUSCT, forthcoming 1979). \$100.

With the PRC's new openness to foreign technology and renewed emphasis on foreign trade, US companies will come into greater contact than ever before with the administrative ranks of China's foreign trading corporations (FTCs). Knowing the officials who make the decisions can mean a big difference for the foreign trader.

Listing over 1800 trading officials, the directory represents the first effort to collect all known information about FTC personnel and management structure in one volume. Author Jeffrey Schultz, a consultant on China trade with the National Council, has described the operational systems of the FTCs, including affiliate organizations and bureau responsibilities.

CHINA'S PROFESSIONAL AND INDUSTRIAL SOCIETIES, by Robert Boorstin (over 150 pp., NCUSCT, forthcoming 1979). \$80.

Midway through 1977, China trade analysts noticed a strange phenomenon: a trickle, which shortly became a stream, of delegations organized by Chinese "societies," organizations of ambiguous antecedents which have begun to play a part in import decisions.

Details of more than 50 societies known to have come into existence or been revived since 1976 are presented in this one-of-a-kind research paper. History of the societies, relations to industrial ministries and the PRC scientific establishment, and the societies' role in foreign trade are covered in depth.

TAXI AND TELEPHONE CARDS: PEKING (NCUSCT, November 1978). \$5.

Flipping desperately through his thick English-Chinese phrase book, the Detroit auto magnate wept tears of frustration as his cab swept by the Bank of China headquarters where he was about to miss a vital appointment.

Sighing, the importer from Tuscaloosa watched as the famed Peking Duck Restaurant faded in the distance because she was unable to tell her driver its name in Chinese.

And grimly, the merchant trying to get a plane out of China set down the receiver after being met with the reply, "Who is this? What number are you dialing?" for the tenth time.

Scenes such as this are relegated to the past with the publication of the National Council's telephone and taxi cards, first in a series of direction and telephone cards for each major Chinese city. Names, addresses, and telephone numbers of foreign trade organizations, embassies, hotels, hospitals, restaurants, sites of interest, and transportation services in Peking are printed in English and Chinese. Simple direction-giving phrases for drivers are printed on a separate card.

Packaged in a clear plastic envelope, the 10 cards that form the set will make a handsome and practical addition to the travel gear of the businessman bound for China's capital.

Members of the National Council are given a 25% discount on publications. For domestic orders please add \$.75 postage and handling for each publication; foreign customers will be billed for airmail postage. Prepayment is required for all publications. Write: Publications Department, The National Council for US-China Trade, 1050 17th Street NW, Washington, DC 20036.

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