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The China Business Review

VOL. 4 NO. 1

TRANSLATION SERVICES OF THE NATIONAL COUNCIL

The National Council provides translation services for member companies and other firms wishing to have material translated into modern, simplified Chinese characters.

In all business contacts with the People's Republic of China, having correspondence, brochures, and other information translated into the script presently used in China facilitates communications with China's trade organizations. This is because China has limited translation resources: information received in China in Chinese can be disseminated and responded to much faster than if the correspondence is in English.

It is very important for the Chinese characters used in correspondence with Chinese trade authorities to be clear, fluid, and well-drawn. It is important to recognize that present terminology and style of business correspondence used among overseas Chinese differ considerably from that now in use in the People's Republic of China.

Services Offered

The National Council offers a translation service, with strict quality control, for all companies involved in business with China for translation of:

- Correspondence
- Business Cards
- Brochures and Pamphlets
- Summary of Technical Data
- Advertisements
- Catalogues
- Any other form of communication required

These services also include review, revision and correction of translations, both written and oral, made via other agencies in the U.S. and elsewhere, and referral to printing houses possessing modern Chinese ideographic forms. The Council has a simplified-Chinese typewriter.

As information that companies wish to convey to the Chinese normally includes technical terms, the Council's services also include a reference system of leading Chinese-speaking authorities in the U.S. in all major technical fields. These include those of applied mathematics, physics, biochemistry, civil engineering construction, electrical engineering, medical technology, metallurgy, statistics, computer sciences, heavy engineering, textile machinery, electronics and petroleum technology.

The Council also has an extensive set of reference works available including specialized dictionaries, atlases, and recent literature from China.

In the preparation of Chinese script, the following processes are involved: initial translation, research for technical terms, reference to specialized dictionaries, calligraphic copying, and final checking of contents.

To insure strict quality control, the translators used by the Council have been screened by authorities on modern Chinese usage. The services made available by the Council are also often recommended by the Washington Liaison Office of the People's Republic of China.

Charges

Translation charges depend on the type and extend of translation involved. Charges are increased for work needed at short notice. Fees are based on an hourly charge, plus additional cost if additional translation consultations with specialists are involved. There is a reduced hourly rate for members of the National Council. Non-members pay a higher rate. Estimates may be obtained in advance without charge. All services are provided in the strictest confidence.

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The China Business Review

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Front cover. The National Council's agricultural chemicals delegation members strolling at the Chinese Academy of Science's Institute of Soil in Nanking. At right is FMC's E. M. Morgan, leader of the mission; at left, wearing cap is local CCPIT host; institute host Mr. Liu has arm raised at center. Details page 19.

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

CHINA TRADE EVENTS

NEW YORK, January 20

"China After Mao," a briefing for executives involved in international trade, was held at the headquarters of American Management Associations, the sponsoring organization. Chairing the session was Eugene A. Theroux of Baker and MacKenzie. Speakers were Christopher H. Phillips, President, National Council; Nicholas H. Ludlow, Director, Publications and Research, National Council; Mark E. Buchman, Senior Vice President, Manufacturers Hanover Trust Co.; Julian Sobin, Senior Vice President, International Minerals and Chemical Corp.; Richard Sorich, Columbia University; and Larry Gell, Gell Associates.

WEST ORANGE, N. J., January 21

"US-China Trade in the Post-Mao Era" was the topic of a speech given by Council President Christopher H. Phillips at the World Trade Association of New Jersey.

NEW YORK CITY, January 21

A meeting of the National Council's Importers Steering Committee was held at the offices of ACLI International to discuss the possibility of delegations to the PRC, as well as other matters.

CHICAGO AREA, February 10-12

Talks on US-China Trade Potential will be given at the Business Executives luncheon hosted by Thomas Miner & Associates (Feb. 10), the Conference of the Association for Commerce and Industry's World Trade Division (Feb. 11), and the Executive Programs luncheon for Northwestern University's Graduate School of Management (Feb. 12). Roland Berger, consultant for the 48 Group, will be the speaker. For details contact Richard Cooper, Salk, Ward & Salk, (312) 236-0825.

SOUTHWEST, February 15-17

Council President Phillips will be the guest speaker on the subject of Sino-US trade after Mao at a series of dinner meetings held by the Committees on Foreign Relations of Albuquerque (Feb. 15), Phoenix (Feb. 16) and Tucson (Feb. 17). The Committees are affiliates of the Council on Foreign Relations in New York City.

RACINE, WINCONSIN, February 20-21

A conference on "The Exchange Experience with China—the Past, Present and Future" sponsored by the National Committee on US-China Relations with the support of the Johnson Foundation will be held at the latter's Wingspread Conference Center. Council Vice President Melvin W. Searls, Jr., will participate. Information: (212) 682-6848.

MOUNT KISCO, NEW YORK, February 24-26

The Seven Springs Center, an affiliate of Yale University, will host a conference on "China After Mao: The Global Implications" to be chaired by William Bundy. Melvin W. Searls will represent the National Council.

PITTSBURGH, March 16

"Prospects for US-China Trade" will be one of the topics of a conference on China sponsored by the China Council of the Asia Society, the Pittsburgh World Affairs Council, the University of Pittsburgh Asian Studies Program and the Mid-Atlantic Association for Asian Studies. Eugene Theroux of Baker and McKenzie will make the presentation. For details contact Peggy Blumenthal at Asia Society, (212) PL-1-4210.

ST. LOUIS, March 18

A conference on China will be sponsored by the St. Louis International Studies Association. Speakers include David Denny, US Department of Commerce, Bureau of East-West Trade, on the topic of "China's Foreign Trade Policy." For further information call John E. Turner at (612) 373-2682.

DENVER, March 22-23

The National Council has scheduled a conference on construction and mining equipment sales prospects to the PRC—its third conference specializing in a particular area of Sino-US trade. Introductory remarks on the role of the National Council by President Christopher H. Phillips will be followed by talks on "China's Current Political Scene" (Richard Solomon, Rand Corporation), "Economic Forecast of China's Economy" (Dwight Perkins, Harvard Economics Professor), "Contracts and Licensing to the PRC" (Eugene Theroux, Baker and McKenzie). Speaking on the subject of China's mining industry will be K. P. Wang, US Bureau of Mines, on an "Evaluation of China's Mining Industry;" M. W. Searls on "Who's Sold What Mining Equipment Worldwide," William Clarke, US Department of Commerce, on a "Mining Equipment Market Evaluation;" and WABCO Director of Mining and Marketing, Robert Brenkman, on "A Case History of a Sale." Presentations on the construction industry will include Searls on "Who's Sold What Construction Equipment Worldwide," William Clarke on "A Construction Equipment Market Evaluation," Caterpillar Vice President for Marketing Del Lammers on "A Case History of a Sale," and C. J. Wang on "Agent s Role in the Sale of Heavy Equipment." For further details contact Eric Kalkhurst at (202) 331-0290.

KWANGCHOW, April 15-May 15

The 41st Chinese Export Commodities Fair will be held. Attending from the National Council will be Vice President Searls, Director of Business Advisory Services Eric Kalkhurst and Hong Kong representative John Kamm.

MILWAUKEE, WISCONSIN, May 13-14

The Institute of World Affairs of the University of Wisconsin at Milwaukee and the China Council of the Asia Society are planning a "Wisconsin Conference on China," which will feature an afternoon roundtable on "Sino-US Trade: Possibilities and Problems." Nicholas Ludlow, Director of Research and Publications at the National Council, is chairing this panel, focusing on trade problems and prospects. The panel will also consider the practicalities of doing business with the PRC.

WASHINGTON, D.C., June 16

The Annual Meeting of the National Council will be held at the Mayflower Hotel.

Hsinhua

Workers at Shanghai's Hutung Shipyard.

CHINA'S FUTURE

Where is China headed under the leadership of Chairman Hua Kuo-feng? What directions will economic policy take in the People's Republic? The speech by Hua at the second national Tachai conference in December and the simultaneous re-releasing of a 1956 speech of Mao Tse-tung provide plenty of clues as to China's forthcoming economic development. Some of the more interesting statements indicate big economic growth in 1977 and the years through 1980, an emphasis on professional, pragmatic thinking as opposed to ideological attitudes, and a continuing Chinese interest in foreign technology. In addition the Chinese released an important commentary on the state of the PRC's foreign trade, excerpts from which are printed here.

Chairman Hua Kuo-Feng's address at the second national conference on Learning from Tachai in Agriculture, December 25, 1976—Excerpts

"What will become of China's future? Will it be a bright China or a dull China?"

Key points of Hua's address

- **Economic push in 1978–1980:** China must "prepare for a big growth of the national economy in the last three years of the fifth five-year plan."
- **Priorities** are "first to run agriculture well and also run light industry well and organize the market well."
- **Agriculture:** Learning from Tachai, building more Tachai-type counties, and agriculture mechanization were tasks "set at the present conference."
- **Industrial priorities:** "Meanwhile we must do a good job in transport and communications and in heavy industries that produce fuel, electricity, petrochemicals, iron and steel and other raw and semi-finished materials, so as to ensure the smooth operation of industry as a whole."
- **National Industrial Conference before next May** on "Learning from Taching in Industry."
- **Strengthening economic management:** "Whether in industry or in agriculture, or in any other economic undertakings, we must follow the policy of building our country and running our enterprises diligently and thriftily and rely on the masses, and systematize rational rules and regulations and improve and strengthen socialist economic management."
- **Both red and expert:** "We should encourage people to raise their cultural and technical levels for the sake of the revolution and to acquire proficiency in their work so as to be both red and expert."
- **Raise living standards:** "We must pay attention to the well-being of the masses and raise the living standard of the people step by step on the basis of increased production."
- **Economic growth in 1976 set back:** "It is chiefly owing to interference and disruption by the gang of

four that the achievement of our national economy this year is not as great as it should be. The people of the whole country now fervently hope that after the overthrow of the gang of four, our national economy will grow rapidly and they are determined to make up as soon as possible for the loss of time caused by the gang.

"This year also witnessed serious national disasters in our country. In a vast land like ours, there are always some areas hit by natural disasters each year. But in this year, not only did a number of areas suffer quite seriously from drought, waterlogging, low temperature, early frost and other adversities; there were also violent earthquakes of magnitude 7 and upwards in the Lungling, Tangshan and Sungpan areas on six occasions. Particularly the Tangshan earthquake inflicted a loss of lives and property that is rarely seen in history."

Hsinhua

China's agriculture: combine harvester at work in Central China.

- **The next eight years are critical:** "In his report on government work to the Fourth National People's Congress in 1975 Premier Chou En-lai reiterated the grand plan Chairman Mao mapped out for our country to accomplish the comprehensive modernization of agriculture, industry, national defense and science and technology and bring our national economy to the front ranks in the world before the end of the century and pointed out that the decade between 1976 and 1985 would be decisive for the realization of this plan."

- **1977 is key year:** "The work in 1977 has a vital bearing on the situation of the subsequent eight years. We must exert ourselves, *maintain independence, keep the initiative in our own hands and rely on our own efforts* and strive to make outstanding achievements in all fields."

ON THE TEN MAJOR RELATIONSHIPS
MAO TSE-TUNG

First Published April 25, 1956—Re-released December 25, 1976 by the New China News Agency—Excerpted

The Relationship Between Heavy Industry on the One Hand and Light Industry and Agriculture On the Other

The problem now facing us is that of continuing to adjust properly the relation between investment in heavy industry on the one hand and in agriculture and light industry on the other in order to bring about a greater development of the latter. Does this mean that heavy industry is no longer primary? It still is, it still claims the emphasis in our investment. But the proportion for agriculture and light industry must be somewhat increased.

What will be the results of this increase? First, the daily needs of the people will be better satisfied; second, the accumulation of capital will be speeded up so that we can develop heavy industry with greater and better results. Heavy industry can also accumulate capital but, given our present economic conditions, light industry and agriculture can accumulate more and faster.

Here the question arises: Is your desire to develop heavy industry genuine or feigned, strong or weak? If your desire is feigned or weak, then you will hit agriculture and light industry and invest less in them. If your desire is genuine or strong, then you will attach importance to agriculture and light industry so that there will be more grain and more raw materials for light industry and a greater accumulation of capital. And there will be more funds in the future to invest in heavy industry.

Hsinhua

Light industry: the assembly line at Nanking Radio Factory.

There are now two approaches to our development of heavy industry: One is to develop agriculture and light industry less, and the other is to develop them more. In the long run, the first approach will lead to a smaller and slower development of heavy industry, or at least will put it on a less solid foundation, and when the overall account is added up a few decades hence, it will not prove to have paid. The second approach will lead to a greater and faster development of heavy industry and, since it ensures the livelihood of the people, it will lay a more solid foundation for the development of heavy industry . . .

The Relationship Between Economic Construction And Defense Construction

. . . In the period of the first Five-Year Plan, military and administrative expenditures accounted for 30 per cent of total expenditures in the state budget. The proportion is much too high. In the period of the second Five-Year Plan, we must reduce it to around 20 per cent so that more funds can be released for building more factories and turning out more machines. After a time, we shall not only have plenty of planes and artillery but probably have our own atom bombs as well . . .

The Relationship Between the State, the Units Of Production and the Producers

. . . Take the workers for example. As their labor productivity rises, there should be a gradual improvement in their working conditions and collective welfare. We have always advocated plain living and hard work and opposed putting personal material benefits above everything else; at the same time we have always advocated concern for the livelihood of the masses and opposed bureaucracy, which is callous to their well-being. With the growth of our economy as a whole, wages should be appropriately adjusted . . .

. . . Here I would like to touch on the question of the independence of the factories under unified leadership. It's not right, I'm afraid, to place everything in the hands of the central or the provincial and municipal authorities without leaving the factories any power of their own, any room for independent action, any benefits. We don't have much experience on how to share power and returns properly among the central authorities, the provincial and municipal authorities and the factories, and we should study the subject. In principle, since centralization and independence work with the unity of opposites, there must be both centralization and independence . . .

The Relationship Between China and Other Countries

. . . Our policy is to learn from the strong points of all nations and all countries, learn all that is genuinely good in the political, economic, scientific and technological fields and in literature and art. But we must learn with an analytical and critical eye, not blindly, and we mustn't copy everything indiscriminately and transplant mechanically. Naturally, we mustn't pick up their shortcomings and weak points . . .

. . . In the natural sciences we are rather backward, and here we should make a special effort to learn from foreign countries. And yet we must learn critically, not blindly. In technology I think at first we have to follow others in most cases, and it is better for us to do so, since at present we are lacking in technology and know little about it. However, in those cases where we already have clear knowledge, we must not follow others in every detail.

We must firmly reject and criticize all the decadent bourgeois systems, ideologies and ways of life of foreign countries. But this should in no way prevent us from learning the advanced sciences and technologies of capitalist countries and whatever is scientific in the management of their enterprises. In the industrially developed countries they run their enterprises with fewer people and greater efficiency and they know how to do business. All this should be learnt well in accordance with our own principles so that our work can be improved.

Nowadays, those who make English their study no longer work hard at it, and research papers are no longer translated into English, French, German or Japanese for exchange with other countries. This too is a kind of blind prejudice. Neither the indiscriminate rejection of everything foreign, whether scientific, technological or cultural, nor the indiscriminate imitation of everything foreign as mentioned above, has anything in common with the Marxist attitude, and they in no way benefit our cause. . . . 完

THE PAST AND FUTURE OF CHINA'S FOREIGN TRADE

China's Recent Commentary

In an unusually long report, China's news agency broadcast a commentary on January 13, 1977 on the PRC's foreign trade, with explicit references to complete plant purchases (endorsed by Chairman Mao Tse-Tung), oil exports, and the effects of the "gang of four" on China's trade performance in 1976. Among the key passages are—

"Gang of four" Attacks Foreign Trade. "In order to achieve their criminal goal of usurping party and state power, the Wang-Chang-Chiang-Yao 'gang of four' antiparty clique used a variety of despicable means in 1976 to launch an organized, planned and premeditated wild attack against foreign trade over the issue of our country's oil exports and caused serious results at home and abroad. . . .

"The gang of four poked their noses into foreign trade and sabotaged it. They viciously cursed the Ministry of Foreign Trade as the 'ministry of national betrayal' and perversely directed their spearhead at the great leader Chairman Mao, the esteemed and beloved Premier Chou and the party Central Committee headed by Comrade Hua Kuo-feng."

Mao Tse-Tung's Foreign Trade Directives. "In the struggle to expose and criticize the 'gang of four' the cadres and masses on the foreign trade front have reviewed the development of socialist China's foreign trade. They have pointed out: Since the liberation of the whole country, foreign trade was always conducted under the kind concern of the great leader Chairman Mao and the party Central Committee and under direct leadership of our esteemed and beloved Premier Chou. Chairman Mao personally formulated the correct line, principles and policies for our country's trade in the period of socialism . . . Chairman Mao solemnly proclaimed to the whole world in his address to the preparatory committee of the new Political Consultative Conference: *'The Chinese people wish to have friendly cooperation with the people of all countries and to resume and expand international trade in order to develop production and promote economic prosperity.'"*

Plant Purchases Approved By Mao. "At these meetings, the 'gang of four' launched further attacks over the question of importing whole sets of equipment. Chang Chun-chiao viciously said: Too many major items have been imported. They have clustered together. If you don't examine your own mistakes, you cannot convince others. The 'gang of four' were clearly aware that the import of all these entire sets of equipment was approved by Chairman Mao. They themselves signed their names to these reports and the locations of some of the plants had even been selected by them."

Mao Chaired Decision on Oil Exports. "Particularly since the Great Proleterian Cultural Revolution, our country's petroleum output has more than doubled. Based on this situation, the Party Central Committee headed by Chairman Mao, in accordance with domestic oil consumption and export possibilities, and taking into account the needs of all sides, made the decision to export part of our petroleum. At a time when the Western countries are beset with an energy crisis, our country is not only able to insure domestic self-sufficiency in oil, but can begin exporting some as well. What a drastic change it is for us to develop from a country that was poor in oil and which had to import it to one that can produce and export it! What soul-stirring happy tidings that is! . . . The fact that our country can export petroleum has greatly boosted the morale of the Chinese and deflated the arrogance of imperialism, revisionism and all reaction. Our oil exports play a certain role in opposing the two hegemonic powers of the Soviet Union and the United States, in supporting the struggle of the Third World people and in trading for construction materials to help promote our country's construction. It is of great significance politically and economically."

Mao's Principle: Rely on Domestic Market. "As for the nonsense fabricated by the 'gang of four' out of thin air such as selling out resources, these can only expose more clearly how deplorable and pitiable are the tactics employed by this pack of political swindlers! . . . Our foreign trade undertakings have always been pursued in accordance with Chairman Mao's principles relying mainly on the domestic market while making the foreign market supplementary and overall planning and proper arrangement. . . . We are developing economic and technical exchanges with countries of different social systems on the principle of respecting each other's sovereignty and equality and for mutual benefit so that each can provide what the other lacks. We are, on the basis of the principle *maintain independence and keep the initiative in our own hands and rely on our own efforts,* developing trade in a planned way with various countries in the world. We are using exports to obtain needed materials in return and to import needed equipment and technology in an effort to implement the principles of *making foreign things serve China* and combining learning with creation."

Oil Export Policy Attacked by "Gang of Four." "In March 1976, at a meeting held without authorization behind the backs of Chairman Mao and the party Central Committee, the big careerist Chiang Ching openly made up the story that our country's oil has been given to foreign countries and sold to those big capitalists, and viciously attacked by alleging that there are agents of international capitalists and comprador bourgeoisie in China. . . . In his attack, Chang Chun-chiao viciously declared: There are bourgeoisie and comprador bourgeoisie in our party, especially in the Political Bureau. He slandered our country as one having a colonial economy. Chiang Ching uttered sheer nonsense, saying that China's petroleum exports have shifted the energy crisis onto the Chinese people and saved the First World and the Second World. Yao Wen-yuan openly spread the rumor that the State Council leases out natural resources to foreign countries and practices national betrayal."

Petroleum Shipments Sabotaged. "How did the 'gang of four' attack the shipment of China's petroleum? Now we know the facts. . . . Originally, our country's comprehensive 1976 plan for a balance in fuel and raw materials, a safe and sound plan drawn up through overall coordination, had already been approved by the central authorities. However, the 'gang of four' stirred up trouble behind the scenes while outwardly approving it. They sent orders to their minions in Shanghai and Liaoning to make successive urgent requests to the central departments concerned, apply pressure on others with such labels as disrupting production and sabotaging revolution and smearing the movement to repulse the right deviationist wind to reverse verdicts, and willfully change the coal-consuming enterprises into oil-consuming ones with the ulterior motive of deliberately creating a situation in which there was an urgent need of oil. Having thus disrupted the state's unified plan, they then made unfounded countercharges to frame foreign trade personnel.

"In 1976 alone, that sworn follower of the 'gang of four' in Liaoning had willfully increased the number of oil-consuming units by more than a hundred. Shanghai's crude oil consumption for 1976 exceeded the plan by 1 million tons. The 'gang of four' even disregarded the state's unified allocation plan and flagrantly made false reports on the situation on the battlefield. Under the pretext of protecting Shanghai, it forced the central departments concerned to give its approval to intercept crude oil at Shanghai harbor destined for the fraternal provinces and municipalities. In 1976 it intercepted 13 tankers at Wusungkou bound for Maoming in Kwangtung, Nanking in Kiangsu, Changling in Hunan and other localities and seized a total of 200,000 tons of crude oil.

"It was precisely because of the troublemaking and sabotage activities of this sinister counterrevolutionary gang, because of its disruption of the state plan and its abuses involving large quantities of oil resources that some enterprises in other provinces and municipalities were compelled to halt work and stop production, that some oil refineries had no 'rice for the cooker', and that even the countryside was plunged into difficulties in many localities.

"In some localities the irrigation and drainage machines stopped running right at the crucial flood prevention time and the commune members there were filled with anxiety, all because the oil supply channels to their areas were disrupted. Now it has become clear to the people that it was the Wang-Chang-Chiang-Yao 'gang of four' who engineered the troubles and disruptions and were the arch-culprits behind the momentary crisis in domestic oil supplies. Not only this, but as a result of the interference and disruption of the 'gang of four' oil exports were also affected. This harmed our country's international credibility and had negative effects both politically and economically.

"The foreign trade workers and staff point out that it is sheer nonsense uttered by the gang of four to make the false accusation that our country's oil export has saved the Western capitalist countries from their energy crises. They cited facts to prove that, while our crude oil export certainly has a great political impact, the quantities are very small. The quantities are almost negligible when considering their proportion to the total amount of crude oil exported by the world. In 1973 it amounted to only .067 percent of the world total oil export. In 1974 the figure was only .28 percent, and the 1975 figure was .65 percent. How could such a negligible amount have saved Western capitalism from the energy crisis? Only idiots who do not have basic common knowledge can make such statements! Yet the 'gang of four' stubbornly refused to see the facts and kept rattling away."

"Gang of Four" Imported Luxurious Items for Licentious Lives. "The foreign trade departments have exposed how the 'gang of four' used the power they usurped to try in every way they could to import the equipment they needed for usurping party and state power and how they stopped at nothing in importing large quantities of goods, including highly luxurious items for their licentious lives. In 1975 the total value of such things imported with their approval under various pretexts reached as high as $1 million. The amount for the period from January to September 1976 rose to more than $10 million, a tenfold increase. They even had large quantities of such things imported by units under their control and by their henchmen, bypassing the Ministry of Foreign Trade. Even things which have long been available domestically and which are of fairly good quality were imported by them—by designated brandnames—from designated factories in designated countries."

THE BANK OF CHINA IN THE 1970s

The People's Bank of China (at left) on Chungshan Road, Shanghai, November, 1976.

As China's international trade has grown in the 1970s during the PRCs Fourth Five-Year Plan (1971-1975), the Bank of China, China's foreign exchange bank, has had to enlarge the scope of its operations to meet Peking's new needs abroad. The PRC has become a force—a minor one—on the Eurocurrency market with over a billion dollars worth of claims against Group of Ten banks at the end of 1975. The following piece, by Howell Jackson, with Dick Wilson, examines the operations of the Bank of China during the past six years, analyzes the leverage of the BOC, and investigates the BOC's position on the Eurocurrency market. Of particular interest is the fact that the PRC's cumulative balance of trade has been pushed into deficit for the first time in fifteen years. (For earlier articles on the BOC see UCBR Vol. I No. 6 and Vol. III, No. 3)

As the financial intermediary between China and the rest of the world, the Bank of China has had to extend its accounts to keep pace with the expansion of Chinese trade. The BOC's total assets increased from RMB 7 billion in 1971 to RMB 17 billion in 1975, a jump of 142% while China's trade in the same period increased 203%. Between 1974 and 1975, the BOC's total assets plus letters of credit and guarantee grew 19% reaching a record level of RMB 26.2 billion equivalent to US $13.3 billion (on December 31, 1975 US $1.00 equalled RMB 1.9663). In 1975 total two-way trade for China was up only 3% over 1974's.

The most notable development in the BOC's accounts came in the bank's equity: capital shot from RMB 19,800 in 1974 to RMB 400,000 in 1975. Not only is this jump unusually large, but it also represents the bank's first new capitalization since at least 1969. The reason for such an injection must have been a desire by officials to improve the bank's leverage, but some western observers have suggested that the move was merely window-dressing since the BOC is virtually guaranteed by the People's Bank of China (PBOC), Peking's central bank. [Functionally, the Bank of China is the foreign exchange arm of the PBOC.]

On the liabilities sheet, BOC funds "Due to Banks" grew 156% and accounted for 44% of all senior liabilities in 1975 compared with 41% in 1971. The Bank of China's "Deposits," thought to contain, in large part, Peking's foreign exchange deposits increased 128% from 1971 to 1975, reaching a peak RMB 7.4 billion (US $3.8 billion).

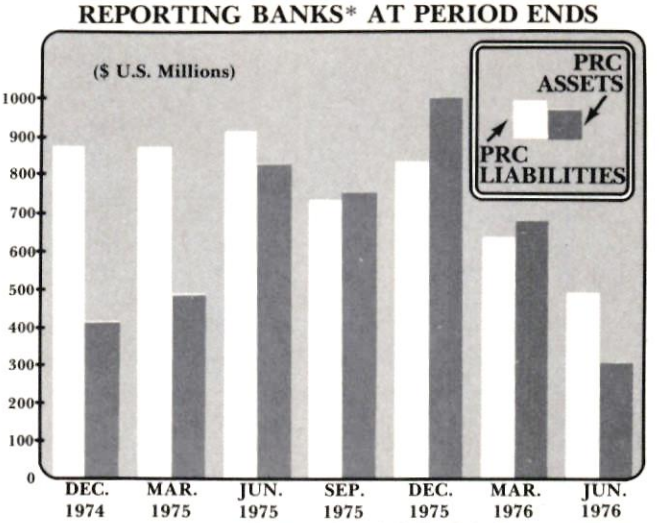
L/Cs up 600% in Five Years

The clearest reflection of China's expanded foreign trade can be seen in the bank's entries for "Letters of credit and guarantee" which grew from RMB 1.4 billion in 1971 to RMB 9.2 billion (US $4.7 billion) in 1975, a increase of nearly 600% or over 60% per annum.

On the assets side, the "Due from Banks" category grew from RMB 3.3 billion in 1971 to RMB 8.5 billion (US $4.3 billion) in 1975, up 156%. Caused, most likely, by additional Chinese accounts in foreign banks such as the Group of Ten banks mentioned below, this increase was also related to China's expanded trade. "Securities and Investments" was the most advanced bank asset classification as it nearly tripled in the five years, probably due to new PRC investments in Hong Kong.

In fact, the PRC's financial policy towards Hong

CHINA'S EURODOLLAR POSITIONS FROM REPORTING BANKS* AT PERIOD ENDS



*Source: BIS; not including Swiss, Japanese, Canadian and non-American Hong Kong Banks.

REPORTED EUROCURRENCY NET BORROWINGS OF CHINA, WEST GERMANY AND THE SOVIET UNION IN FOREIGN BANKS AT PERIOD ENDS ($US MILLIONS)

Period	CHINA [1] Net Borrowings	CHINA [1] Net Borrowings as % of Total Assets	WEST GERMANY [2] Net Borrowings	WEST GERMANY [2] Net Borrowings as % of Total Assets	SOVIET UNION [3] Net Borrowings	SOVIET UNION [3] Net Borrowings as % of Total Assets
12/74	358	85.9%	4,382	33.8%	74	2.3%
3/75	267	54.7%	4,971	35.5%	2,102	79.9%
6/75	87	10.5%	4,456	29.9%	2,979	135.9%
9/75	−18	—	4,018	26.3%	3,139	113.2%
12/75	−139	—	3,252	17.3%	4,743	166.2%
3/76	−42	—	7,174	38.5%	5,615	209.0%
6/76	81	26.6%	4,155	22.1%	6,360	227.4%

[1] Position of China in all domestic Group of ten banks minus Swiss, Japanese and Canadian banks plus US banks in the Caribbean area and the Far East.
[2] Position of West Germany in all domestic Group of ten banks plus US banks in the Caribbean area and the Far East.
[3] Position of USSR in all domestic Group of ten banks minus Japanese banks plus US banks in the Caribbean area and the Far East.

Source: BIS.

THE BANK OF CHINA
PROFIT AND LOSS STATEMENT

RMB 000's

	1971	1972	1973	1974	1975	1975/1974 Change
Expenses						
General	32,905	39,474	49,686	63,672	102,687	61%
Depreciation & Amortization	12,499	15,126	18,000	24,559	51,664	110%
Net Profit	**9,882**	**12,850**	**16,855**	**22,347**	**67,494**	**202%**
TOTAL	**55,287**	**67,451**	**84,541**	**110,579**	**221,846**	**101%**
Income						
Interest, commission & other	55,287	67,451	84,341	110,579	221,846	101%
TOTAL	**55,287**	**67,451**	**84,341**	**110,579**	**221,846**	**101%**

Kong seems to have become more aggressive in general: Chinese investment and sales in Hong Kong have increased substantially in recent years. Peking has permitted the BOC's Hong Kong branch to initiate US dollar-denominated savings and fixed deposit accounts as of late 1975 with competitive interest rates of 3½% (3 months) to 5¾% (12 months) for the fixed deposits. As an added enticement, the accounts offer immunity from the 15% Hong Kong government's withholding tax. Reportedly, the BOC's Hong Kong branch, together with the other twelve Chinese-controlled banks in the territory, retain deposits equivalent to US $15 billion.

Income doubled, Profit tripled

The Bank of China's income doubled in 1975, leaving a net profit more than three times that of the previous year. This advance came after three years of consistent increases in the bank's net profit, averaging over 30% per annum 1971–1975. As a result of these improvements, the bank's rate of return has also risen in the first half of this decade. In 1971, net profit represented 5.2% of net worth, but by 1975 its percentage was nine.

That the BOC has managed to maintain such a comparatively high rate of return on equity in the face of 1975's capitalization drive is surprising. The consistent profitability of the bank, however, may be attributed to revenues obtained from letters of credit and guarantee or possibly investments in Hong Kong. Nevertheless, the growth of the BOC's rate of return seems to indicate some consideration of bottom-line management on the part of bank officials.

Future banker? Chinese child learns abacus skills.

BOC's Unusual Banking Ratios

By at least one measurement, the Bank of China's financial position deteriorated from 1971 to 1974. Its leverage (defined here as total liabilities over total net worth) grew from 36.22 in 1971 to 48.78 in 1974. Any leverage over 15 would be considered unsound within the United States, and the Hong Kong banking community generally keeps its leverages beneath 20. Only with the RMB 380,200 increase in capital in 1975 did the leverage manage to drop to a more reasonable 21.62.

By other measurements, the BOC's position seems rather unorthodox and extremely conservative. For instance, since the BOC holds so much foreign exchange in its "Due from Banks" category, its so-called "minimum-risk assets" actually exceed its "risk assets." This conservative posture is much more liquid than those of typical Hong Kong banks, which normally have "minimum-risk assets" equal to between 30% and 40% of their "risk assets."

Another unusual feature is the bank's "deposit run-off ratio," which was consistently over unity during the period. This high ratio implies that every private depositor in the BOC could withdraw his deposits and the bank could pay them off without having to recall one outstanding loan.

China and the Eurocurrency Market—Restraint

Beyond BOC's balance sheet, other information available on China's finances reflects the cautious attitude of the PRC in international banking. For instance, in the Eurocurrency market, where China has not yet drawn a publicized loan, the country's position towards reporting banks is known (see graph for details).

These figures are compiled by the Bank for International Settlements (BIS) and published quarterly. In the case of China, aggregate assets and liabilities are given for all accounts with domestic banks of reporting Group of Ten countries (Belgium-Luxemburg, France, Germany, Italy, the Netherlands, Sweden, the United Kingdom, and the United States). Canadian, Japanese and Swiss banks do not isolate Chinese accounts in their books, but funds held in or owed to American banks in the Far East or the Caribbean are included.

CHINA SELLS GOLD

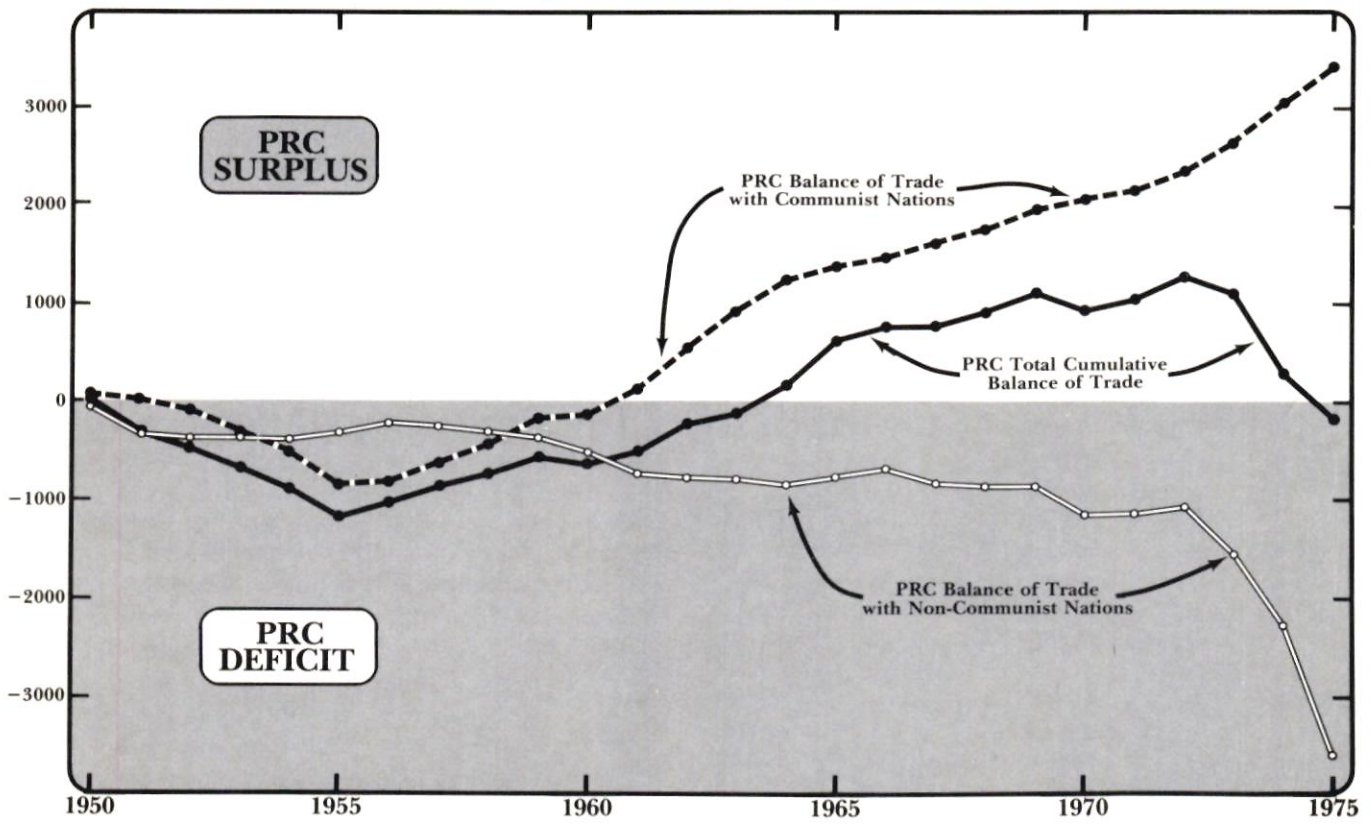
Reportedly China sold 15-20 tons of gold on the European market in November 1976. At the going rate this would have been equivalent to $73-98 million at a time when the gold market might have appeared to be peaking. This unsubstantiated report may have referred to a market operation, a year's end windowdressing by the PRC, or a further move to reduce the gold in the BOC's foreign reserves. The last report of the PRC selling gold was in early 1976.

It is important to recognize that these BIS statistics only point to the nature of Chinese foreign bank accounts; they do not indicate the magnitude of all such accounts since China has significant banking commitments in omitted areas such as Japan, Switzerland, Hong Kong (non-American banks), and Singapore.

From December 1974, when the figures were first compiled, China's assets with these banks have more than doubled from under $500 million to over $1 billion. In December 1975, PRC deposits in these foreign banks equaled more than 22% of the Bank of China's assets "Due from Banks." If assets held in Japanese

PRC CUMULATIVE BALANCE OF TRADE

($U.S. Millions by the year)



Sources: JEC Compendium, August 1975; Unclassified CIA Research Aid on China's International Trade, August 1976.

A BANKER'S VIEW OF THE BANK OF CHINA'S BOOKS

	1971	1972	1973	1974	1975
Leverage [1]	36.22	38.77	46.32	48.78	21.62
Deposit Runoff Ratio [2]	1.037	1.057	1.050	1.118	1.157
Net Profit Percentage of Net Worth	5.2%	8.1%	7.0%	7.9%	9.0%

[1] Definition: **Leverage** = $\frac{\text{Total Liabilities}}{\text{Total Net Worth}}$

[2] Definition: Deposit-runoff Ratio = $\frac{\text{Minimum Risk Assets}}{\text{Deposits}}$

and non-American Hong Kong banks could also be added, that percentage could possibly substantially exceed fifty.

Among the interesting aspects of China's position on the Eurocurrency market has been the restraint with which Chinese officials have approached net borrowing. Beginning with net borrowings in reporting country banks of some $358 million in December 1974, China improved its position to that of net lender by December 1975: it was as a net lender of $139 million at that time. At the end of 1976's second quarter, China reemerged as a net borrower on the market with net borrowings of $82 million.

The magnitude and nature of the PRC's reported performance on the Eurocurrency market is atypical of that of most large participating nations. First, the volume of China's assets in reporting banks, never more than $1 billion, is minimal compared with West Germany's $18 billion or Russia's $2.7 billion in June 1976. (Both Russian and German accounts are more completely reported than China's, but this discrepancy probably does not diminish the differences between the countries' positions.)

The second major difference in China's position in the Eurodollar market is the degree of flexibility the nation enjoys. At no time have China's net borrowings exceeded 90% of the assets it holds in reporting banks, and the trend during the eighteen months reported seems to have been towards decreasing that percentage. China's strategy in this area seems to be closer to the stability seen in the accounts of financially mature West Germany than it does to the Soviet Union which has become heavily committed on the market with net borowings more than twice assets held.

Export earners: Shanghai schoolchildren pack model fans.

The Next Five Years

Whether or not China will be able to continue such a conservative borrowing policy over the next five years is open to speculation. For the first time since the early 1950s, China has suffered three years of net trade deficits from 1973 to 1975, drawing nearly $1.5 billion away from their hard currency coffers. Since 1960, the PRC has balanced a cumulative trade deficit with non-communist countries by maintaining a cumulative surplus with the rest of the communist world, some experts hypothesize.

In fact, by 1972, China's total cumulative surplus from 1950 exceeded $1.2 billion, but with turnkey plant purchases and major grain expenditures over the last few years, China's total cumulative balance of trade has been pushed into deficit for the first time since 1962. Should Chinese planners wish to continue net trade deficits over the next five years some financing will have to be worked out on the international monetary market.

China's fifth Five Year Plan (1976-1980), currently thought to be undergoing revision in Peking, should be unveiled in the course of 1977. It is likely that additional plant purchases along with agricultural machinery and advanced technology will be featured on Chinese shopping lists, starting in mid-1977 and continuing for some years. If these expensive items are actually purchased, one would expect increased PRC activity on the Eurocurrency market, further expansion of Bank of China accounts, and possibly even some medium or long term financing. More likely, however, Chinese FTCs will rely upon deferred or progressive payments schemes employed in previous major western grain and equipment sales. 完

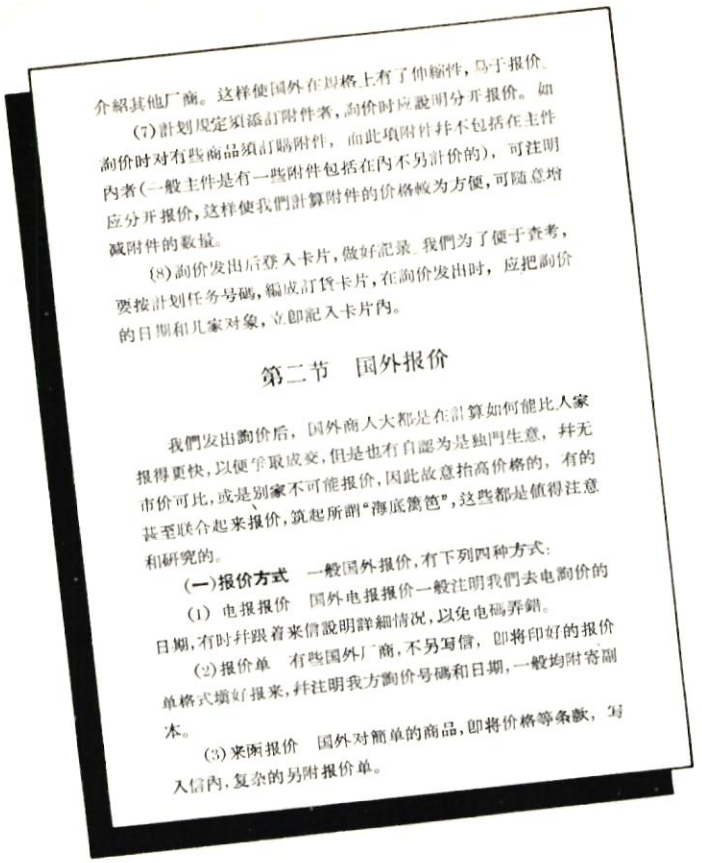
THE BANK OF CHINA IN THE PRC'S FOURTH FIVE-YEAR PLAN
FIVE-YEAR BALANCE SHEET 1971-75
RMB—thousands

Assets	as of December 31 1971	1972	1973	1974	1975	1975/1974 Change
Cash	24,966	28,711	31,563	34,415	39,457	15%
Due from Banks	3,321,160	4,147,053	5,276,331	7,016,513	8,491,659	21%
Minimum risk Assets	**3,346,126**	**4,175,764**	**5,307,894**	**7,050,928**	**8,531,116**	**21%**
Bills discounted & remittances bought	897,221	1,023,551	1,289,736	1,509,993	1,687,353	12%
Loans and overdrafts	1,870,249	2,168,293	2,840,109	3,698,111	4,896,245	32%
Securities & investments	16,773	17,638	27,811	45,771	49,135	7%
Sundry accounts receivable including under forward contracts	377,404	421,288	501,621	527,137	648,132	23%
Collections receivable for customers	233,569	263,781	303,143	366,536	411,251	12%
Risk Assets	**3,385,216**	**3,894,551**	**4,962,420**	**6,147,548**	**7,692,116**	**25%**
Land, buildings, furniture, equipment	50,676	55,321	63,168	73,754	94,532	28%
Other Assets	58,707	66,531	78,507	88,978	101,273	14%
Trust Assets	195,788	259,349	986,736	745,139	588,581	−21%
Non-banking Assets	**305,171**	**381,201**	**1,128,411**	**907,871**	**784,386**	**−14%**
TOTAL ASSETS	**7,036,518**	**8,451,521**	**11,398,730**	**14,106,352**	**17,007,574**	**21%**
Letters of credit and guarantee	1,350,250	1,622,015	6,515,074	7,885,254	9,221,569	17%
Total Assets plus L/Cs and L/Gs	**8,386,768**	**10,073,536**	**17,913,804**	**21,991,606**	**26,229,143**	**19%**

Liabilities	as of December 31 1971	1972	1973	1974	1975	1975/1976 Changes
Due to Banks	2,794,407	3,323,813	4,286,537	5,800,831	7,148,117	23%
Deposits	3,227,736	3,951,379	5,056,372	6,306,375	7,370,578	17%
Remittances & drafts outstanding	40,580	41,023	49,218	64,590	85,694	33%
Sundry accounts payable and under forward contract	284,150	314,411	383,810	433,856	523,451	21%
Other liabilities	81,254	85,228	92,049	105,627	128,137	21%
Collections for customers	223,569	263,781	303,144	366,536	411,251	12%
Trust liabilities	195,788	259,349	986,737	745,139	588,581	−21%
TOTAL LIABILITIES	**6,847,487**	**8,238,951**	**11,157,866**	**13,822,958**	**16,255,809**	**18%**
NET WORTH						
Capital	19,800	19,800	19,800	19,800	400,000	1920%
Surplus	67,094	72,358	77,974	91,216	107,238	18%
Reserves	92,254	107,523	126,236	150,030	177,079	18%
Net profit	9,882	12,850	16,854	22,347	67,494	202%
Total net worth	**189,031**	**212,533**	**240,864**	**283,394**	**751,815**	**165%**
TOTAL LIABILITIES & NET WORTH	**7,036,518**	**8,451,521**	**11,398,730**	**14,106,352**	**17,007,574**	**21%**
Letters of credit and guarantee	1,350,250	1,622,015	6,515,074	7,885,254	9,221,569	**17%**
Total Liabilities & Net Worth plus L/Cs and L/Gs	**8,386,768**	**10,073,536**	**17,913,804**	**21,991,606**	**26,229,143**	**19%**

Source: NCUSCT—Registrar General's Dept. HK; Wilson

Note: The official RMB rate on December 31, 1975 was 1.9663 to the US dollar; December 31, 1974 was 1.8397; December 31, 1973 was 2.0202 to the US dollar; on December 31, 1972, RMB 2.2401; December 31, 1971, RMB 2.267. Sources: Picks, Standard Chartered Bank, Ltd.



介紹其他厂商。这样使国外在报格上有了伸縮性，易于报价。

(7)計划規定須添訂附件者，詢价时应說明分开报价。如詢价时对有些商品須訂購附件，而此項附件并不包括在主件內者(一般主件是有一些附件包括在內不另計价的)，可注明应分开报价，这样使我們計算附件的价格較为方便，可随意增減附件的数量。

(8)詢价发出后登入卡片，做好記录。我們为了便于查考，要按計划任务号碼，編成訂貨卡片，在詢价发出时，应把詢价的日期和几家对象，立即記入卡片內。

第二节　国外报价

我們发出詢价后，国外商人大都是在計算如何能比人家报得更快，以便拿取成交，但是也有自認为是独門生意，并无市价可比，或是别家不可能报价，因此故意抬高价格的，有的甚至联合起来报价，筑起所謂"海底篱笆"，这些都是值得注意和研究的。

(一)报价方式　一般国外报价，有下列四种方式：

(1) 电报报价　国外电报报价一般注明我們去电詢价的日期，有时并跟着来信說明詳細情况，以免电碼弄錯。

(2)报价单　有些国外厂商，不另写信，即将印好的报价单格式填好报来，并注明我方詢价号碼和日期，一般均附寄副本。

(3)来函报价　国外对簡单的商品，即将价格等条款，写入信內，复杂的另附报价单。

How China Prepares to Import: Foreign Quotations

This is the sixth in a UCBR series of translations from the PRC's Foreign Trade Practice, *published in Shanghai, 1959. The book was reprinted in 1972 and reportedly remains one of the principal texts at Peking's Institute of Foreign Trade.*

Once they have received inquiries for quotations, most foreign firms will try to return their bids as quickly as possible in order to beat their competitors and win the contract. However, there will be some who consider that, since their products are ones of a kind, they do not need to adhere to market prices. Others feel their products are so much better than those of the competition that they can compete without regard to the market price. These firms will intentionally raise their prices. Some firms even go to the extreme of fixing prices by working together with other firms and raising a "fence on the ocean floor." All of these ploys should be recognized and investigated.

I. QUOTATION METHODS

(Normally, foreign quotations fall into the following four categories.)

1.) Quotations by Telegram—Foreign quotations by telegram usually note the date of the inquiry, and are occasionally followed by letters explaining the details of the transaction to avoid typographical errors in the telegram.

2.) Quotation Lists—There are some foreign firms that do not write letters, but make quotations on a printed quotation form with the model numbers added. In this case, the code and date of the original inquiry will be included, and customarily, a copy of that inquiry will be returned.

3.) Formal Letter Quotations—When foreigners quote on a relatively simple product, the price and other information are included within the letter; for more complicated specifications, a quotation list is normally appended.

4.) Voluntary Quotations—Because our foreign trade expands day by day, foreign companies may introduce their goods voluntarily. Also, old trading partners who are familiar with the needs of our country will volunteer quotations for their goods in stock or soon-to-be released goods.

II. TYPES OF QUOTATIONS

(Foreign companies, fearing that their costs will rise while the foreign trade corporation evaluates the quotation, usually specify certain quotation terms. Listed below are two such terms.)

1.) The Unlimited Quotation—This sort of quotation does not fix the date of sale; however, it does refuse to accept responsibility should the item sell out during the period covered by the quotation. Or, on the other hand, this type of quotation gives the price of a product but will not be valid until final confirma-

tion of the availability of the product. Currently, this is the type of quotation most often received.

2.) The Firm Offer Quotation—This quotation is sometimes used because it has been requested in the inquiry. At other times, it is the foreign firm that decides upon this type of price quotation because it feels that it can only maintain the quoted price over a limited period of time. Generally the period specified runs from one week to one month. Once that period has elapsed, the quoted price is no longer effective, and another quotation must be made. However, if it is seen that within the limited period the market price of the product in question rises, it is possible to make the purchase immediately, and the foreign firm, by the terms of its own quotations, will not be able to renege on the offer.

III. EXAMINING THE CONTENTS OF QUOTATIONS

After foreign quotations have been received, the first thing to be done is to examine the content of each quotation thoroughly. It is not certain that the foreign firm will have responded according to the requirements included in the inquiry. In addition, any one of their clauses may not be acceptable; the specifications of the equipment may not be consistent with the needs of our country. Thus it is necessary to systematically distinguish the points of examination. Listed below are the points to be considered.

1.) Do the Specifications of the Product Meet with our Nation's Needs? It is important to note whether or not the specifications of the goods that have been quoted are compatible with the nation's requirements. Sometimes a quotation will arrive for a product with specifications equivalent to the item requested, but the quality of the quoted item may be inferior. If the price of this product is cheaper, then the end-user should be contacted, and the possibility of a substitution should be discussed. At other times, the specifications of a quoted item may vary slightly, but the quality of the product is high and the price is cheap. In this case also, the end-user should be consulted for a possible substitution. Generally speaking, one must comply with the needs of the end-user, but it is proper to use all channels available to introduce lower priced merchandise for the purpose of saving foreign currency. At the same time, care must be taken to insure that the quality of a good is not so low that it will influence its usefulness to the end-user. There will be times when a foreign company quotes a piece of merchandise with higher specifications than are necessary. Naturally, the end-user would be happy to select this product. It is, however, the duty of the foreign trade corporation to persuade the end-user that, under the principle of saving foreign currency, a cheaper, but adequate, substitution should be chosen. If the end-user has a particular need which requires a highly specialized product, then the foreign trade corporation should accept and support that decision.

2.) Examining the Price Clause, Method of Shipment, and Method of Payment. When the inquiries were composed, the price clause and method of shipment were included. Therefore, most foreign companies, in making their quotations, respond accordingly. However, there are times when the foreign firm makes a proposal for its own convenience. For example, if a C&F price clause is requested but the foreign firm is unable to provide estimated shipping costs, it may wish to quote FOB. This is because the company fears that if it overestimates the shipping cost, it will lose the contract and that if it underestimates the shipping cost, it will lose money. In such a case, first the shipping cost can be estimated by the foreign trade corporation and then later the actual cost can be added to the price. Hence, the quotation may be considered.

There are also some foreign companies that get a discount on insurance rates; they will always try to quote CIF so that they can make a little extra money. (The general principle is to strive to have goods insured by our side). Nevertheless, one should not forget the relationship between the price clause and the method of payment: For instance, if the method of payment is prior to shipment or letter of credit, then the foreign company has already received his compensation prior to shipment. In this case, since the foreign company is not concerned with the risk during the period of shipment, it will probably not insist on insuring the goods. However, if the method of payment is on delivery or letter of guarantee then the foreign firm is justified in wanting to insure the safety of its goods, and the foreign trade corporation should agree to the foreign company's terms. Yet, if the cost of an item is not too great, sometimes the foreign company will agree to a C&F price clause with payment on delivery.

Sometimes, when dealing with a new trading partner, complete payment in advance or a full letter of credit will be requested. Before agreeing to such a clause, the foreign trade corporation should examine the situation. Does this company have a dependable reputation? Is the price reasonable? Is the end-user in great need? Generally, a letter of credit payment can be arranged if i.) the value of the goods is small; ii.) the reputation of the firm is good; iii.) the firm's delivery is known to be quick. Normally, approval can be obtained from the proper superior to authorize complete payment in advance. This method also saves on the cost of opening a letter of credit. In some cases, a foreign company may appear very flexible towards changes in the terms of a quotation. If the company is willing to accept payment on delivery and it qualifies for a letter of credit, then the situation should be reassessed. If the company is truly qualified for L/C payments, the FTC should consider arranging

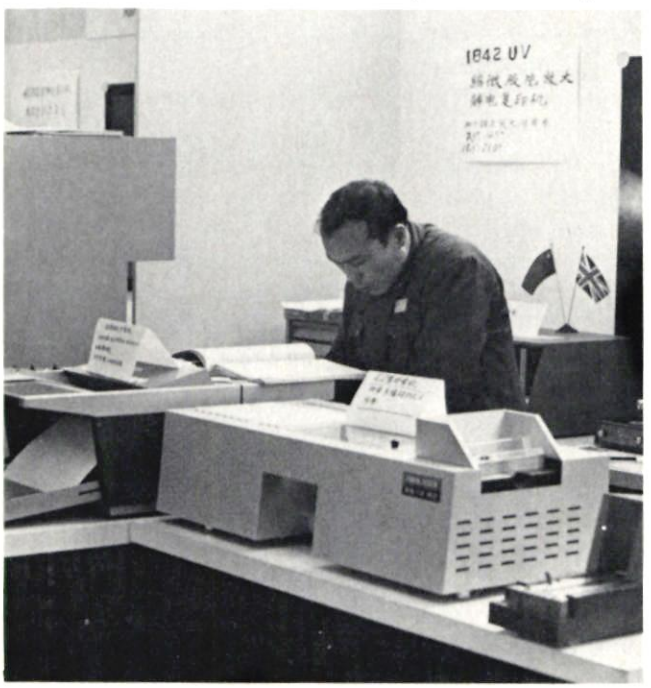
the transaction in that manner of payment. However, in this event, the price should be suitably adjusted. (Sometimes a reduction may be made in the quoted price: the reason is that, after the goods have been shipped, the foreign company, in effect, obtains a loan from the bank against the letter of guarantee. There is an interest charge on this loan, and that interest is already calculated into the price when it is first quoted).

In machinery equipment purchases, there is a relatively long transaction period involved because construction to specifications and delivery require time. In this case, some foreign companies, under the pretext of purchasing raw materials, will request that a portion of the cost be forwarded as a deposit and the balance be paid upon shipment. When confronted with this problem, a foreign trade corporation should not immediately respond, but rather consider the imperatives of the situation. Sometimes, the request should be refused at first. If negotiations prove ineffective and it seems necessary to acquiesce, then it can be proposed to the foreigners that a deposit will be made if a bank will guarantee the safety of that deposit and if the foreign trade corporation is compensated for the interest accrued on the deposit. In addition, usually the deposit should not be too large. It is generally best to avoid a deposit.

Occasionally the price clause will seem right for some product, but there is some doubt about the assurance of delivery. In this case, a guarantee on the transaction can be requested. The letter of credit should not be opened until this request has been fulfilled.

Discussed above are the general types of payment terms used on the foreign market. Under the unprosperous conditions of the capitalist system, there is still benefit in using the most profitable measures possible in order to gain better payment terms.

Rank Xerox on show at UK 48 Group Show in Peking.



3.) Problems with Terms of Inspection. Most old trading partners will appreciate that China's inspection system really seeks the truth in a fair and even-handed spirit, but some new trading partners and direct factory outlets will not understand. Therefore, it is customary to point out the differences in China's inspection clauses. Some foreign companies will often claim that their local export inspection offices do not concur with the Chinese inspection system. Under this pretext, they request either that their goods be inspected at the factory prior to shipment by a third party inspection team or that they forward their inspection certification and have China accept it. In spite of all these requests, if the foreign trade corporation sends a letter of explanation informing the foreign company that all other foreign firms have accepted Chinese inspection terms, that all requests for claims have been resolved satisfactorily, and that there has never been a combative situation, then most foreign companies will come around to accepting the Chinese inspection terms.

4.) Procedures for Disposing of Voluntary Quotations. Foreign firms will often voluntarily send quotations to sell new goods or unmarketable goods as well as goods that our nation always needs. This sort of information is very useful for a foreign trade corporation, but since China's foreign trade organization is divided into so many sections, sometimes foreign companies are confused by the divisions. Therefore any given foreign trade office will often receive information on products that do not relate to its field of specialty. Also, foreign firms that have a wide range of products do not differentiate between product types and send quotations on all of them. When a foreign trade corporation receives this sort of quotation, it should register all those goods that relate to its field of specialty and forward the rest to the relevant foreign trade corporations. Moreover, the foreign trade corporation should respond to these quotations in order to encourage the continuation of such voluntary foreign quotations so this sort of price information will be constantly available. Naturally, some of the advertising types of circular letters do not warrant answers; to mark down the price information is sufficient.

5.) Registering Information in Quotations. After the contents of a quotation have been carefully inspected, the price information should be transferred to the product card which carries price statistics. At the same time, the price along with the quoting date should also be entered to the order card for reference. However, the price list itself should be kept in hand in order to facilitate price comparison and investigation work. 完

NEW FROM THE NATIONAL COUNCIL

DIRECTORY

of Research Institutes in the People's Republic of China

The emphasis on China's scientific research is on "Uniting theory with practice", applying science to the needs of changing economic priorities. In the past seven years China's scientific and technical interaction with the world's scientific and industrial community has increased enormously. The need to know the state of China's scientific research has become important.

The *Directory of Research Institutes in the People's Republic of China* is an up-to-date reference that any organization or individual concerned with China's scientific development will find indispensable.

The *Directory* will be a standard reference for the following—

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- Companies giving technical presentations in China, and participating in exhibitions in China.
- Institutions and firms hosting scientific and technical delegations from China.
- Scientific and technical research institutes studying research in China, overall or in individual categories.
- Companies analyzing the market for scientific instruments and other laboratory equipment in the PRC.
- Companies analyzing China's scientific development in the short-to-long range as it relates to their own product area:
- Individuals interested in learning about the state of science in the PRC.

About the Directory

In 1977, the National Council is publishing a three-volume *Directory of Research Institutes in the People's Republic of China*. The 300-plus page volumes will describe research in the categories listed and will provide comprehensive information about the organization and work of all known industrial research institutes in China through 1976. The *Directory* has been prepared by Susan Swannack Nunn.

The *Directory* contains the following data where known · name and addresses of the institute, in English and Chinese · date of establishment · organization · staffing · research divisions · subsidiary facilities · affiliates · biographical information of staff · present and past research and publications · recent research and activities (including abstracts of work published) and known equipment installed.

The cost of the 3 volume *Directory* is $300. Individual volumes are $125 each. Airmail postage overseas is $20.00 per set or $7.00 per volume.

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Huang Chen visits NASA, sees how US put men on moon.

COUNCIL ACTIVITIES

During the past three months, the National Council has been busy, its activities highlighted by a trip arranged for the Chief of the Liaison Office of the People's Republic of China in Washington, D.C. (PRCLO), the Council's first technical mission to China concerning agricultural chemicals, and a trip for PRCLO commercial officials to US mines in the midwest.

COUNCIL ESCORTS HUANG CHEN, CHIEF OF PRC LIAISON OFFICE, TO HOMES OF OIL AND JAZZ

His Excellency Ambassador Huang Chen, veteran of the Long March and Chief of the Chinese Liaison Office in Washington, D.C. began the new year with an informal tour of Houston and New Orleans arranged by the National Council. This was the Chinese Ambassador's second trip to a region of the US arranged by the National Council. His first trip to the mid-west (Chicago, Detroit and Buffalo), was in November 1974. The visit to the Southwest, from January 3 to 7, was hosted locally by Pullman Kellogg, Cameron Iron Works and International Systems and Controls, and by the Port of New Orleans.

Highlights of the trip were a visit to NASA headquarters in Houston, a tour of the New Orleans and Houston ports, and a visit to the French Quarter of New Orleans including a look at local art, reminiscent of Montmartre to China's one time Ambassador to France. The Chinese also visited Cameron Iron Works, the American Rice Growers Association, Pullman Kellogg and Amoco's Texas City Refinery. During the excursion, Ambassador Huang expressed particular interest in modern American rice growing techniques and practices as well as the general level of industrialization in the Houston area.

With the Chinese Ambassador, from the Liaison Office, were Madame Chu Lin, his wife; Hsu Shang-wei, Third Secretary; Madam Wang Hung-pao, wife of Mr. Hsu; Chang Tsien-hua, Counselor of Commercial Affairs; and Tung Chih-kuang, Second Secretary of Commercial Affairs. Melvin W. Searls, Jr., Vice President of the National Council, accompanied the group.

National Council Agrichemicals Delegation Has Good Visit to China

There are good opportunities for business with the People's Republic of China in advanced agricultural chemical products and technology, according to the National Council's Agricultural-Chemicals (Pesticides) Delegation that visited the PRC in late November 1976. With technical representatives from seven US companies, E. M. Morgan of the FMC Corporation led the group on a visit through China beginning November 17 and ending December 1. Half the group stayed till December 4.

The mission was hosted by the Liaison Department of the China Council for the Promotion of International Trade (CCPIT) in cooperation with the CCPIT's Technical Exchange Department. Mr. Hsiao Fang-chow, Vice-president of the CCPIT, hosted a banquet for the group, which Mr. Tung Chao, Director of the Liaison Department of the CCPIT, Mr. Li Chao-li, a leading member of the Technical Exchange Department, and others also attended. Mr. Kuo Szu-mien and Mr. Chen Li-chung of the CCPIT escorted the group through China. Locally, in Nanking, Shanghai and Kwangchow, local subcouncils of the CCPIT arranged itineraries.

The Council held a reciprocal banquet attended by, besides their hosts, Mr. David Dean,, Deputy Chief of the US Liaison Office in Peking, Mr. Liu Po-kang, Manager of SINOCHEM's import department, Mme. Kua Yi, Manager of TECHIMPORT's Dept. No. 1, and William Thomas, Chief of USLO's Commercial Section.

The delegation, the Council's first technical delegation to China, which was cordially received, saw its trip as the first step in a continuing series of interactions between the US pesticide industry and China's agricultural community.

The mission presented papers on fungicides, herbi-

cides and insecticides to Chinese representatives while in Peking, and visited a number of Peking, Nanking and Shanghai research institutes doing fundamental and applied research on different aspects of crop protection. Some of the group also visited Kwangchow.

During their stay in Peking the delegation paid a courtesy visit to SINOCHEM and a visit to TECHIMPORT.

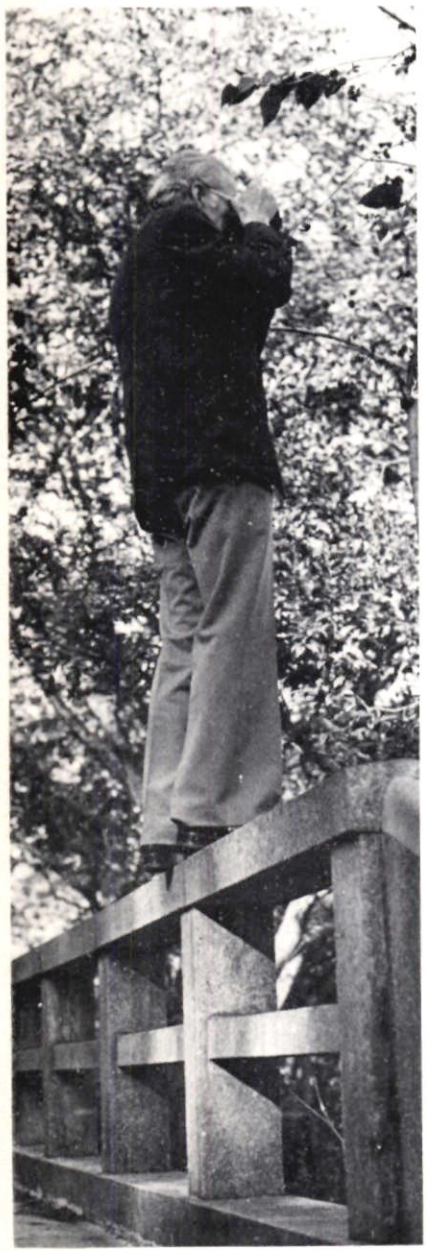
Observations of the Mission

The delegation made the following observations on the Chinese pesticide industry:

- The Chinese are aware of pesticides technology being developed abroad.
- China has made considerable progress in its overall agricultural program; the group was particularly impressed with China's water and land management and methods of crop strain selection.
- China's pesticide research emphasizes cooperative efforts combining research development work with practical needs of communes, via experimental units.
- China's interest in pesticides is reflected by a concern for disease and insect control on major grain crops such as rice and wheat.
- The emphasis was on insecticides and fungicides rather than on herbicides.
- China faces pesticides-related problems similar to America's.
- Further two-way exchange in pesticides technology is desirable.

The group visited the (CAS) Institute of Zoology in Peking, Kiangsu Institute of Agricultural Research in Nanking, (CAS) Institute of Soil in Nanking, Institute of Plant Physiology and Institute of Entomology in Shanghai, Chungshan University—Biology Department in Canton, and the Kwantung Academy of Agricultural Research—Crop Protection Division, in Canton.

The members of the group were Earl M. Morgan, Managing Director, International Agricultural Chemicals Division, FMC Corporation and Chairman of the National Council's Agrichemicals Committee; G. Donald Munger, Manager of Research and Development, Agricultural Chemicals, Diamond Shamrock Corporation; Orlo K. Jantz, Manager, Agricultural Research and Development, Dow Chemical (Pacific Area); Kent M. Reasons, Regional Manager, Agrichemicals Division, DuPont Far East Inc.—Japan; Norman E. Krog, Technology Planning, Agricultural Chemicals Division, FMC Corporation; E. J. Groskorth, Regional Manager, Agricultural Chemicals, Hercules Far Eastern Ltd.; Earl C. Spurrier, Government Relations Director, Monsanto Agricultural Products Company; and Victor H. Unger, Director, Agriculture Products Research, Rohm & Haas Company. The group was accompanied by Nicholas H. Ludlow, Director of Research and Publications, the National Council for US-China Trade.



Council Agrichemical Group in China: Top, the group with escorts, Nanking CCPIT hosts, and guides on the Yangtse Bridge near Nanking; above center, at cordial visit with SINOCHEM, mission leader E. M. Morgan presented Yu Hung-te, Deputy Manager of the Import Department with specially bound copies of the US Farm Chemical Handbook 1976; lower right, group members relaxing at the Children's Palace in Shanghai; lower center, at the University of Illinois together in the 1940s, Earl Spurrier of Monsanto, and Liu Tsai-yung, CAS Institute of Soil; left, FMC's Norman Krog focusses on foliage near Canton; opposite, top, delegation leader Earl Morgan leads off technical symposia with description of US pesticide industry; opposite center, visiting laboratory at institute in Shanghai; opposite below, Goodbye China: Krog, Munger and Jantz, with CCPIT hosts, at Canton railway station.

COUNCIL WILL HOLD CONFERENCE ON CHINA'S MINING AND CONSTRUCTION INDUSTRY AND PROSPECT FOR US SALES MARCH 22 AND 23, 1977, DENVER, COLORADO

The recent earthquakes and domestic situation in the People's Republic of China have caused setbacks to the development of China's mining and construction, critical to China's overall economic growth. The Chinese government is now calling for an economic boost in the next three years. There are clear indications that an expansion of mining is probable in the PRC, for both domestic needs and potential foreign exchange earnings.

The National Council for US-China Trade will cover these industry sectors in a first-time conference on the Mining and Construction Equipment Industries in the People's Republic of China and Prospects for US Sales, in Denver, Colorado on March 22 and 23, 1977.

The conference program will include presentations on the following topics by experts in the field: US-China Trade and the National Council by Christopher H. Phillips, President of the National Council for US-China Trade; China's Current Political Scene by Dr. Richard Solomon of the Rand Corporation; A Forecast of China's Economy by Professor Dwight Perkins of Harvard; Contracts and Licensing in Business with China by Eugene A. Theroux of Baker & McKenzie; The State of China's Mining by K. P. Wang; US Bureau of Mines; Who's Sold What Mining Equipment to China by Melvin W. Searls, Jr., Vice President of the National Council; A Case History of a Mining Equipment Sale to the PRC by WABCO executive Robert Brenkman; The Agents' Role in Sale of Heavy Equipment to China by Dr. C. J. Wang; International Corporation of America; An Evaluation of China's Construction Industry and Prospects for Sales by William Clarke of the US Commerce Department; Who's Sold What Construction Equipment to China by Melvin Searls, Jr.; and A Case History of a Sale of Construction Equipment to China by D. R. Lammers, Vice President, Caterpillar Tractor Company.

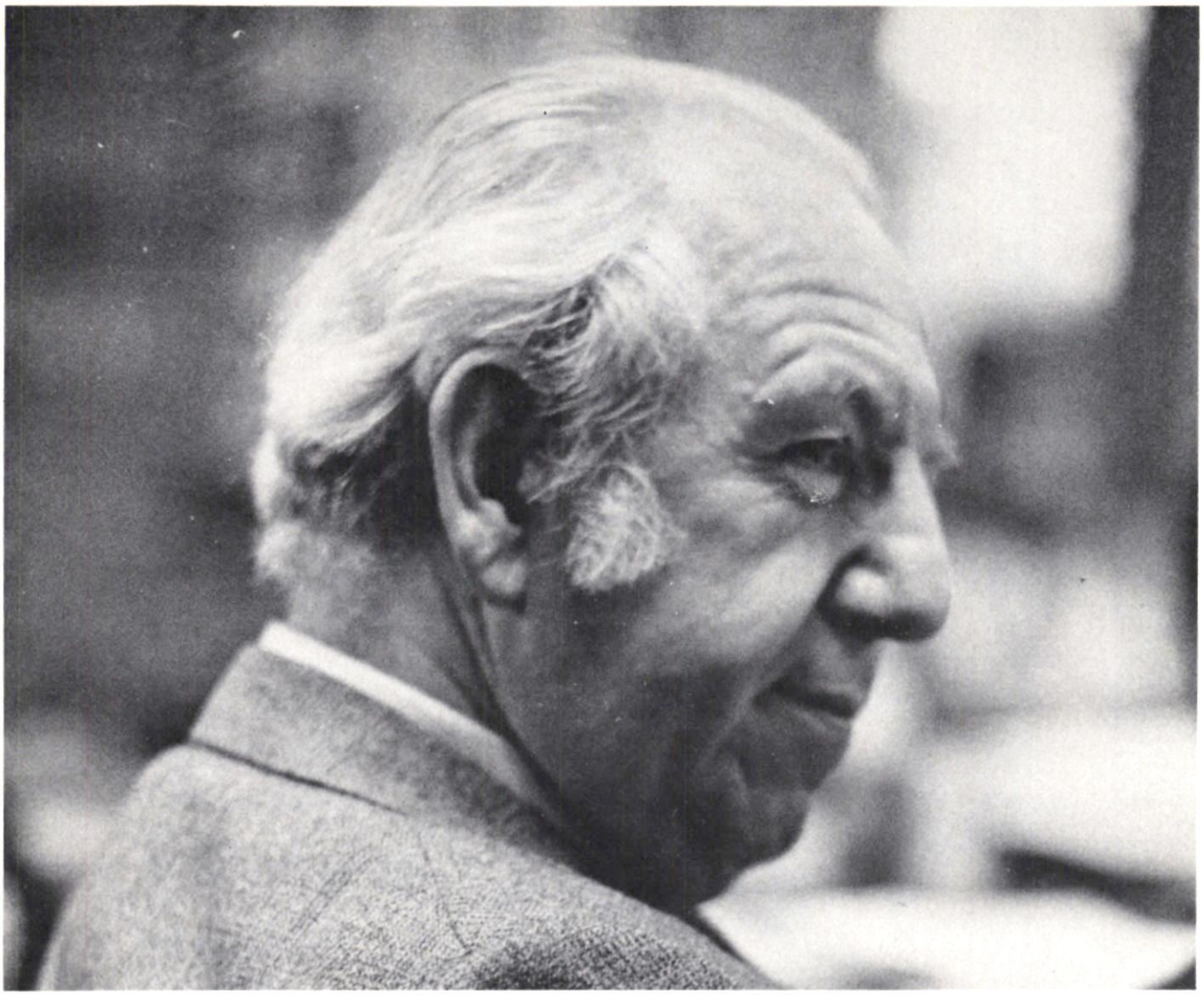
The meeting will be the National Council's third specialized industry conference. Two previous conferences focussed on China's oil and agriculture. Details of the following conference are available from the National Council for US-China Trade, 1050 17th Street, NW, Room 350, Washington, D.C. 20036 (202) 331-0290.

Chinese pose by Harnischfeger's P & H Model 200 mining shovel.

COUNCIL TAKES CHINESE OFFICIALS BELOW ZERO

In temperatures at times reaching minus 25° F under clear blue skies, the National Council took three representatives from the Commercial Section of the Chinese Liaison Office on a five-day tour of mines, and mine equipment factories in the mid-west, November 20 to December 5, 1976, arranged by the Council's Mining Equipment Committee. Participating from PRCLO were Chang Tsien-hua, Commercial Counsellor; Tung Chih-kuang, First Secretary; and Yu Jen-chuan.

In the course of visits to open-pit and underground mines, the group saw the Hanna-Butler taconite mine in Mt. Iron, Minnesota; the Eveleth Taconite taconite mine in Eveleth, Minnesota; the General Diesel plant in Hibbing, Minnesota; Harnischfeger International's offices and manufacturing facilities in Milwaukee, Wisconsin; plus Cominco American's lead mine and Meramec Mining's operations near Sullivan, Missouri. Escorting the group form the National Council's office were Vice President Melvin W. Searls, Jr. and Director of Business Advisory Services, Eric Kalkhurst. 完



PROFESSOR ECKSTEIN, DOYEN OF CHINA TRADE SCHOLARS, IS DEAD

Professor Alexander Eckstein, dean of American political economists specializing in China and its foreign trade, died on December 4 in Ann Arbor, Michigan, depriving the American China trade community of a familiar character and fatherly mentor.

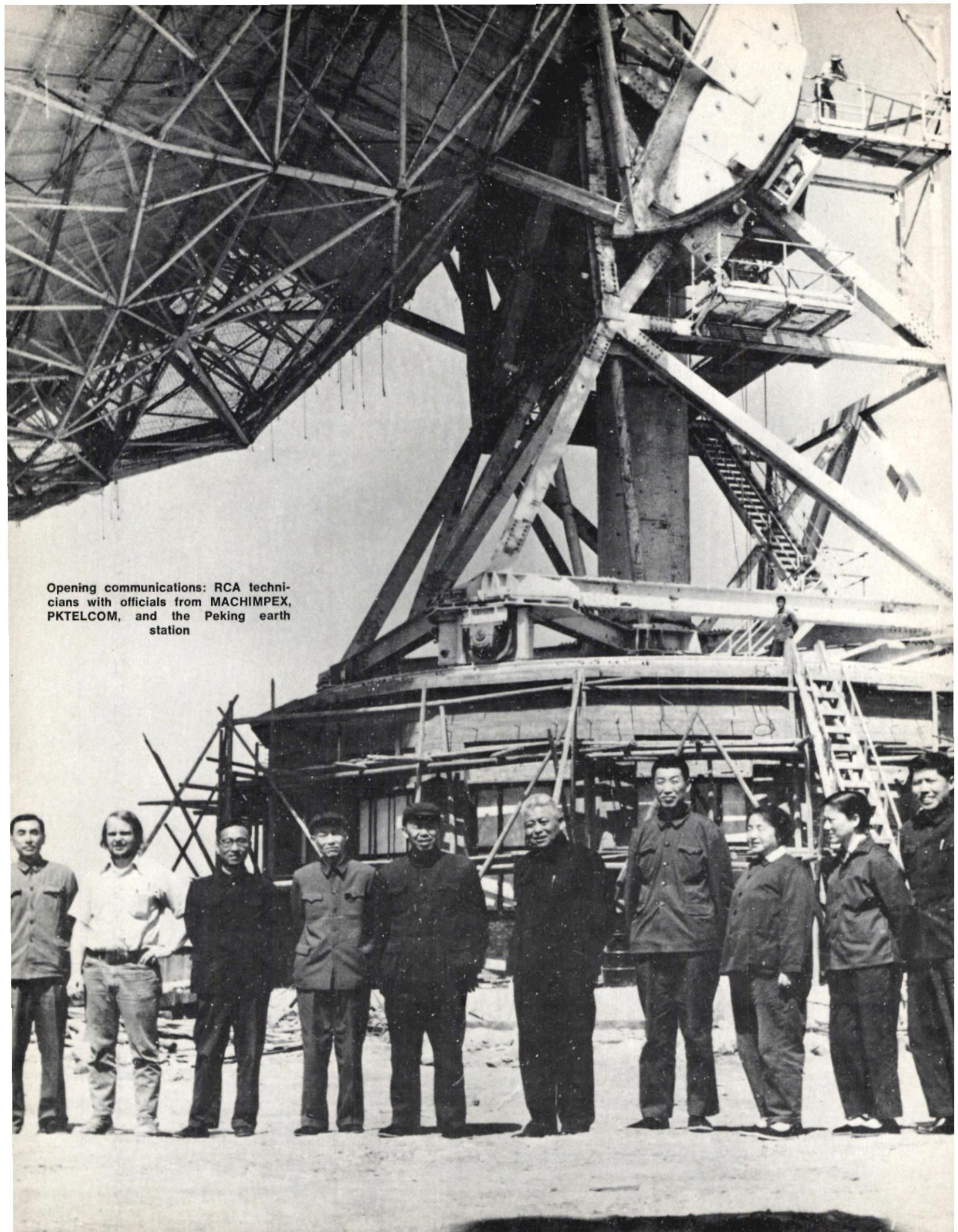
Alex Eckstein died before trade relations between the US and the PRC were fully normalized, an objective he regularly urged in books, articles, congressional testimony and speeches.

The passing of this leading China scholar in a sense marked 'the end of an era of China watchers in the US isolated for so long from the China they had watched from afar. He was one of the founders of the National Committee on US-China Relations in 1966, later chairing the Committee from 1970 to 1972, and a Director until his death.

Professor Eckstein, who served on the Academic Advisory Board of the National Council and spoke at many of the Council's functions, had a major role in the development of US studies of China's economy and trade from the early 1960s on. It was in good measure due to his efforts that the University of Michigan established itself as a major focus of China studies in the US.

The words Professor Eckstein wrote in an issue of this magazine are perhaps even more relevant today than they were when they were published in 1974: "Until further steps are taken such as the granting of MFN, and the settlement of claims and, even more importantly, until we establish full diplomatic relations with the People's Republic of China, the process of normalization will be necessarily precarious."

Professor Eckstein's ability to conceptualize, his involvement in the China business, and his presence will be sorely missed.—NHL



Opening communications: RCA technicians with officials from MACHIMPEX, PKTELCOM, and the Peking earth station

CHINA'S AMERICAN RESIDENTS: US COMPANY TECHNICAL PERSONNEL IN CHINA

Stephanie R. Green

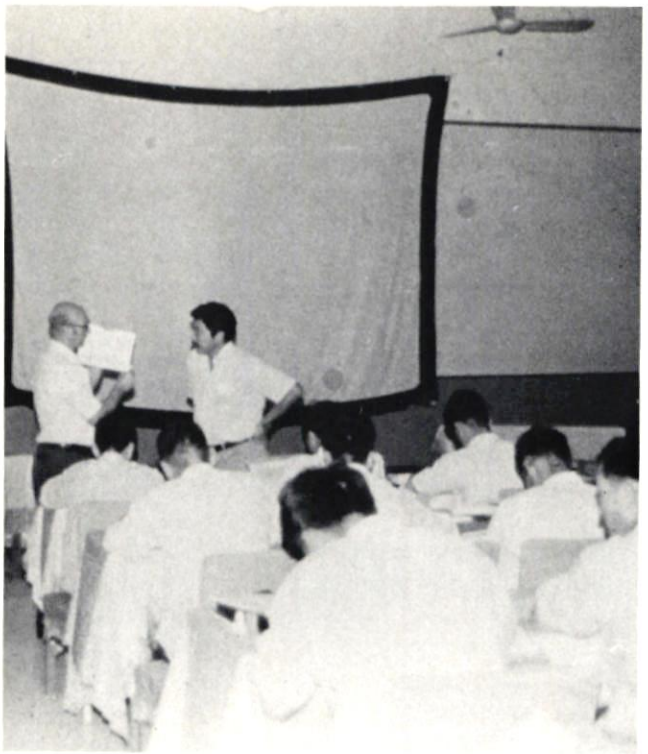
In the past two issues, UCBR has looked at the experience of foreign technical personnel in China—the experience of one US company and of Japanese firms. With over four hundred US technicians and some of their families in China or due to go in connection with sales of various kinds of equipment, the need to know what to expect is growing. This article explores the experience of American companies to date, including contract clauses for personnel, living and working conditions, technical interaction and installation problems, and case examples. Among the findings—companies feel Chinese interpreters have been inadequate, food and accommodations vary from place to place, and workers in Shanghai perform differently from those in Peking.

Of the estimated 3,000 technicians and engineers from around the world who have conducted follow-up service support inside China following the signing of contracts with the PRC, close to 15% have been Americans. At least forty-one American companies—all dealing in heavy machinery, plants, or technology—have signed contracts or are involved in contracts both large and small, which have resulted or will result in the dispatch of technical personnel to the PRC to oversee installation and to provide operational and maintenance training for purchased products.

The list includes the giant exporters, such as Pullman Kellogg, which sold $205 million worth of ammonia plants, and its subcontractors; and Boeing, which supplied China with $125 million worth of 707s. It also boasts a large number of companies involved in smaller transactions, for example, Bucyrus-Erie, which exported $20 million worth of blast hole drills and power shovels, and RCA Global Communications, which set up two satellite communications earth stations valued at $8.2 million. Other companies which have exported to China include WABCO, United Technologies, Caterpillar Tractor Co., Lummus, Western Union International, Baker Trading, Digital Resources, Geospace, Engelhard, and others.

In dealing with the PRC, these companies have experienced similar areas of cooperation as well as similar frustrations. The Chinese have shown a high level of technical competence overall, great seriousness and diligence as students, and unending hospitality as hosts. On the other hand, they have proved themselves wary in having American technical personnel actually in China, although they have eagerly sought to dispatch their own people to US shores. This wariness has been in direct conflict with what all American companies consider normal practice regarding follow-up product support and the sending of technical personnel to ensure it.

Once differences of opinion on technicians have been ironed out, visiting company representatives have also encountered differences in approach to technical know-how and emphasis on technical subjects not considered crucial on the more developed US technological scene, such as refusal to accept recommended spare parts lists and inability to see design criteria as fluid and changing.



Caterpillar instructors in Shengli Oilfield classroom.

Chinese Reluctance Changing

A number of companies comment that the general Chinese reluctance to host foreign technicians in China has been slowly lessening as the Sino-US trade relationship matures. In the recent past, the PRC has been far more amenable to US company requests to dispatch technicians and engineers than it was in the early 1970s. In fact, in one case, the Chinese have reportedly used delaying tactics to keep some US technicians in the PRC longer than the Americans originally thought would be necessary. Correspondingly, Americans have become more familiar with the kind of experience they can expect to have in China, and the kinds of living and working conditions under which they will conduct their training. They have discovered conditions to be far different from those in the US or in many other countries, and have encountered some hardships. But, for the most part, they have found themselves fascinated by their unique opportunity to observe China and greatly impressed with the demeanor and enthusiasm of their Chinese hosts.

For this article, UCBR talked to most of the companies which have made sales to the PRC since trade reopened in 1971 in an attempt to provide an overview of their experiences, discover patterns and publicize these experiences to companies just concluding new contracts.

The story has four parts: a look at initial contract clauses negotiated by the Chinese and Americans, a description of basic living and working conditions, and an analysis of the substance of technical interaction between them (which contains a number of points of conflict that have proved very similar for all companies). The story concludes with portraits of the experiences of three companies which made major sales: WABCO, RCA Global Communications, and Caterpillar Tractor Co.

CLAUSES FOR TECHNICIANS—BRIEF

For the most part, clauses in US company contracts with the Chinese concerning technicians are brief. Sometimes they are to the point, especially if concluded recently: "ours was very explicit," says a representative of Baker Trading Company, which has negotiated several contracts for sales of petroleum equipment to the PRC. Most often the clause is very general, as with Boeing. Other companies' contracts have specified very little other than the fact that the Chinese would send technicians to the US. Other substantial details have been left to later discussions and letters, as with Bucyrus-Erie and Western Union International.

The brevity of contract clauses on technicians is a consequence of China's general resistance to the idea of technicians providing follow-up service support. Many companies have found that they have to do some hard convincing to get Chinese negotiators to accept basic service support, although some informed UCBR that they experienced no trouble at all. [Companies always include service support as part of the purchase package to assure that a buyer can properly install and maintain a product.] American firms have encountered several variations on this central theme of resistance to technicians from abroad in their sales contracts with Peking:

Getting a Clause into the Contract. Some have been able to include a clause in the contract, generally, but not always, following tough negotiation, which contained skeletal wording about technicians residing in China for brief periods of time. Further specification has been made through letters, telexes and verbally.

One company, WABCO, arranged in its contract for technicians to visit each other's countries for training on WABCO mining trucks. Two representatives stayed over a month early in 1976, and one of them returned to stay over the six month time limit initially agreed to.

Generally the companies which have experienced no or almost no difficulty in the inclusion of satisfactory contract clauses on sending personnel to China have been some with extremely desirable and unique products, such as jet engines or construction or oilfield equipment. In these cases, the Chinese appear to have been far more cooperative in the acceptance of the company's typical practice regarding technicians. In addition, companies with a whole turnkey plant face less problems than those selling individual pieces of machinery, comments one firm.

No Clause, Only Followup Communications. A second group of companies have not actually been able to negotiate a clause on dispatching their staff to China, only on the Chinese coming to the US. Instead, the question of US personnel in the PRC is handled through post-contract letters or verbal exchange, only after the Chinese have realized that, indeed, it would be necessary and desirable to have on-site instruction in their own country.

Such was the case with Caterpillar Tractor Co., for technicians to provide service support for pipelayers sold in August, 1975. A cover letter to the contract mentioned the dispatch of Caterpillar technicians to the PRC. In fact, according to a company negotiator, "Discussions on training took place only at our insistence. We took the stance that there was a strong need for the Chinese to be able to effectively maintain, repair and operate our tractors, and that training would be necessary to achieve this." The Chinese finally agreed verbally, after which the cover letter phraseology was inserted.

"Perhaps," comments the Caterpillar executive, "the reluctance stemmed from reasons of pride." By contrast, the Chinese themselves raised the idea of their training in the company's Peoria, Illinois headquarters, which was worked out in detail in a further exchange of letters.

Failure to Dispatch Personnel to China. A third group has been unable to convince the Chinese to accept training in China at all. One of these is Rucker, which sold $2 million worth of land blowout preventer stacks in December 1973 and delivered them in the second half of 1974. The Chinese refused the initial offer of personnel, but the company is still trying to arrange entry to the PRC to see how its equipment is being used. "If the Chinese are using this equipment incorrectly," worries a company representative, "it won't last, and we won't get more orders from them."

Clark Equipment, which supplied towing equipment to China, was also turned down when it offered technical assistance, although MACHIMPEX requested "clarification" of the offer.

For companies in all of these categories, there has sometimes been an additional "hidden" method of training for which they are not paid. During contract negotiations, many have been questioned at length on technical points in planned seminars and informal discussions.

LIVING AND WORKING CONDITIONS

Once in China, Americans have found their hosts anxious to create favorable living and working environments. These are not what the US company members have been used to at home, or at other locations abroad, but generally, conditions in China have not proved difficult to adjust to.

At least six US firms have sent wives and sometimes children along with the company representatives, including Kellogg, Boeing, RCA, WABCO, Cummins and United Technologies. Caterpillar did not arrange for wives to join their husbands in China, but a Caterpillar worker says he felt the Chinese were disappointed that the wives did not make the trip.

Accommodations

When working sites are in or near big cities, the Americans are put up in hotels, which are as close to Western-style living as can be offered, with complete bathroom facilities, comfortable rooms, and many restaurants available. A representative from Boeing for example, lived in the Peking Hotel for two years, and another from United Technologies lived there for one year. Each brought his wife. In isolated areas, accommodations are more rustic, although the Chinese make every effort to approximate Western lifestyles, in the opinion of families from Kellogg, WABCO, and other companies.

Food

Different locations have provided differently with regard to food, depending on how many personnel are involved and how close to a big city a training site is located. The Kellogg plant sites, because they have such large training staffs, have been provided with special cooks proficient in both Eastern and Western cuisine. At the WABCO site, where just one family was residing, only Chinese food was served and Western foods were shipped from the US. Many Americans, although they like Chinese foods, have been thankful for other choices or for care packages from home.

Most company representatives say Chinese food portions are large, far more than the Chinese themselves receive. Chicken, vegetables, beef, pork, eggs, and rice are the staples. At the Kellogg plant sites, nearly 300 dishes have been available, including some very exotic selections. Cooks at some company work locations have been sensitive to American tastes, eliminating untouched dishes from the menu and repeating preferred dishes. Most technicians have found they can get eggs for breakfast, but Chinese finesse in cooking them American-style varies considerably from location to location.

Travel

Travel permits are generally required to go to any substantial distance from a training site, but Americans have not found the Chinese particularly reluctant to grant them, so long as they are to bona fide tourist attractions.

The Chinese themselves have proved eager to set up day tours to nearby spots of interest. For American Peking residents, a trip to the Great Wall and

US TECHNICIANS IN CHINA

Company	Product	Number	Date	Location
Baker Trading Co.	Petroleum equipment	2	October 1975	Peking, Taching
		2	May 1976	Peking
		7	Feb.-March 1977	Peking, Szechuan
		6*	March-Apr. 1977	Peking & unknown oilfield
Boeing	707 aircraft, spare parts, ground equipment	6	Aug.-Sept. 1973	Shanghai
		4	Aug.-Oct. 1973	Shanghai, then Peking
			Oct. 1973-May 1974	
		2 +	Aug. 1973-Dec. 1975	Shanghai, then Peking
Vendor: **Litton**		1	1974 (4 months)	Peking
Bucyrus-Erie	Blast hole drills, power shovels	3	1975 (3 months each)	Anshan Mine, Da Gou Mine, Dong Asham Mine, Chida Shan Mine, Nine Feng Mine, Wei Tou Shan, Pen-hsi Iron and Steel Works
Vendor: **General Electric**		2	Feb.-Mar. 1977	Peking and unknown mines
		1	Nov. 1975	Pen-hsi and others
Caterpillar	Pipelayers	5	Early 1976	Peking, Shengli
Control Data	Computer	7*	Aug. 1977 (4 wks.)	Peking
		2	Aug. 1977 (2 yr. shifts)	
Digital Resources	Seismic prospecting equipment	Not available	Late 1977	Unknown
Dowell Schlumberger	Oilfield equipment	1	Spring 1977	Peking
Engelhard (for Technospeichem)	Xylene process	1	1974	Taching
Geospace	Seismic surveying equipment	16*	May-June 1975	Peking
Lummus	Basic technology for Toyo ethylene plant	5	May 1976	Peking Petrochemical Works
Pullman Kellogg	Ammonia fertilizer plants	140 +	Nov. 1974-early 1978	Szechuan, Hunan, Heilungkiang, Liaoning, Hupei, Yunnan, Kweichow, Hopei.
Vendors:				
Babcock and Wilcox		6	1975-1977	
Benfield		3	1975-1976	
Bently Nevada	Vibration & monitoring instruments for turbines	2	July-Oct. 1976	
		1	Dec. 1976-Feb. 1977	
Betz		4	1975-1976	
C and CI		2	1975-1976	
CB & I (Chicago Bridge and Iron)		2	1975-1976	

Ming Tombs is mandatory. Other company personnel have taken guided tours around China, one or two weeks in length. The wife of one US company representative in Peking was given a trip organized by Luxingshe, the China International Travel Service. Some families, however, have found that because there was little time when they could be together, they sometimes politely turned down Chinese sightseeing proposals so that they could enjoy each other's company at a more relaxed pace.

Expenses

The typical US company in China now pays all expenses while in China, as the Chinese do while in the US. Apparently, the only exceptions were immediately after trade reopened when the Chinese government footed the bill for RCA technical personnel, Western Union International, and possibly for others. Costs include room, board, transportation and miscellaneous expenses. Technicians are normally paid by their own companies out of the lump sum which the Chi-

US TECHNICIANS IN CHINA

Company	Product	Number	Date	Location
Delaval		10	July, 1975-1977	
Dresser Clark		7	1975-1977	
Halliburton		4	1975-1977	
Honeywell		5	1975-1977	
IPM (UPS) System		1	1975-1976	
Los Angeles Water Treatment (a division of Chromalloy)	Water treatment equipment	5	Mid 1975-Early 1978	
Marley		1	1975	
OCI		2	1975-1976	
Westinghouse		1	1975-1976	
RCA Global Communications	Satellite Communications earth stations	23	Feb.-March. 1972	Shanghai
		25 +	July-Sep. 1973	Shanghai
		35	Oct. 1972-July 1973	Peking
Vendors:				Shanghai, Peking
Comtech	Electronic equipment			Shanghai, Peking
Cosmo	Consultant			Shanghai, Peking
E-Systems	Communications equipment			Shanghai, Peking
Rentronics	Tracking			Shanghai, Peking
Northern Electric	Multiplex equipment			Shanghai, Peking
United Technologies (Pratt & Whitney Aircraft Division)	Jet engines	2 +	Sept. 1973-Sept. 1974 (and other trips from Hong Kong)	Peking
WABCO	Mining trucks	4 +	March-Apr. 1976	Pen-hsi Iron and Steel Works
			March-July, Sept.-Dec. 1976, Feb. 1977	
Vendor:				
Cummins Engine		4	July 1975	Peking
		1	Feb. 1977	Pen-hsi
Western Union International	Satellite earth communications station	3	Mar. 1973	Peking
		2 +	Aug. 1973-Apr. 1974	Peking
Vendors:				
Comtech		5*	Oct. 1973-Jan. 1974	Peking
		1	Aug. 1973-Oct. 1973	Peking
E-Systems		5	Oct. 1973-Jan. 1974	Peking
		1	Oct. 1973	Peking
GTE		1	Mar. 1973	Peking
Other companies		54	—	—
TOTAL:		Over 439		

* Approximately
\+ Includes some wives and/or children
Note: This list is not inclusive.

nese pay according to the contract; technicians do not receive salaries directly from PRC corporations, as do Japanese workers (see UCBR Vol. 3 No. 6). Companies have found it practical to give workers American travellers' checks which they can then convert to Chinese yuan. Although room and board charges vary, most companies consider them reasonable.

If inexperienced hosts in isolated areas attempt to charge city board rates, technicians have found the Chinese amenable to negotiating for lower costs. Technical personnel who have been to China several times over a period of years comment, however, that city hotel rates have skyrocketed, making it a rather expensive proposition for technicians staying a long time. In Peking a foreign company representative can count on spending $50 a day, including food, board, cables, taxis and other expenses.

Working Schedules

American workers generally adhere to Chinese working schedules, although there have been excep-

tions; for instance, Bucyrus-Erie had its contract people on Chinese schedules and its erectors on regular US 9-to-5 schedules. Chinese working patterns, a survey shows, differ from region to region, season to season, and industry to industry. In addition, if the Americans are only to be in residence for a few weeks, they will probably have no days free.

Caterpillar workers put in a 7½ hour work day (8:00-noon, 2:30-6:00) with a 2½ hour siesta period; WABCO started at 8:00, lunched from 12-2, and signed off at 6, after which an hour or so was spent reviewing the topics of the day and laying out the following day's schedule. Others might start at 9, and break 1, 1½, or 2 hours for lunch. Breaks are longer in the summer, especially when the region is particularly hot and humid. They also depend on the distance between the guesthouse and the training site, since workers are often brought back to the guesthouse for their meals. For some companies, the trek back and forth has proved a very time-consuming process which workers feel is very unnecessary.

Orientation

Because of the tremendous differences in politics and lifestyles between the US and China, some firms have found it useful and supportive to arrange in-house orientation programs to sensitize their technical personnel before they arrive in the PRC. Pullman Kellogg arranged such a program with the State Department's Foreign Service Institute, while WABCO, Caterpillar and other companies have worked with a Peoria, Illinois-based twosome known as the Asia Group. The National Council has also provided orientation.

Programs provide insight into history and politics, analysis of social and cultural differences, and language training. As Asia Group phrases it, such training "enables the businessman, who is in face-to-face situations with Chinese, to understand current Chinese attitudes and to project a favorable image of himself as an American. This kind of mutual understanding can only serve to enhance the prospects of repeat sales to the PRC."

TECHNICAL INTERACTION AND INSTALLATION PROBLEMS

While many company representatives have felt a significant degree of rapport with their Chinese trainees, communications have snagged on a number of issues. The initial problems of Chinese resistance to the technicians and their follow-up support packages has been accompanied by a variety of related difficulties:

Self-reliance and Pride—In the opinion of most companies, the Chinese just want to be well enough prepared technically that, with the help of a very small number of technicians, they can master the items themselves. This philosophy has led, on occasion, to slowdowns in training and in the installation of purchased products. It has caused frustrations in the classroom, such as in one case where an instructor wanted the Chinese to take a piece of machinery apart, examine it and put it back together. The trainees, indeed, disassembled the item, but then refused to put it back together, saying they were sure they could do it. The flabbergasted teacher finally convinced the group to reassemble the machinery. Two hours later, they were still trying to do so.

In various cases, the Chinese have tried to do as much as possible themselves, sending technicians home before installation or erection of equipment is completed. Often, trouble has occurred after the technicians return home, necessitating exchanges of cables.

Design Criteria—In line with China's emphasis on self-reliance and pride has been the desire to understand the basic design of an item so that the Chinese can learn how to reproduce it themselves. They constantly ask, why do you make an item this way? In several companies' cases, however, they could not seem to understand that designs are not frozen and that changes are sometimes made during the construction of a piece of equipment as designers discover new improvements. The Chinese have been distressed to find inconsistencies between the original blueprint and the item finally delivered. Such scrutinizing of all equipment has caused delays in machine assembly. Sometimes whole days have been lost while questions are mulled over, but as the Chinese have become familiarized with the product, installation has sped up.

Spare Parts—The majority of companies have been dismayed by the Chinese refusal to accept their recommended spare parts lists. Such a refusal is tied in both with the desire for self-reliance and the pride of composing their own list and the desire to implement new knowledge about design criteria to manufacture replacement parts themselves. For some companies, only a very small percentage of spare parts were bought. Sometimes spare parts for an entire model were refused, leaving a company to wonder how the Chinese would maintain the equipment at optimum efficiency. Caterpillar, Cummins, Boeing and others all suffered this problem. Cummins and Caterpillar eventually sold more spare parts. RCA, however, was faced with the opposite problem. The PRC requested so many spare parts (on the component level instead of the module level as recommended) that the firm had difficulty supplying them.

Questionable Use of Equipment—For products from some companies, businessmen have been worried when they have found the Chinese using inadequate lubricants or electrical systems to back up the equipment. Such usage could cause the machinery to break down. The companies are distressed that the Chinese will think the equipment defective, and upset that their reputation for quality work could be challenged generally.

AT HOME IN CHINA: ARE YOU HAPPY HERE?

"The Chinese always asked me, 'Are you happy here?'" They did everything possible to make us comfortable," remembers Annie Taber, wife of one of WABCO's technical representatives in China, Nevin Taber. Puerto Rican-born Annie, along with her 11-year-old son, Ikie, spent from May to August of last year at the Pen-hsi Iron and Steel Works, Liaoning Province. "They treated us like kings and queens," she says fondly of her Chinese hosts. "They are so kindhearted and unselfish."

The Apartment

Before her arrival, the Chinese fixed up a family-style apartment at one end of the building which housed both Chinese and American workers. At that time, WABCO engineers, Nevin Taber and Tom Harrison were already there, living in simple spartan manner in a separated section of the guesthouse. But the Chinese wanted to do more for a family. The Taber apartment, which cost 70 yuan per month, had two bedrooms, a living room, a small kitchen, a medium-sized foyer which Annie converted into a dining area, and an 8' by 8' bathroom with a tub "as large as a swimming pool."

The Chinese had painted the floors a nice brown, but Annie did not quite go for the color combination which adorned the walls: the top half white, the bottom half blue, separated with a strip of red. Before coming, she ordered white paint from the US, as well as wall-to-wall carpeting and drapes for which her husband had sent the measurements. For two months, she painted and redecorated the apartment. She had to scrape and repaint several times because the differing chemistries of the American and Chinese paints caused the former to blister off.

"The Chinese provided us with nice leather furniture," Annie describes. "All I did was rearrange it." When she requested it, the Chinese installed curtain holders and rods promptly. They swept the yard, which was enclosed by a protective wall, every morning at 5 a.m. And when she showed interest in obtaining a house plant, they found one for her. They also provided a sewing machine with a treadle.

The family was provided with its own female interpreter and a service staff of two 20-year-old girls who did some cleaning, although Annie liked to do a lot of it herself. They brought hot water from the boiler for the family's use. Annie felt charges for laundry were a bit high, so she began to do it herself. (The women of Pen-hsi did their own in a nearby stream). The Chinese were very amenable, and took her to the store to buy a rope to use as a laundry line. The only thing available was a children's jump rope, which she bought; but as time went on, the rope, meant for a different purpose, hung lower and lower.

Getting Along with the Neighbors

Since almost no Westerners had ever come to that area, the townspeople were extremely curious about their US guests, but the staring children and adults didn't bother American mother and son. When Annie was painting furniture outside, or hanging up her laundry outside, some of the women from the village, generally of her own age, would come to look over the wall and talk. She was always friendly, calling out to them, "Ni hao! (Hello!)"

Ikie played with many of the technicians' children and the town children, learning a lot of Chinese in the process. His skateboard was a favorite with them. One 18-year-old Chinese boy brought him a bicycle to use, and he often went over to their school to play.

The Chinese interpreters never asked Annie personal questions, but they often talked about how much better life has been since 1949. Although there was much dialogue with the interpreters, the Americans never had a chance to visit any of the neighboring households.

Eating Eastern and Western

For the family's uninitiated palates, Annie asked WABCO to ship them some American food to augment the Chinese menu. Company food packages included instant potatoes, powdered milk, and peanut butter (for which the Chinese had no Western style bread).

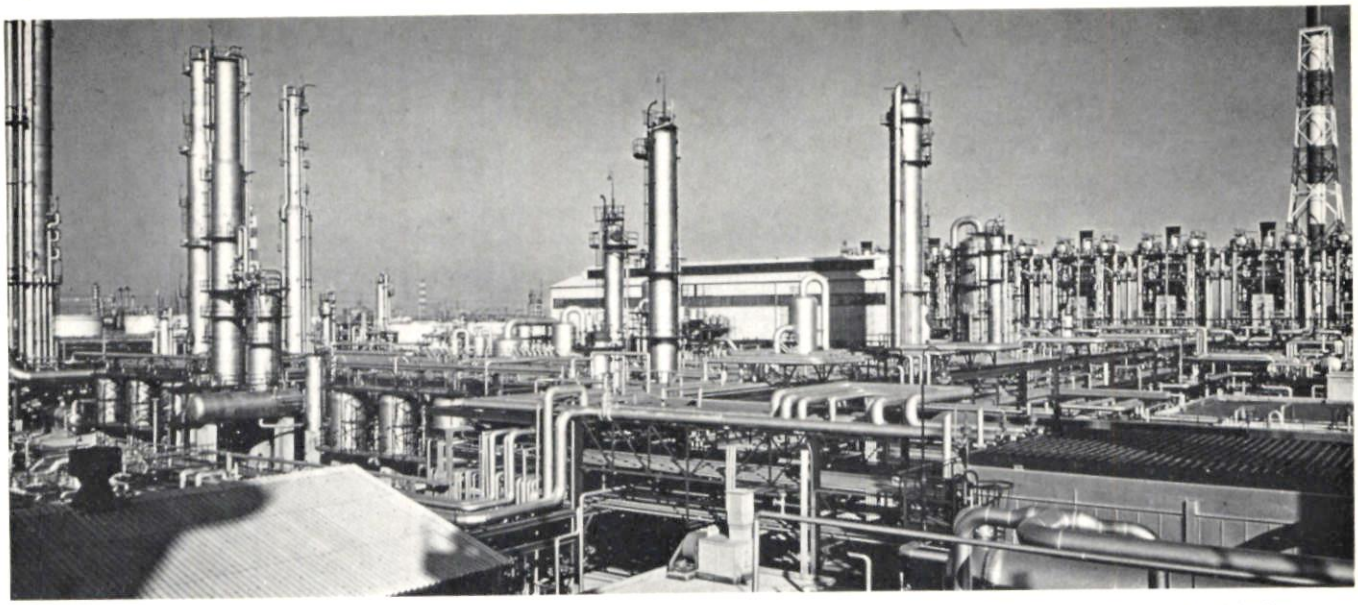
Ikie enjoyed helping the Chinese cooks prepare meals. The two cooks outfitted him with his own apron, which was bigger than he was. He would come back home covered with the flour they used for their Chinese-style steamed bread.

Annie had brought cake mixes from the US, but had to deal with the lack of an oven in which to bake them. "I thought maybe I'd steam one," she described. "I put it in the presure cooker, and told the cook to stick his finger in. If it came out clean, the cake was done. It came out pretty well, so after that I made lots of them."

Outings

Annie never roamed too far from the apartment which was home for the summer. On Nevin's day off, they usually stayed quietly at home together, although sometimes they went on day outings—once to a nursing home, once to a hot springs—or to see revolutionary movies. Annie only went once to the main town of Pen-hsi, and never shopped in its department store. The men sent all their cables from the town, however.

The Taber family left China at the beginning of August, after only a three-month stay, but they remember their experience with greath warmth. It was the following month, however, that Annie realized the real depth of her feeling for the people she had met in the PRC. "I felt so bad when Chairman Mao died," she says, "that I started crying. I thought of my friends in Pen-hsi, and knew how sad they were."



C-E Lummus provided engineering and start-up advisory services for ethylene plant at Peking Petrochemical Works.

Refusal of "Inexact" Orders—In many cases, the Chinese have hesitated, or refused, to accept any item that did not appear exactly as ordered, even when the variation would cause absolutely no difference in performance. For instance, some parts for one company's equipment arrived with water condensation on the covers, leading the Chinese to reject the order. The Chinese caution is understandable, but it has led to delays and frustrations in equipment installation.

Secrecy—Chinese reluctance to reveal where various items of equipment will be used has sometimes obstructed optimum efficiency in making purchases. One firm comments that it could have included options for cold weather performance on its machines if it knew where these machines were headed in the PRC.

Varying Quality of Interpreters—The competence of the Chinese interpreters provided has been crucial to the efficiency of training sessions. China has not been able to train interpreters in the necessary spectrum of technical subjects fast enough to keep up with the number of contracts signed. As a result, most companies feel that the large majority of interpreters have been somewhat inadequate, although this situation should improve in the future. Interpreters simply have not been familiar with the range of technical terms necessary to explain plant installation and machine assembly, and have often been helped out by American technicians who speak Chinese. In addition to a quality problem, there has been a quantity problem; often, there are not enough interpreters to keep training proceeding at a reasonable pace. As a result, many companies' programs have exceeded the time projected before the training team arrived in China.

THREE CASE EXAMPLES

Complementing this overview of company experiences in China are the following individual stories which cover the gamut of pleasures, problems, and fascinating experiences encountered by visiting American technical personnel.

WABCO

WABCO's trek to the Pen-hsi Mine in Liaoning Province began at a Canton Trade Fair when Chinese trade officials questioned the company's representatives intensely about its mining trucks. The Chinese already had similar trucks operating at their mine, although WABCO did not know that until arrival of its engineers many months later.

The negotiations were dominated overall by an easy, friendly tone. According to a WABCO negotiator, "The Chinese did not at first understand the need to have WABCO people at the mine site, but came to the realization that it would be necessary and desirable."

The terms of the contract were simple. WABCO was to furnish after-delivery training to maintenance personnel in China. The Chinese accepted WABCO's recommendations on the length of time necessary for its instructors to remain in China—approximately six months. As far as living conditions were concerned, the contract was not specific, referring only to "suitable housing." WABCO personnel feel the Chinese did their utmost to create a comfortable living environment for the visiting instructors.

The two WABCO representatives, Tom Harrison and Nevin Taber, believe they are the second and third Westerners to visit the Pen-hsi Mine, preceded only by a visitor from Bucyrus-Erie. They arrived in March of last year, after two groups of Chinese had already visited WABCO headquarters in Peoria, Illinois. The PRC contingents had returned to their country and arranged for the construction of a truck erection site especially for WABCO. The Chinese also

built a classroom with a blackboard and a separate lunchroom facility for the two visitors.

For a year prior to the representatives' arrival, WABCO shipped large amounts of technical data to China. They comment that the Chinese "really did their homework" and faced the men with a mountain of questions during the later training sessions. The company also shipped other materials. Although the contract had not specified what material would be available at the site, WABCO decided to play it safe, and sent lubricants, paint, antifreeze and other items so that no shortages would hold up truck assembly. There was a separate contract for vehicle spart parts.

During the seven-day-a-week working schedule, the WABCO representatives encountered a number of different situations in which it became clear that gaps in communications and in conceptions of the meaning of technical cooperation existed.

Despite encountering conceptual difficulties, the WABCO engineers and their Chinese counterparts accomplished everything they set out to. Many discussions were carried out, and compromises made, all with a satisfying result.

RCA: ONE OF THE FIRST GROUPS IN

As with many firms, RCA Global Communications, which set up satellite communications earth stations in Peking and Shanghai in 1972, found that the Chinese were interested in having only the minimum number of technical personnel conduct training and installation within PRC borders. The wording of the contract clause stipulated the number of technicians to be sent: the number 40 for each station was agreed upon, although fewer actually went.

Reference in the contract to living and working conditions was brief and not too specific. The company gave site differential pay for those making the trip to China.

As is often the case, the Chinese were not enthusiastic about having an operations and maintenance contract, and obtained a lot of information through discussions with the Americans during their spare time. In fact, they liked to call training "discussion" rather than thinking of it as a formal educative process, negotiator Bob Tinwin remembers.

At the Peking facility, RCA workers were housed in the Nationalities Hotel, which was 25 km., or over an hour's commute one way from the site. Technicians felt that valuable time was consumed in going to and from the hotel, and wished that closer housing could have been worked out. In Shanghai, accommodations were at the Peace Hotel, which one worker described as "terrific." Many outings were arranged, including a two-week tour of Wuhsi, Changsha, and Nanking.

Free time varied according to duties: some workers had one day off per week, and some two. During working hours the Chinese brought lunch to the site.

Instructors found that classroom attendees changed from session to session. All students, however, were interested in the same type of information and issues as outlined in the first sections of this article. There was a heavy emphasis on questions of design criteria; one representative noted that these appeared to be asked by someone who would attend the class for only a day.

BE PREPARED—AN AUDIOVISUAL KEY TO CHINA

China Old and New by John King Fairbank, sound and color filmstrips. Harvard University Press, Cambridge, Ma., 1976, $350.00.

Of any country in the world, China is probably the most difficult for an outsider to understand and adapt to, especially without some type of advance preparation. Unfortunately, only a small number of the hundreds of contract seekers, contract negotiators, company technicians and engineers, and other business visitors to the PRC have been introduced through organized orientation programs to the philosophies and events which make China what it is today and which mold the way that nation responds to foreigners. There is no doubt that potential faux pas could be avoided if American company representatives are exposed to succinct analyses of China's past and present.

John King Fairbank, dean of American China scholars, has produced an excellent and unusual means by which to obtain this information. His *China Old and New* is an audiovisual compendium of fifteen sound and color filmstrips, with accompanying text and guide, which should prove invaluable to companies desiring to acquaint their personnel with a concise as well as a fascinating overview of the triumphs and despairs of China's recent history and present-day realities.

China Old and New can stand alone as a full orientation program, or it can be combined with regular company training sessions. It can provide company negotiators and technicians with a necessary basic foundation and, particularly vital, with an acute understanding of the way China regarded foreign encroachments in the past and the manner in which it seeks to absorb and neutralize foreign influences today.

The audiovisual format is a very palatable one, especially if time is short before departing for China. American businessmen, many of whom receive audiovisual presentations often, are generally receptive to this type of media and can absorb it more quickly than a pile of books.

This work is a masterpiece of compilation. It is obvious that a great deal of effort was involved in matching the slides with the spoken tape. Fairbank's timing and delivery hold the reader's interest. The quality of both film and tape are highly professional. A company can only profit by exposing its personnel to this overview of Chinese history by perhaps the most respected authority in the field.

On-site instruction: Chinese work on Caterpillar tractor at Shengli Oilfield.

The Chinese were very curious as to how the RCA equipment was built. For instance, they borrowed a transformer for a week to study it. In line with the general PRC emphasis on self-reliance, the Chinese preferred to use materials they already possessed, often producing a part themselves and thus showing that they were not completely dependent on RCA. One problem encountered was that the Shanghai facility expected all machinery and parts to be brand-new although such a stipulation had not been a part of the original contract. Some of the materials used were actually from a station in Thailand, modified and integrated with a new antenna.

Interestingly, several of the RCA engineers noticed pronounced differences between operations in Shanghai and in Peking, apparently the result of a strong sense of competition. Using identical equipment supplied by RCA, each of the two sites built a station completely different in design. One engineer summed up the differences by describing Peking as "more bureaucratic" and Shanghai as "more aggressive."

As with other companies, the Chinese purchased few large replacement parts (as opposed to smaller spare parts)—less than 30% of the recommended quantity. RCA personel felt that they were attempting to maintain the stations on an inadequate quantity. One engineer points out that the Chinese have a different concept regarding the operation and maintenance of the earth station. Whereas RCA stresses subsystem and modules the Chinese are more interested in knowing and understanding the individual component parts. Perhaps, he theorizes, because manpower is cheap the Chinese can afford to assign many people to learn manually how to combine single parts. In the US, however expensive labor leads to greater use of machines. If a part breaks down in this country the whole section of the machine would be replaced because that is the easiest method, but in China the time would be taken to take the section apart and replace the individual piece.

RCA technicians and engineers, as some of the first Americans to visit China after the reestablishment of trade relations, paved the way for smoother interaction for later US arrivals.

CATERPILLAR

Caterpillar also encountered the typical PRC reluctance to host foreign technicians in China. Describes one negotiator, "Discussions on training were at our insistence. We took a stand that there was a strong need that the Chinese could be able to effectively maintain, repair and operate the equipment that they had purchased, and training was an integral part of service. The Chinese knew what they wanted in machinery, but they were not acquainted with other commercial aspects, such as after-sales support." Only when groups visited the US could they really see for themselves what was entailed in follow-up service support.

The biggest issue during contract negotiations, which had direct bearing on the later experience of Caterpillar technicians, was the Chinese refusal to accept Caterpillar's recommended spare parts list. The company's opinion is that the list which the Chinese themselves composed was based on the experiences they had had with prototypes from other countries. It showed that, in essence, the Chinese were preparing for types of machine problems with which US technology has dealt already. Many talks ensued concerning the list, leading to its modification toward some of Caterpillar's original suggestions.

This stand on spare parts led Caterpillar to anticipate the characteristically strong Chinese interest in design criteria. Because they wanted to be able to manufacture replacement parts in China, they were constantly asking, "Why do you make it this way? Why a square boom instead of a round boom?" [One US visitor comments that because the machine operator does the repairs himself in China, there is good continuity in care for the machine].

When the five Caterpillar men reached China in early 1976, they were scheduled to stay only two weeks, but the training evolved into a month-long program, including 2½ weeks at Shengli Oilfield and trips to Peking (where there were seminars), Tsi-nan and Tsingtao. For the most part, the Caterpillar workers encountered different trainees on-site than had travelled to their headquarters in Peoria. Some of the people were high-level engineers; others were listening in on spoken English for their own practice.

With all of them, however, they felt that a strong and friendly rapport existed. Said Caterpillar representative Tom Zaia, "We were sincerely friendly, joking and kidding around." Adds his colleague Dan Folk, "The key to success, I think, was to be natural and to act like who we are—Americans."

While at the Shengli Oilfield, the men were lodged in one of the field's three guesthouses, located at the

northern end. The quarters, built in 1972, housed no other foreigners while they were there, and possibly, they believe, had had no American visitors before. The building was of concrete, with stone floors. Each man had a separate room, bathtub with a shower, and hot and cold running water. A typical room was $10/day; one with a meeting room was $16/day. Although there was no airconditioning, there were fans in each room. A telephone was available for calls to the States. At night an evening guard was posted around the compound; the Chinese said he was for the men's own protection. One night the men simply rode past the guard on their bicycles for an evening ride. They were not stopped.

The men ate in their own dining room—a standard condition for visiting Americans. Except for breakfast, the fare was all Chinese. "There was plenty of it," comments one company representative, "and it was all tasty." For the first meal of the day, fried eggs were available, and quite good at that. The men estimate that they spent about $4-5/day for all meals.

Laundry was a separate expense—about $3.00 for three days worth. A service staff tended to some daily needs, such as rolling up the bedding, although the sheets and towels were not changed during the representative's' stay. During the last few days room service brought them cold soda and beer in the evenings. The Chinese themselves drank only warm beer and tea.

Each morning at 5 a.m. they were awakened by the public address system at the nearby commune, which played rousing martial music. Their own working hours, however, did not begin until 8 a.m. and went to noon with a 2½ hour break for lunch, ending at 6 p.m.

Available recreation was standard: ping pong, chess, carroms (rings with sticks), Chinese movies, visits to nearby schools.

The US visitors felt very strongly that the Chinese trainees did not differ from groups from other foreign countries which they had trained. The degree of competence was judged as very high; apparently all the trainees had operated machines before.

All in all, at Shengli, Caterpillar offered its students seven days in the classroom and four days operating the machines. It turned out to be just the right amount of time for the Chinese.

Conclusion

Five years ago, American company representatives arriving in China had almost no concept of what to expect—both technically, and with regard to living and working conditions. In 1977, that situation has greatly improved, and should improve even more in the coming years. About one hundred US engineers and technicians are already known to be scheduled to provide service support in China in the next several years. This number will swell with almost every new contract signed.

It is reasonable to assume that deeper understanding between American technical personnel and their Chinese hosts will result, and that many of the communications, technical and logistical gaps outlined in this article will be smoothed over and disappear, contributing to the overall improvement in the Sino-US trade relationship. 完

RMB: DOLLAR RATES AS OF FEBRUARY 1977

Date		*RMB/US$*	*US¢/RMB*	*RMB/US$ % Change*
		1976		
October 4	Bid	1.9070	52.4384	
	Offer	1.8974	52.7037	
	Median	1.9022	52.5707	−0.80
October 7	Bid	1.9079	52.4136	
	Offer	1.8983	52.6787	
	Median	1.9031	52.5458	+0.05
October 9	Bid	1.9136	52.2575	
	Offer	1.9040	52.5210	
	Median	1.9088	52.3889	+0.30
October 19	Bid	1.9251	51.9454	
	Offer	1.9155	52.2057	
	Median	1.9203	52.0752	+0.60
October 20	Bid	1.9193	52.3752	
	Offer	1.9097	52.3642	
	Median	1.9095	52.3697	−0.56
October 21	Bid	1.9136	52.2575	
	Offer	1.9040	52.5210	
	Median	1.9088	52.3889	−0.04
October 26	Bid	1.9060	52.4659	
	Offer	1.8964	52.7315	
	Median	1.9012	52.5984	−0.40
November 4	Bid	1.9002	52.6260	
	Offer	1.8908	52.8877	
	Median	1.8955	52.7565	−0.30
November 5	Bid	1.9098	52.3615	
	Offer	1.9002	52.6260	
	Median	1.9050	52.4932	+0.50
December 21	Bid	1.8926	52.8374	
	Offer	1.8832	53.1011	
	Median	1.8879	52.9689	−0.90
December 30	Bid	1.8850	53.0504	
	Offer	1.8756	53.3163	
	Median	1.8803	53.1830	−0.40
		1977		
January 11	Bid	1.8944	52.7872	
	Offer	1.8850	53.0504	
	Median	1.8897	52.9185	+0.50
January 14	Bid	1.9020	52.5762	
	Offer	1.8926	52.8374	
	Median	1.8973	52.7065	+0.40
January 15	Bid	1.9097	52.3642	
	Offer	1.9001	52.6288	
	Median	1.9048	52.4965	+0.40
January 28	Bid	1.9211	52.0535	
	Offer	1.9115	52.3149	
	Median	1.9163	52.1839	+0.60

Source: Standard Chartered Bank, Ltd.

EXPORTER'S NOTES

Briefly

- **Lull seen as preamble to heavy buying in 1977 and through 1980.**
- **Disappointing second half of 1976.**
- **Japan maintains lead as China supplier, but Germany and France post gains.**
- **Two petroleum equipment sales announced, one has unusual inspection clause.**
- **Outlook for grain sales "modestly optimistic"—may hinge on wheat/rice price ratios.**

EXPORT OUTLOOK

China appears to have been gearing up its export efforts, particularly to the US market, as a preamble to heavy purchases later in 1977. Among the concrete signs of an export program—an excellent Fall Fair, Chinese financed promotions in the US, moves to register Chinese trademarks in the US, and a steadily rising import of Chinese goods. (See Importer's Notes). Among the signs of a pending import program—China has been inviting one US company after another to Peking for talks on a variety of technologies.

EXPORT LULL—BUT CHINA PLANNING FOR BIG ECONOMIC GROWTH 1977–1980

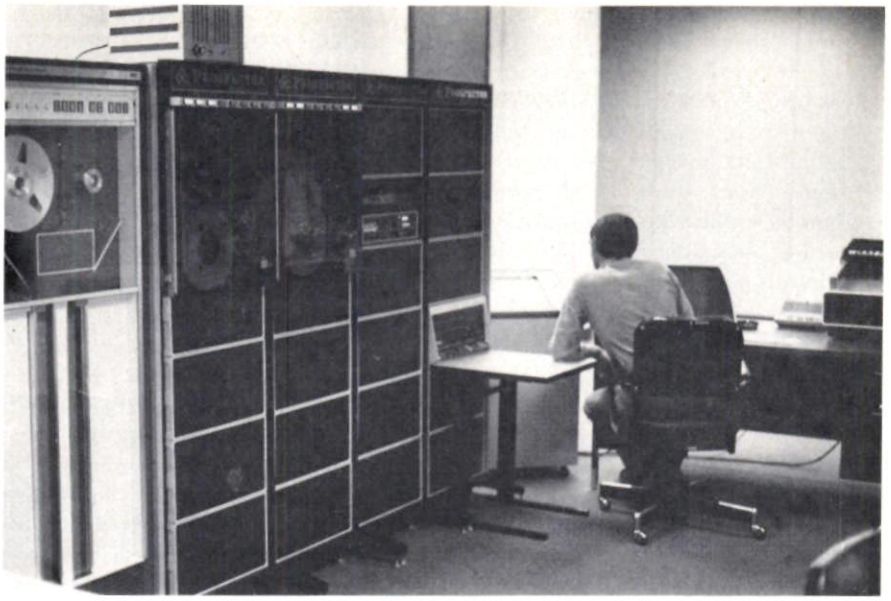
The second half of 1976 was disappointing for US exporters to China. Sales, which averaged $20 million during the first six months of the year, fell to an average of $3 million between July and November. During November, the latest month with compiled statistics, the US only shipped $1 million of goods to the PRC. Projected, preliminary returns indicate that US exports to China in 1976 will equal $135.4 million, down some 55% from 1975's $303.6 million. **The rate of decline, however, for US exports to China slowed somewhat from 1975 when US sales fell 63% from the previous year.** The composition of US exports to China remained almost totally static since the end of the second quarter with "New Special-Purpose Non-Military Vehicles, not elsewhere classified" the only new entry on the list of top ten US export categories to the PRC. US sales to China in 1977 depend upon the negotiation of new contracts: **at the July–November 1976 selling rate, annual US exports for 1977 would reach only $12–36 million, more than 70% below 1976's projected level. But most American observers expect a modest up-turn in orders from the PRC as plans for the revised fifth Five-Year-Plan are finalized.** Plants, high technology, industrial equipment, and agricultural produce are all mentioned as possible US major sales in coming months for shipments, by the end of the year. A conservative estimate for 1977's US exports to China would show an 11% increase of 1976's exports with $150 million in sales. **More important than the amount of goods sold, however, will be the number of major contracts signed in the coming year for shipment through the remaining years of the Five-Year-Plan, when China's economy is scheduled for big economic growth, according to Hua Kuo-feng.** Sales of agricultural goods remain a question mark, though forecasts are "modestly optimistic."

Construction in Peking, November 1976; See page 22.

CHINA'S FOREIGN TRADE 1976—JAPAN MAINTAINS LEAD, GERMANY AND FRANCE ADVANCE

The following points about PRC trade through 1975 were made by the CIA's unclassified report on China's International Trade (ER 76–10610 October 1976). China's trade with the non-communist world remained at 84% of total trade through 1975, but **the US dropped from China's second largest trading partner to sixth.** West Germany, whose total trade with China in 1975 grew 22.3% over 1974's level, became the PRC's third most important trading partner. The reduction in China's trade deficit from $810 million in 1974 to $445 in 1975 was due not to a change in the PRC's deficit with the developed world (constant at roughly $2.9 billion) but rather to enlarged surpluses with the developing world (up 27% from a surplus of $770 million in 1974 to $980 million in 1975) and the Hong Kong-Macao market (up 18% from a surplus of $890 million in 1974 to $1.05 billion in 1975). • **Disruption of transportation, diversion of supplies to relief and reconstruction, and the loss of industrial production caused by earthquakes has affected China's trade, and especially China's exports, through 1976.** This disruption was compounded by the temporary closing of Hsinkang harbor. Loss of coking coal from Tangshan will affect steel production, which in turn could increase Chinese demand for foreign steel. Damaged mining and electrical generating equipment could be replaced by imports in 1977. • The composition of China's purchases

world-wide is dominated by manufactured goods, with that category reaching 62% of all imports in 1975, up from 52% in 1974; foodstuffs declined from 20% of imports in 1974 to 13% in 1975. • Reports through the second quarter of 1976 reveal that **Japan has maintained its role as leading exporter to China despite a drop of 12% in Chinese purchases.** West Germany and France both showed strong export growth performances, finishing second and third, respectively, at the end of June, 1976. Italy was the only other country among China's ten leading suppliers to improve its sales (up 52%) in the first half of 1976 compared with the same period in 1975.



US seismic prospecting equipment sold to China by Digital Resources.

US SALES— FOR PETROLEUM EQUIPMENT

A 1975 petroleum equipment sale released. Nearly 18 months after its contract was inked, Dowell-Schlumberger, a jointly owned subsidiary of Dow Chemical's Dowell Division and France's Schlumberger, revealed a $3 million sale it made to China's TECHIMPORT on July 17, 1975. The deal for pumping equipment used in high pressure hydraulic fracturing, manufactured in Dowell's Tulsa plant, adds substantially to the other $5 million of foreign down-hole petroleum equipment know to have been sold to China since 1973. (Total petroleum equipment sales to the PRC during the period thought to have surpassed $340 million.) The hardware of the Dowell-Schlumberger sale comprises eight Cat-Frac pumpers, model B 504, and two blenders, model E 302, the units are mounted on International Harvester chasses with Caterpillar diesel engines. Basically, the blenders mix water with some additives and the propping agents, then pump the mixture into the Cat-Frac pumpers which send the liquid into the ground at pressures up to 15,000 p.s.i. The system can either fracture the rock layer and then prop it open with some agent (normally sand) or else fracture the rock with an acid-based liquid that etches the cracks, thus improving well production. **The TECHIMPORT contract signed is unusual in several ways.** It has a C & F Peking payment clause, but the Chinese nominate their own vessel and assume possession of the merchandise 12 miles off the US coast. Also the contract has an unusual inspection clause: ". . . When it is necessary, the buyer has the right to send, at his expense, 24 man-month inspectors to the seller's manufacturer to carry out joint inspection with the seller on the equipment under this contract. . . The buyer's inspectors shall only leave their opinion in connection with the quality of the equipment, and the seller shall pay attention to these opinions. But the buyer's inspectors shall not sign any document of such inspection; such joint inspection shall not substitute for the inspection to be carried out by the buyers after the arrival of the equipment under this contract in China. Nor shall such inspection free the seller from the guarantee concluded under Chapter ___ of this contract." In other words, the Chinese have obtained the right to make a nonbinding inspection of the equipment in the United States. Similarly, Dowell-Schlumberger is authorized to send an official to China to participate in joint inspections and test-running of the first half of its equipment. That half, however, sent in 1976, arrived without China's inviting a Dowell-Schlumberger representative to be present. Plans are currently underway to send a company executive to China to oversee the starting-up of the second and final shipment, due to leave the United States in February, 1977. In January of this year, the Chinese elected to send their "inspection" team to the United States. Nine Chinese technicians are currently touring Dowell sites in Tulsa and the southern United States. In addition to the informal inspection of equipment, Dowell-Schlumberger officials have planned to include some operation training for the Chinese visitors. The first shipment of merchandise went via Chinese-owned Panamanian-registered vessels, but the second is to go aboard a chartered carrier. **Another US seismic prospecting equipment sale:** Ending a hiatus of American petroleum equipment sales since early 1976, the Houston-based Digital Resources Corporation recently announced that it had sold a $1.7 million set of two seismic exploration systems to MACHIMPEX in early November, 1976. After several years of preliminary marketing, the company landed the sale for both computer hardware and associated software during three to four weeks negotiations in Peking last fall. Based on Digital Electronic's PDP 11/45 minicomputer, the two "Prospector" seismic processing computer systems have associated "Respond" on-line interactive seismic software as well as related ancillary equipment, including a CRT monitoring unit. Still under negotiation with the Chinese are details of technician exchange; Digital Resources hopes to send engineers to China for installation after Chinese personnel have received training in Houston. US Government permission to export is also needed before the deal can be completed, but since the Digital Resources equipment is dedicated to seismic use and since the computer's memory size can be ad-

justed to satisfy government controls, company officials expect little trouble in gaining export approval. Currently start-up is expected in late 1977. Digital Resources is a subsidiary of Applied Digital Data Systems, Inc. of Hauppauge, New York. **And another Chinese technician group arrives in the US.** In addition to the Chinese technical personnel touring Dowell's facilities, a second group of 37 Chinese technicians arrived in the United States on January 19 to inspect some equipment under contract and to train with the contracting company. One of the dozen American enterprises to make multi-million dollar petroleum equipment contracts with the Chinese, the American firm will host the Chinese for a three month visit which was stipulated in the terms of the original contract signed some eighteen months ago. Seven of the Chinese will serve as inspectors over the final stages of equipment assembly which has been underway for twelve months. Another 21 Chinese will receive technical instruction in the operation of the highly sophisticated American hardware; the company's training division, with more than a dozen instructors, will spend the entire three months with their Chinese guests. The remaining nine Chinese will serve as interpreters during the training program, three with the inspection team and six with the trainees. Since part of the sale was sub-contracted out to various other US firms, additional instructors will be brought in during the training to explain the use and maintenance of the sub-contracted components.

THE OUTLOOK FOR GRAIN TO CHINA: MODESTLY OPTIMISTIC, AND LONG TERM PROSPECTS

"Modestly optimistic" over "the prospects of our beginning to sell agricultural commodities again to the People's Republic of China" was the verdict of Assistant Secretary of Agriculture, Richard E. Bell at the National Council's China agriculture conference in November. Secretary Bell said he thought "the Chinese are going to become a longer term market for American farm products." Another view, given by Dr. Carroll Brunthaver, Vice President of Cook Industries, was also "fairly optimistic." Brunthaver's opinions, excerpted here, focus on an interesting relationship, that of wheat/rice price ratios and how it relates to China's wheat purchases. He sees the TCK problem as a serious obstacle to future US grain sales to the PRC. The full text of the seven hours of speeches at the conference is available from the National Council when purchased along with the Special Report #19 entitled *China's Agriculture*. Excerpts from Brunthaver's presentation follow:

. . . I basically agree with Assistant Secretary of Agriculture Bell's conclusion that we are fairly optimistic on the future of trade with the People's Republic of China. I personally believe that China is caught up in the same set of forces in which many other countries, be it Korea, Japan or the Soviet Union, of the world are caught up in. One of these forces is people: the population growth that's continuing.

Hsinhua

At certain prices, China may sell rice, buy wheat, and earn foreign exchange. Above, Honan wheat harvest.

CHINA'S WORLD TRADE 1976—DOWN

Very preliminary figures indicate that China's total two-way trade in 1976 was $14 billion, down about two percent from 1975's $14.32 billion. Although China's exports appeared to have grown at a 3% rate in 1976, her imports, down 15%, based on 70-80% returns from trading partners, caused the absolute decline. For the first time since 1973, China's trade with the west appears to have been virtually balanced. China's machinery imports were down substantially in 1976, and Japan's two-way trade with China based on preliminary 1976 returns declined 19% while America's fell 27%. America's total exports to China in 1976 reached $135.4 million while total imports were $201 million. These figures are preliminary estimates, it should be emphasized.

The second force is the buying power of people, or at least the desire to upgrade their diets. What people want increasingly, which may take five or ten years to develop, is protein from the animal instead of the plant. This is significant to agriculture trade because of the tremendous inefficiencies associated with this desire. It takes somewhere between three and twenty times the agricultural resources to produce that pound of protein through the animal. It's important not only because world population is growing—China's population is growing—but also because a very small percentage of the people in the world are rich enough to get the protein from the dairy products, the broilers and the animals we take for granted. Only one out of four or five of us is rich enough.

WHEAT SALES PROSPECTS

Now, let's look very briefly at the trade pattern developing in the year ahead. First we (Cook Industries) see China's wheat production certainly no more than last year's, and perhaps down a bit. According to our numbers, this is very near a record production of wheat. We have last year's production

A CHINA HAND FOR CARTER'S WHITE HOUSE

The University of Michigan's Michel Oksenberg, a professor of Political Science and a long-time friend of the National Council—he was on the Council's Academic Advisory Board—has joined the National Security Council as an advisor to Zbigniew K. Brzezinski, assistant to President Carter on National Security. Professor Oksenberg has been a prolific commentator on politics in the PRC, having authored several books and contributed numerous articles to various journals. Over the last year, the National Council has been fortunate to have Mr. Oksenberg as a speaker on China's political scene at two conferences.

at a record 32.5 million metric tons. Tradewise, starting with 1969–1970, the People's Republic of China imported 5 million tons in 1969–1970, dropped off to 3.6 million, dropped off further to 2.97 million in 1971, and then shot up for the three big years of 5.3 million, 5.8 million and 5.6 million. In 1975, they dropped, we estimate, to 2.28 million, and for the period 1976–1977, we're estimating about 2.4 million tons imports from all sources. This may be a little on the high side, and they may drop back to the 2.3 million they bought last year. If they increase their buying, we feel it will be in the 1977–1978 period and so this July/June 1976–1977 should be 2.3 or 2.4 million. We don't think America's going to get any of that 2.4 million. In fact we break it down to 1.32 million for Canada (950,000 has either been done or committed in agreements), 1 million for Australia and 100,000 for Argentina. This would be similar with the previous year when, of the 2.28 million tons China imported Canada sold about 1.2 million and Australia about 1.08 million. In 1974–1975, they were more diversified. America got 1.5 of the 5.6 million. Canada was the biggest supplier with 2.4 million, Australia had a hefty 1.4, and Argentina got in for about 200,000 tons.

CHINESE RICE EXPORTS PROFITABLE

We watch the rice situation with a great deal of interest because we feel there is a price relationship between wheat and rice. If it becomes profitable for them to sell their rice, then they will import wheat to replace it and earn foreign exchange in the process. The ratios have not been favorable in the past few years. The ratios, however, do become favorable if wheat and rice seek loan levels, or a world price equivalent to our loan levels.

In other words, if wheat goes to our loan, which is almost the case now, of an equivalent of $2.50–2.60/bushel in Chicago, and rice seeks its new low loan level of $6.00/hundred-weight, that could produce a price ratio that would encourage the Chinese to export some rice and to import an additional amount of wheat to offset that sale. In any case, we're looking at a rice production of 122 million metric tons, the same as last year's, which was a record crop. In 1968, the production was estimated at only about 95 million tons. Their exports of rice have varied between 0.8 and 2.0 million metric tons over the past six or eight years. We think the 1975's export was in the neighborhood of 1.5 million. In 1976, we estimate they exported about 900,000 tons of rice, and looking ahead into 1977, we estimate that China will export between 1.0 and 1.2 million metric tons.

SOYBEAN AND COTTON: CHINESE IMPORTS

As we look at the soybean situation, we estimate a production this year of 9.3 million metric tons, down from the 10 of last year and the 9.7 of the year before that. Given that situation, we think China will import or has imported approximately 200,000 tons of soybeans, probably from Brazil. The 200,000 tons would compare with 40,000 the year before, 75,000 in 1974–1975, and 830,000 tons in 1973–1974. We think China was in the soybean oil market for about 68,000 tons of oil, in 1972–1973. Again in 1974–1974, for about 10,000, and unofficially I would say China is in the market for approximately 30,000 tons this year. The cotton situation is stable. China has consistently imported about 700,000 bales, except for the two big years of 1972–1973 and again in 1973–1974 when they imported 1,952,944 and 1,771,979 bales, respectively. They normally import 700,000 and export 1–200,000 bales. This coming year, our guess is they will import the seven but not export any. **The TCK situation—** It is a smut ball, about the size of a kernel of grain, which has about three million spores. If the Chinese find one spore of the three million under a very powerful microscope, they reject the cargo. A rejected cargo sitting in any Chinese port will cost the exporting company conservatively $1 million to place that wheat in another port around the world. It's a very serious problem, a problem that we, as a company, cannot cope with. We cannot sell wheat to the Chinese unless we can work out some way of resolving the problem. . . .

TRAVELER'S ADVISORY

Travelers recently back from China had some delightful culinary experiences both eastern and western that are reported here:

- In Peking for the tastiest **Peking Duck,** the Peking Duck Restaurant is a must.
- For a change of pace try the International Club. If someone in your group has a **birthday, special iced cakes** with appropriate lettering may be ordered from the International Club. The Peking Hotel will also prepare cakes. Both require 24 hours notice.
- Yogurt called sour milk on Chinese menus is great at the Peking Hotel.
- The best western dessert in China is the **chocolate souffle** at the Nanking Hotel (order in advance). It's sensational. Also available here are chocolate and apple pies.
- Where can you get **T-Bone Steak** in the PRC? At the Peace Hotel in Shanghai. The hotel also has **Filet Mignon,** and delicious jam souffle.
- Among the many varieties of food available at Canton's Tung Fang Hotel—**Indian curries** and dishes of various kinds.

DAVID ROCKEFELLER IN CHINA

Among the new year's first exchange of visitors, David Rockefeller, Chase Manhattan's Chairman of the Board and a Vice Chairman of the National Council's Board of Directors, travelled to Peking for five days to meet with leading Chinese officials. **During talks held with Bank of China, "concrete progress" was reported made in expanding banking relations, although prospects for early resumption of trade transactions seemed dim.** Hosted by the China People's Institute of Foreign Affairs, Rockefeller had an audience with Li Hsien-nien, Vice Premier and Hua Kuo-feng's top economic minister, and Huang Hua, Minister of Foreign Affairs. Most observers regarded the Rockefeller-Li talk, held in the Great Hall of the People, as indicative of the PRC's continuing interest in developing relations with the United States at all levels. At the same time, the encounters gave participating Chinese leaders an insight into the new American administration since Rockefeller has had close associations with Cyrus Vance, Secretary of State; Michael Blumenthal, Secretary of the Treasury; and President Carter. In additional talks, Rockefeller and his five-member entourage met with groups from the Ministry of Foreign Affairs and the CCPIT. **The China trip, by one of America's leading bankers, has set off a new round of speculation that resolution of the frozen assets problem might be arranged prior to the normalization of diplomatic relations.** During a visit with the Deputy General Manager of the Bank of China in July 1976, Christopher H. Phillips, President of the National Council for US-China Trade, was specifically told that, in China's view, the problem of claims/assets could be resolved prior to diplomatic relations. **Others are less optimistic.** P. C. Crafts, Jr., a Vice President of First National Bank of Boston who attended the Fall 1976 Canton Fair, concluded from his meeting with Bank of China officials in Shanghai that the "blocked assets problem is subsidiary to the key problem of normalization." Mr. Craft went to China to investigate the possibility of a non-commercial correspondent relationship with the Chinese for his bank; this type of arrangement is maintained by four American banks at present. 完

Beneath the "Welcome Guest Pinetree" of the Great Hall of the People, David Rockefeller with Huang Hua, Li Hsien-nien. Front row, from l. to r. Madame Kang Tai-sha, Deputy Secretary General (CPIFA); Ko Po-nien, Vice President (CPIFA); Huang Hua, Minister of Foreign Affairs; David Rockefeller; Li Hsien-nien, Vice Premier; Thomas Gates, Head of US Liaison Office; Wang Hai-rung, Deputy Minister of Foreign Affairs; and Tang Wen-sheng ("Nancy"), Deputy Director of the Department for US-Oceanic Affairs. Second row, l. to r. Jim Bish, Senior Vice President of Chase Manhattan; Mary Ames Wadsworth, Project Manager for Chase Pacific Trade Advisors; Kenneth Morse, President of Chase Pacific Trade Advisors; John Linker, Chase Hong Kong Manager; and William Thomas, Chief of Commercial Staff at US Liaison Office.

TOP TEN EXPORTERS TO CHINA
January-June 1976
(US $ millions, adjusted)

Country	Jan-June 1975 Exports to China	Jan-June 1976 Exporters to China	Change 1976/1975
Japan [1]	1,181	1,044	−12%
West Germany [2]	223	398	+78%
France [3]	120	250	+108%
Australia [4]	225	164	−21%
Canada [2]	246	112	−54%
USA [1]	152	105	−31%
UK [2]	96	78	−19%
Italy [2]	48	73	+52%
Switzerland [2]	36	31	−14%
Netherlands [3]	80	31	−61%

[1] Based on January–July figures;
[2] Based on January–June figures;
[3] Based on January–May figures;
[4] Based on January–April figures.
Source: CIA Research Aid October 1976.

NEW FROM THE NATIONAL COUNCIL

China's Agriculture

The People's Republic of China as a market for agricultural products—including commodities, chemicals, livestock and equipment.

Two Invaluable References Now Available

- **Speeches at the National Council's Conference on China's Agriculture and Prospects for US Sales, November 18, 1976—seven hours of presentations.**
- **The 236-page workbook for the Conference, titled *China's Agriculture*, a definitive reference.**

The two together are available as a package at $75. The workbook is available separately at $25. (Add $7 for the package or workbook for airmail outside of North America). Copies may be ordered from the National Council in Washington, D.C.

China's Agriculture puts Peking's present and future agricultural demands in perspective, and provides the raw data for any market assessment of the PRC relating to agricultural products. Among the key sections of this report—

- Production acreage and yield data for seventeen of China's most important crops, and livestock inventory for eight types of animals, 1949 through 1975.
- China's agricultural exports and imports, 1970 through 1975, with market shares and dollar volumes, including China's imports of livestock, fertilizer, pesticides, agricultural machinery etc. Sino-US agriculturally-related trade. Major PRC grain contracts and terms 1973-1976.
- Agricultural products and equipment exhibited in China (1972-1975): over 250 European, Japanese and Australian companies with model numbers and/or descriptions of products displayed including food processing and refrigeration equipment, agricultural chemicals, tractors, irrigation equipment, packaging equipment, livestock etc.
- A comprehensive list of known Chinese manufacturing plants related to agricultural chemicals, agricultural machinery and food processing.
- Agricultural equipment made in China with known specifications, plus specifications of Chinese farm equipment on the international market including implements, water pumps, well drilling equipment, meat and noodle making machines, oil expellers, shellers, chemical sprayers, threshers, tractors, tractor attachments, and transplanters.
- Agricultural research institutes in the PRC, including a summary of known recent research work.
- Agricultural trade missions to and from China by category and date, 1971-1976.
- Analyses of China's agricultural system, agricultural techniques (including a listing of pesticides in use), and agricultural mechanization, plus a compendium of China's statements about agricultural policy.
- Maps and charts of China's agricultural zones and crop seasons.
- A bibliography of works on Chinese agriculture.

Speeches for the Conference on China's Agriculture

The eleven speeches given at the National Council's St. Louis Conference focus on the practicalities and prospects of selling agricultural products to the PRC. The seven-hours of talks are highlighted by a Speech by Richard E. Bell, Assistant US Secretary of Agriculture. The Speeches are as follows—

US-China Trade and the National Council—Christopher H. Phillips, President, National Council for US-China Trade.

China's Political Scene—Michel Oksenberg, Professor of Political Science, University of Michigan.

Agriculture and China's Economic Development—Benedict Stavis, Professor of Economics, Cornell University.

China's Agricultural Trade—Harold C. Champeau, Agricultural Officer, US Department of Agriculture, Foreign Agriculture Service.

Who's Sold What to China—Melvin W. Searls, Vice President, National Council for US-China Trade.

Current US-China Relations—Richard E. Bell, Assistant Secretary for International Affairs and Commodity Program, US Department of Agriculture.

Selling Grain and Cotton to China—Dr. Carrol Brunthaver, Vice President, Cook Industries.

Fertilizer Sales to China—Julian Sobin, Senior Vice President, International Minerals and Chemicals Corporation (IMC).

Animal Husbandry Products in China—Dr. Herbert T. Peeler, Division Vice-President, Animal Health and Nutrition, International Minerals and Chemicals Corporation (IMC).

Agricultural Chemicals in China—Ching C. Tung, Research and Development Department, Monsanto Company.

Agricultural Mechanization in China—Roy E. Harrington, Product Planning Department, Deere and Company.

CHINA ECONOMIC NOTES

From Chinese Media Reports

GENERAL—"OVERALL SUCCESS"

In a year-end summation, the New China News Agency (NCNA) praised the overall success of the Chinese economy. "A new high-yielding oil field" was announced in the account, but other reports indicate that China's total crude production grew only 13% during 1976, down substantially from the 1971-1975 growth average of 21.9% per annum. China's total 1976 oil production can be estimated at roughly 86.7 million tons (1.7 billion barrels per day). Elsewhere, the Chinese lauded three new large and medium size tractor plants established in Heilungkiang, Shantung and Liaoning over the past year. Sizable increases were also noted in chemical fertilizer production, water conservancy, and power generation, all of which in some way will contribute to the general drive towards agricultural mechanization expected over the next four years. **Meanwhile a second conference on Learning from Tachai** was held on December 20 to reaffirm Peking's commitment to improved production on China's communes and state farms.

INDUSTRY

Trouble in the key link. A generally sluggish 1976 economy in China has been aggravated by difficulties in the steel industry. The earthquake-inflicted slowdown at the Kailuan mines led to serious deficiencies in coking coal, since the Hopeh Province supplier has been a key source of the commodity. One NCNA press report revealed that all coal coming out of the restored Kailuan mine shafts was being shipped directly to the Anshan Iron and Steel Company. Another NCNA story revealed that the Canton Steel-Rolling Mill's production level in September was 28% below its output eleven months earlier. The article added that production by the end of 1976 was considerably above 1975's. **Cement production up.** Following a national conference of small cement works held in Yentai, Shantung by the State General Bureau of Building Materials Industry, Chinese press sources revealed that cement output from the small plants was up 6.8% by the end of November over the same period in 1975. With 3,000 small cement plants around the country, their contribution to construction in the PRC is considered invaluable, supplying 58.8% of total cement production. Their growth for 1976, 6.8%, however, is well below the average annual growth for cement output during the years 1970 to 1975 when production on an average increased 15% annually. **Synthetic fibers and fabrics** are being widely produced in Canton, according to a 1976 Hong Kong report. There are fifty synthetic fibers made in Canton, including dacron, capron, ching-lun, weilun, and viscose rayon. Dacron and cotton, rayon and cotton (jenmien nu hua ni), (dacron ti-tan chang-szu), cotton (ti-tan chang-szu), and other synthetic fabrics are also produced. **China's total rubber consumption** in the first half of 1976 was 155,000 tons including 31,000 tons of synthetic rubber, according to the November 12 edition of *European Chemical News*.

CHINA'S AGRICULTURE

China's grain output hit an all-time high, according to a year end NCNA press account, but USDA officials are less confident. With fifteen provinces reporting some details of their individual crop outputs, as opposed to eighteen at the end of 1975, a government analyst estimates that PRC grain production was roughly the same in 1976 as it was in 1975, approximately 270 million metric tons. But others hold that **grain output increased dramatically in 1976** with a total grain harvest of over 300 million metric tons, up between 4% and 6% from 1975. To reach the ambitious goal of a 1980 harvest of 400 million metric tons set at 1975's Conference on Learning from Tachai, Chinese farmers would need an average annual increase of 7% over the last five years of the decade. Grain aside, most observers agree that the rest of China's 1976 crops were mixed. Media accounts heralded increased sugar, jute, hemp, tobacco, tea and silk output, but little mention was made of cotton, soybeans, or oilseeds. The consensus among analysts is that China's 1976 soybean harvest fell from 1975's production level while cotton also dropped. As if to corroborate reports of poor Chinese cotton harvests—no PRC media accounts have mentioned this year's crop—future prices on the New York Cotton Exchange, in response to rumors of Chinese purchases in Central and North America, rose to the daily limit of $10 per bale on January 25. **Drive towards agricultural mechanization reiterated:** by releasing a directive written in 1971 under the instructions of Chairman Mao but suppressed by the insidious "Gang of Four," **Peking has reaffirmed its commitment to agricultural mechanization** in the main by 1980. According to an editor's note, the "Gang" did not wish to see agriculture mechanized and therefore squelched the editorial exhorting the peasants to develop mechanized farm production. Symbolizing the perseverance of the mechanization program, a large modern tractor plant, of Chinese design, began serial production of **"Taishan" 25-hp tractors on December 26,** according to a January 4 NCNA account. The plant, with 33 production lines and 23 workshops has a foundry and a subplant for making engines. Located in Shantung's Yenchou county, the state-financed shop will produce 10,000 tractors per year, equivalent to 7.7% percent of China's total estimated tractor production in 1975—130,000 physical units. Having been under construction with the help of local labor since 1970, the plant has already manufactured over 16,000 units since 1973 when the first lines were completed. That the plant was part of a unified plan was emphasized in the press report. **Two new crop strains have been reported in recent Chinese media accounts, one rice and one wheat.** The rice strain, a high-yield hybrid, was first trial produced on 373 hectare in 1975, but in 1976 its use was spread 140,000 hectares, almost half of one percent of Chinese total rice acreage. According to a December 11, NCNA report, this new strain has a yield some 20 to 30%

higher than local brands. In 1975, China's average rice output per acre was estimated by 3,536 kilograms by the USDA. **A spring wheat strain** was also experimented with in 1976. The "Highland-506" spring wheat seed is intended for high altitude growth, and on 700 hectare of experimental paddies, yields of up to 7,500 kilograms per hectare were reported, more than five times the national average in 1975. Despite the efforts of millions of Chinese peasants involved in this winter's farm land construction projects, **1977's crop appears off to a slow start.** The winter wheat, sown in November, did not receive the necessary ground covering of snow before the arctic cold set in. Unprotected, the crop in northern China suffered through long periods of sub-zero temperatures.

ENERGY–COAL

China's coal production, the source of nearly 70% of the country's energy, has become a point of contention among China watchers around the world, but at about 480 million tons in 1976, was higher than some observers think. In a recent US Government Research Aid, released to the public in November 1976, the CIA estimated that China produced some 427 million metric tons of coal in 1975. In January 1977, the National Coal Association released its own report giving China a 473 million metric tons coal output in 1975. Accurate estimates of China's coal output are hampered by bifurcation of reserves in the PRC. In the North, which traditionally produces five-sixths of China's coal, reserves are "generally high in quality and concentrated in large deposits with thick seams." The Southern deposits, however, tend to be scattered and substantially smaller. China's coal is therefore produced in large, well-known mines in the North such as Kailuan, Ta Tung and Yangchuan, but, in the South, in unnamed pits operated by communes or even production brigades. Thus it has been difficult, until the present, to make accurate estimates over the coal production in China's south, and most experts have been inclined to estimate project growth in the smaller pits at an equivalent rate to their capital-intensive northern counterparts. These approximations had to be reassessed when in a December 11 NCNA account, China revealed that 1975's coal output in the eight southern provinces and one southern region was 3.6 times the 1965 level, growing at an average annual rate of 13.6%, rather than the previously supposed 8.9% over the past decade. Some analysts, leary of China's recent press release, suggested that the regions involved may have been gerrymandered to mislead the readership, but the pattern of development—small local plants contributing large part of national production—has also been seen in cement output, where the small units produce 58% of total production, and chemical fertilizers, where they contribute over 50%. Assuming the new revelations as true, China's coal output in 1975 was 465.2 million metric tons, up 112% from 1965. The North in 1975 contributed 76% of total national production compared with 86% ten years earlier. Projecting into 1976's coal output necessitates assessing the damage of the July 28th earthquake. **China's coal industry was more badly hit by the Tangshan earthquake than was previously expected** according to the CIA's account. The massive Kailuan mine, located near the quake's epicenter in Tangshan, Hopeh, supplied some 25 million metric tons, or near 6% of China's total coal output in 1975. Most analysts predicted in major coal setback after the disaster, but fall's Chinese media reports of a quick recovery from the natural disaster confused most western observers. A January 12th NCNA account clarified the extent of the damage by revealing "through hard efforts . . . (the Luchiato coal-mine at Kailuan) turned out some 7,831 tons of coal." In other words, nearly six months after the damage was done, the one mine of more than a half dozen was producing at its previous annual level rate of 2.9 million metric tons, only 12% of Kailuan's estimate output in 1975. Clearly, since Luchiato has been made a model of recovery, the other Kailuan mines must have done less well. In fact, some experts feel that Kailuan's production in 1976 was only half of the previous year's, a decline of 12.5 million metric tons. **Based on that assumption and using recent Chinese accounts of coal production in other areas (especially the 10.6% increase in coal production in the south of China in the first ten months of 1976 compared with the same period in 1975), one can estimate China's total 1976 coal output at 479.6 million metric tons, up some 3% from 1975 despite the mining disaster.** (Chinese press accounts announced that the country's output had been 6.3% over the State plan, but the plan was probably revised downward after the summer's setback.) The three percent growth in 1976 is certainly well below the average annual increase of 7.8% during the previous ten years, but the continued increases in the southern

FOR TRAVELLERS— WINTER IN CHINA
January–March

PEKING

165′ above sea level; approximately same latitude as Philadelphia or Denver; susceptible to cold Siberian winds during the winter. Extremely warm, wool-lined clothing is needed in the winter especially for trips to Great Wall and Ming tombs. Bring scarfs, sweaters, gloves, and long underwear along with your heaviest winter coat. Buildings in Peking are often unheated.

SHANGHAI

50′ above sea level; approximately same latitude as Jacksonville, Florida; cool and possibly rainy during the winter especially in March and April. Medium weight clothing should be taken to Shanghai during the winter along with raincoats and umbrellas. Temperatures drop below freezing particularly during January and February.

January Temperatures

	Peking	Shanghai
Mean Daily Maximum Temperature	35°	47°
Mean Daily Minimum Temperature	14°	32°
Mean Number of Days with Precipitation	3	10
Mean Monthly Precipitation (inches)	0.2	1.9

NC Agrichem Group sees sugar cane first hand near Canton.

provinces, leading to a record contribution of 26% of total output, must have given some consolation to the Peking planners.

TRANSPORTATION

China's railroads under scrutiny. A series of recent Chinese press accounts exhorting local railroad workers to higher standards and announcing army intervention to increase productivity have drawn increased foreign attention to a major bottleneck in the Chinese economy. Moving 458 billion metric tons of cargo kilometers in 1975, nearly thirty times the amount transported on China's highways, the railroad system has suffered from its track length's slow yearly growth over the 1965-1975 period, 2.6%, well beneath the growth rate of the economy at large (5-7%), and substantially under the growth of the highways (16.5%). A December 17 NCNA report claimed that **2,200 more railroad wagons** had been loaded per day from the 11th to the 17th than had been loaded during the first ten days of the month. That improvement, however, was largely due to an increase in coal cars loaded during the same period, up 1,000 wagons. The additional coal transportation is probably a reflection of efforts to supply northern coal consumers cut off from their traditional supplies out of the Kailuan mines, partially destroyed in last July's earthquake. **Army troops were sent into Chengchow's Railroad Bureau** to promote both revolution and production, according to a January 2 NCNA story. Such action must reveal either serious labor disputes or production shortfalls large enough to threaten the fulfillment of the unified plan, reason most western observers. **Looking abroad for help?** A recent trip to Japan by a Chinese Railways Standard Inspection Mission in November 1976 has led some observers to believe that a major program to improve the PRC's railroad infrastructure based on large-scale foreign purchases may be underway. The group "carefully studied the electric machines and rolling stock plants of Mitsubishi Electric Machinery, Hitachi Ltd., and Kawasaki Heavy Industries," according to a December 8 report in Hong Kong's *South China Morning Post*. The article further indicated that the Chinese implied that they would be importing rolling stock on a large scale as well as technology to build a "large marshalling yard extending some 1,000 meters." The Chinese made a similar trip to Japan in 1971 before they initiated a program of dredger and underwater working vessel purchases to improve their port system. Domestically, the Chinese are also working toward railroad improvement: **a 5,000-hp diesel locomotive with hydraulic transmission,** was reported designed, built and tested by Chinese engineers in a December 1 article. Called the "Tung-fang-hung No. 4," the locomotive was built in the Chishuyen Rolling Stock plant of Changchou, Kiangsi but given its trial run on the Shanghai-Nanking and Shanghai-Hangchow lines. In 1975, China produced some 530 locomotives.

TECHNOLOGY

The Chinese Academy of Sciences has achieved success in 1,000 areas during the ten years since the Cultural Revolution, according to a November 10, 1976 NCNA article. For industrial purposes, the article cited advances in numerical control techniques, laser techniques, environment protection and pollution elimination, control of waste gases in the production of nitrates, use of ion-exchanging membranes to electrolyze salt in the production of high-purity soda ash, development of catalysts to synthesize rubber or oil-extended Cisbutadiene rubber, and general seismic exploration work. **The Rolls-Royce Spey engines,** sold to China along with production rights in December 1975, could be used to power future models of PRC's F-9 tactical aircraft, according to the October issue of *Air Force Magazine*. Known to NATO command as Fantan-A, the F-9 uses the same technology as the F-6/MIG-19 although it is somewhat larger. With a wing span of about 10.2 meters and a take-off weight of 10,000 kilograms, the current version of the Fantan-A is thought to have a combat radius of about 800 kilometers with a maximum speed of almost Mach 2. **A new computer** has been produced by the Institute of Computing Technology under the Chinese Academy of Sciences. Following 1 million operations per second computers and integrated circuits first introduced in 1973, the latest development marks **"a fresh advance in basic theoretical research into electronic computers,"** according to a December 14 NCNA account. China is generally considered weak in theoretical science.

MINING

China will lead the world in growth rates for refined copper consumption during the 1970s, according to Bank of America forecasts. The bank's "Global Report" which placed China's 1975 copper production at 150 million metric tons or 2% of world output, asserted that **China's copper consumption** averaged 6% annual growth from 1970 to 1975. In the 1950s China's copper consumption also led the world with an average growth rate of 45%, but in the 1960s both Japan and Canada exceeded China's 6.5% average annual increase. **As for zinc,** the same report estimated that both mining and refinery outputs declined over 3% from 130,000 metric tons in 1974 to 126,000 metric tons in 1975. The report further stated that China's annual zinc mining capacity and smelting capacity will remain constant through 1980 at 110,000 metric tons and 120,000 metric tons, respectively. **Diamonds from the East?** A recent *Ta Kung Pao* article indicated that "a big diamond mine has been discovered in northeast China's Liaoning Province." This new mine, first identified by a local geological team in 1971, apparently has reserves equal to 257% of the state plan's quota. Reflecting this shift in China's gem fortunes, PRC imports of stones from Britain, its major supplier, have fallen from over $20 million, in 1970 to $5.5 million in 1975. Hunan's Hsinhuang Mercury Mine has set a **new Chinese mercury drilling record by tunnelling** 1,056.8 meters per month in a single-head galley. In achieving this, the miners broke their own national record of 707.3 meters set in 1973 完

IMPORTER'S NOTES

Briefly

- **General trend is up**
- **Low Acid Foods, Chapter V**
- **Great Wall Sunrise seen in US.**
- **Chinese sporting goods now standard, official equipment.**
- **Soaring US ski-wear sales bring down up.**
- **US companies default on textile buys.**
- **Special Report—China's Trademarks in the US**

IMPORTS SURGE OVER EXPORTS

For the first time since Sino-US trade began in 1971, two-way trade in 1976 was in China's favor. Imports to the US from the PRC totalled about $200 million and China's exports continue to surge, backed by Chinese promotion efforts, increasing numbers of exclusives, and, in recent months, a number of Chinese trademark applications. The indications are that Peking is looking at the US, the world's largest consumer market, as a long-term sales proposition. And why? The increase in Chinese exports to the US is probably preamble to China's own purchasing program, slated, some observers think, to begin this summer.

AT THE SPRING FAIR

One US importer urges US buyers, especially in the textile area, to be sure to ascertain availability of goods, otherwise the expensive trip to Canton may not be worth it. A textile trader has received a letter asking that orders from last year be cancelled since they cannot be fulfilled due to the earthquakes in the Tangshan region. Textile orders at the Fair may be better if they focus on mills in Shanghai and in southern China. Fairgoers can look forward to a new hotel—the 23-story White Cloud Hotel, expected to be in operation by the time the Fair opens. With a new railway station in Hong Kong and in Canton, new Fair buildings, and now, the "Canton Hilton" as the new hotel has been dubbed, going to the Fair has become increasingly easier and more pleasant in the last two years.

CEROILS—LOW ACID FOODS CONTINUED

Getting low acid foods through US customs remains a problem for the Chinese, as the story of CEROILS' partial registration with the Food and Drug Administration (FDA) continues. In our July–August 1975 issue, this magazine reported that four branches of CEROILS, in Shanghai, Dairen, Kwangchow and Fukien, had apparently completed the first step of registration, but had not filed processing forms describing the factories' canning and treatment processes. These still have not been filed, although the FTC has been apprised of the need to complete registration and has reviewed the subject with the National Council. Since November 1, the FDA has been strictly enforcing regulations on registration, causing the detainment of shipments of Chinese goods, including, for example, large quantities of soy sauce, black moss in syrup, and fish gravy. **Unauthorized registration . . .** While many low-acid food importers and the FDA have been assuming that the Chinese have the subject of registration under serious review, a statement made by a CEROILS official at the Fall Canton Fair casts doubt on this. The official told a representative of the American Chamber of Commerce in Hong Kong that he had heard that "someone in the US" had registered the CEROILS branches, but he said that such registration had not been authorized by the corporation, and that it is still considering the information. The Chinese official felt sales of canned foods to the US at the Fair were quite good, but

More room in Canton: The 23-story Bai Yuan Hotel is due to open at the Spring Fair.

Importers Take Note

PRE-CANTON FAIR BRIEFING

The National Council's Importers' Steering Committee will hold a briefing on doing business at the Canton Fair, on April 1, 9:00 am, at the Carnegie Endowment Center, 345 East 46th Street, New York City.

The conference will be designed to prepare the first-timer, to assist him in avoiding misunderstandings or problems which may arise. For veterans, this conference will be an opportunity to review trends, and to hear how other traders have solved or dealt with import problems.

Importers, members and non-members, are urged to attend and to air their views on way in which imports from the PRC may be facilitated and increased. For further information and reservations, please contact Suzanne Reynolds's office as soon as possible. (202) 659-7681. Members free, non-members $15.00.

thought canned meat was not being sold because of FDA regulations. **The "Great Wall Sunrise"** is not the name of a Chinese movie, but the apellation of a new mixed drink concocted from Great Wall vodka (newly imported from the PRC by China Trade Corporation), Cointreau and orange juice. The drink was created by David Keh's Chung Kuo Yuan.

CHEMICALS—PACKAGING

Explain Your Packaging. SINOCHEM officials suggested to US importers at the Canton Fair last fall that they send the Chinese samples of alternative packaging for testing, noting that US firms do not fully explain the various types of available packaging. The PRC representatives also pointed out that because of China's size, strong packaging is needed for domestic transport.

LIGHT INDUSTRIAL PRODUCTS—CHINESE SPORTING GOODS NOW "OFFICIAL"

China may be affected by shoe import quotas proposed by industry and labor leaders and member of Congress in early January. Recent studies by the International Trade Commission show that overall imports have been capturing more than 50% of the US market, while Commerce Department statistics indicate that the level for 1976 purchases should come close to 400 million pairs. The PRC, although not yet a significant factor in the domestic market here, sells the US footwear in 39 different tariff categories. (High tariffs, averaging about 20% ad. val. but ranging up to 75% ad. val. in Column II, still pose a barrier to increased sales.) **In the January-November, 1976 period, largest US purchases of Chinese footwear were made in men's leather footwear, cemented, of which the PRC shipped $1,088,199 worth to the US.** Total footwear purchases from China equalled $2,590,414 for January to October. The US domestic shoe industry recommends the base period for quotas be the average of imports for the three years, 1973–1975, and that separate quotas be established for imports from Taiwan, Korea, Spain, Brazil, the nine countries of the European community together, and all other countries in a "basket." **Chinese sporting goods** are being promoted by companies across the US. The Chicago-based Five Seas Trading Company features "Train" and "Universal" brands of leather basketballs, volleyballs, and soccer balls, and the "Double Happiness" brand of table tennis paddles and sets. If you are interested, contact George Lu, President, at (312) 236-1138. EST International Sports, a division of Chin-America Corporation headquartered in Bellevue, Washington, also advertises "Double Happiness" table tennis equipment, as well as "Pioneer" and "Aeroplane" brands of badminton equipment for national distribution. **The "Double Happiness" ball, which is I.T.T.F. regulation size, has been selected as the official ball at major international tournaments.** EST, through its own efforts, secured the official approval of the American Badminton Association for "Pioneer" feather shuttlecocks. As a result, these "birds" are being adopted widely for tournament use. EST International Sports has been selected to sponsor the Washington State Badminton Championship in March 1977, with China's shuttlecock's chosen as the "official" shuttlecock, and, predicts EST's Jackson Tse, "We expect similar developments in other states during 1977." For further information, contact Tse at P.O. Box 1082, Bellevue, Washington 98009. **Re exclusives** . . . mention of Ideal Music in the last UCBR as an exclusive importer of Chinese violins was misleading: as well as Ideal Music, there are exclusive distributors of other models of Chinese violins in the US . . . **Antique jewelry probably will not be sold at the Kwangchow Fair** this spring. Companies wishing to import this type of jewelry should deal directly with the Peking, Shanghai, and Kwangchow branches of the Light Industrial Products Corporation.

NATIVE PRODUCE—DOWN SOARS WITH SKI-WEAR

US importers of feathers and down from China are urged to check the US FTC's "Guide for the Feathers and Down Product Industry" to be sure definitions and labels on Chinese products conform to those required by the US, otherwise the goods will not be acceptable for the US market. Feathers and down importers should also check their tariff schedules to determine the distinctions between rates for raw feathers and down and those for the garments they come in. **China's annual feathers and down mini-fair,** held in Shanghai from January 15–28, featured a variety of finished feather and down products including sleeping bags and parkas. In 1976, Chinese sales of feathers and down to this country rose dramatically following soaring sales of ski-wear in the US. Feathers from the PRC skyrocketed from a 1975 total of $1½ million to $11 million for the January-November period of 1976. Chinese down increased from a 1975 value of $612,800 to over $4 million for the first eleven months of last year. November sales, largely swelled by contracts signed at the Canton Fair, comprised about one-third of each of these 1976 figures. The US has been the third largest buyer of Chinese feathers and down over the last few years. From 1973–1975, it accounted for 8–16% of Chinese sales. West Germany leads the market, buying up from 41 to 58% of PRC supplies between 1970 and 1975. Japan ranks second, with 10–18% of the total from 1973 to 1975. **Drink Chinese tea and stop smoking!** According to Japanese reports, a coarse Chinese tea from Yunnan Province claimed to be effective in helping people stop smoking is gaining popularity among US health-food fans and those trying to break the smoking habit. Directions are to dip the bag into boiling water and then quickly gulp the drink down, after which one should soon lose the craving for cigarettes.

TEXTILES—COMPLAINTS FROM CHINATEX

Quotas on Chinese textiles will not be instituted, an intergovernmental committee has decided. Its decision reflects the continuing decline in the level of PRC textile imports, as well as the current lack of pressure from the US industry. **CHINATEX representatives have complained about the practices of US importers,** who are usually complaining about CHINATEX. Officials at the Canton Fair note that sometimes US businessmen do not understand the tariffs. Second, claims CHINATEX, US buyers also appear not to understand its pricing practices. **Corporation pricing, state the Chinese, is based on medium grade, medium qual-**

ity specifications; correspondingly, better grades and superior specifications have higher prices. However, American importers insist on the highest quality and the best specifications but are unwilling to pay the increased costs. Thirdly, **a number of US companies have unilaterally cancelled contracts,** leading factories to refuse to consider future orders from companies which default. While piece goods are relatively easy to find new buyers for, garments pose far more serious problems. The stock cannot be disposed of in China, and other buyers prefer the styles and specifications which they themselves have ordered. Contract cancellations for 1976 were greater than those for the previous year, reflecting a general decline in the state of the textile market in the US.

Unhappy tale . . . Last February a garment firm received samples of shirts and trousers which it had ordered from CHINATEX, and which the company felt were of excellent quality. However, its executives were dissatisfied with certain aspects of the samples, and sent a highly specific list of requested changes, including, for some of the shirts, raising the rear pocket 1 and ¾ inches, increasing the size of the armholes 2 to 2½ inches, and sewing in an opening for pen and pencil on the upper left pocket. In January of this year, the company received the garments and wrote CHINATEX that "we are rather unhappy with what we have found. . . . The garments are not as ordered in some cases and are not as agreed to in your contracts and they are not as promised at the 1976 Spring Kwangchow Fair." The firm noted that for the shirts, the rear pocket was not raised, the armholes were not enlarged enough, and the pocket on the left sleeve was omitted. It further complained that there was slight evidence of poor sewing, that the shirts were badly wrinkled and that it was dissatisfied with Chinese packing procedures. It may be better to avoid, where possible complicated specifications.

TOURISM

The PRC has granted permission for 50 world cruise passengers, from the Queen Elizabeth 2 to visit Peking in March, according to the Cunard Line. Previously, China has allowed groups from the *QE2* of under ten passengers to go to Peking. On March 4, **700 QE2 passengers will spend three days in Canton,** the line says. Fifty of these will fly to Peking for a four-day stay and then rejoin the cruise in the port of Yokohama, Japan. **Another cruise ship will discharge passengers in Canton on March 19.** The Norwegian-owned, Singapore-registered *M.S. Rasa Sayang* joins the luxury liners *Queen Elizabeth 2* and the *Rotterdam*, and the Greek-owned Carras cruise liner *Daphne* (see UCBR Vol. 3 No. 5, p. 59) in offering three-day junkets from Hong Kong up the Pearl River to Canton. The tour, which departs New York on March 8 and returns March 29, has a base price of $2,250, including the three days in Canton The exclusive US tour agent, Kuoni Travel, Inc. of New York City, advertises hotel accommodations in Canton, all meals, and sightseeing trips to a hospital acupuncture operation, schools, folk arts studios, a commune, and factories producing rattan, silk, ivory and pottery. Also offered are free tickets to the zoo, a musical performance, and an acrobatic show. During the cruise, lectures on China will be available for those interested. Kuoni Travel received permission to enter Canton in December 1976. The cruise line, Cruise East of Singapore, will arrange for visa clearance when the vessel reaches that port. For details: Kuoni Travel. (212) 687-7190.

SPECIAL REPORT: THE PRC STARTS REGISTERING TRADEMARKS IN THE US

A search of the U.S. Trademark Office records for registered and pending trademarks indicates that the PRC has filed nearly a dozen applications for trademark registrations in the United States, despite the absence of a reciprocal trademark agreement between the two nations. The first Chinese trademark filed and registered was *Good Health Brand* granted July 9, 1974 to Sobin Chemicals for acupuncture models (See UCBR II: 6) Sobin also filed an informal application on October 9, 1975, for *Galloping Horse* equine acupuncture models which was never officially registered. These two trademarks and the exclusive rights to them are owned by Sobin, China having granted Sobin permission to register the marks as Sobin's exclusive property. Most recently the PRC has asserted its right to trademark registration and ownership in the US by filing applications in the names of Teck Soon Hong, Ng Fung Hong, Hua Yuan and one in the name of China National Light Industrial Products Import and Export Corporation. Teck Soon Hong, Ng Fung Kong and Hua Yuan are Hong Kong incorporated agents of Chinese foreign trade corporations. Registration will protect Chinese trademarks from predatory, unfair trade practices to the advantage of both the Chinese FTCS and their American exclusive distributorship agents who promote products using the trademarked names and logos as licensees of the registered Chinese owner. Altogether eleven Chinese marks have been registered or are pending in the US since 1974.

Chinese Question Prior Use

There have been instances of US firms filing applications for trademarks that the Chinese believed to be legally theirs by right of prior use. In such cases, the Chinese have several avenues of recourse. They may request an assignment of the rights by the applicant to China. If the applicant refuses, then official registration may be blocked by filing an opposition to the application. Alternatively, if an applicant refuses to assign the mark or registration has already occurred, China may file for cancellation of the registration. In one such recent case, China took action to regain rights to its *Narcissus* name and design registered to Leman Enterprises (U.S.A.) Inc. under trademark numbers 1011630 and 1012349 filed May 27, 1975 and June 3, 1975 respectively for canned mushrooms under International Class 29 (U.S. class 46) including "dried and cooked fruits and vegetables." Since then, Ng Fung Hong, through a U.S. representative, has refiled an application, for registration of *Narcissus* brand in three separate classes, International Classes 29, 30, and 32, covering meat, fish poultry, game; beer, ale, porter; coffee, cocoa, sugar, etc. This application is currently pending and cannot be officially registered until reviewed and amended by the U.S. Trademark Office. As with each trademark, application must be filed for both design and words to be used for specific items designated according to both the International and US Class number. Therefore, although *Narcissus* brand may be granted to Ng Fung Hong for classes 29, 30, and 32, it will not be registered for the

remaining 39 international classifications.

Some May Be Refused

Some Chinese trademarks may be refused registration because either the design or words are misleading or confusingly similar to those names already registered by a U.S. company or manufacturer. For example, the Tetley Tea Company had a registered trademark, #303,329, for *Sunflower* brand covering U.S. Class 46, tea, coffee, cocoa, sugar, etc. On July 21 and August 4, 1976 Teck Soon Hong also filed application for registration of *Sunflower* name and design covering Chinese tea, including tea now under exclusive contract to a west coast importer. Applicant Teck Soon Hong also has a pending registration for *Sprouting* tea, name and design filed July 21, 1976. The four trademark applications were filed under the name of Martin Klingenberg and Gipple and Hale, Washington, D.C. attorneys acting as domestic representative for the Hong Kong corporation. (Under US trademark requirements, foreign trademarks may not be registered without a domestic resident who may be served with notice and process of proceeding pertaining to the trademark.) When contacted about the registrations and Chinese plans for future applications, Klingenberg had no comment.

Great Wall and Gold Cup

Other law firms have filed applications including Wolf, Greenfield, and Sacks, of Boston who acted as US representative for China National Light Industrial Products Import and Export Corporation's trademark *Great Wall* registered February 24, 1976, for shoes. The application was reviewed and returned for amendment of several items including lack of English translation of wording on the trademark, unintelligible signature of the authorized officer, and incomprehensible manner of dating the application papers. These amendments were completed by translating Chinese characters—on the trademark, date and signature. The authorized officer of China National Light Industrial Products Import and Export Corporation was identified as Chin Yu Yao, Head of the General Director's Office and his signature in characters was allowed to stand. Upon final amendment and approval, publication appeared in the *Official Gazette* and *Great Wall* was registered trademark #1034378. However, this smooth progression from application through registration was not completed for *Gold Cup* athletic shoes and equipment. Applicant Hua Yuan Co., a Hong Kong corporation, filed application April 7, 1976 through Haseltine, Lake and Waters of New York City. The application for use in International Classes 25 and 28, was "abandoned" November 30, 1976. The *Gold Cup* trademark would have covered "Goods: Class 25: athletic shoes, boots and gloves, namely football shoes, training shoes, running shoes, bowling shoes, tennis shoes, canvas shoes and boots, rubber shoes and boots, corduroy shoes, leather shoes and boots. In Class 28: athletic equipment, namely athletic guards, wrist support, arm guard, kneecap support, elbow support, leg guard, ankle support and athletic supporter. Footballs, volleyballs, basketballs, handballs, water polo balls, punching balls, badminton, rackets and shuttlecocks, table tennis bats and balls, table tennis posts, tennis rackets and balls, nets, discus, javelins, short-puts (sic), skipping ropes, roller skates, and starting instruments for use in sports." To date this listing of Chinese trademarks registered and applied for is complete; however, it is understood that the PRC plans to register many more of its trademarks in the United States in the near future.—*Sally Winder* 完

STATUS OF CHINESE TRADEMARKS IN THE US TO DATE

Trademark	Product	Serial No.	Date filed
	Registered		
(*Registered*; Applicant: Sobin Chemical)			6/3/75
Good Health	acupuncture models	Reg. #987,963	7/9/74
(*Registered*; Applicant: China National Light Industrial Products Import and Export Corporation)			
Great Wall	shoes	Reg. #1034378	
Narcissus	mushrooms	Reg. #1012349	2/24/76
	Pending		
(*Pending*; Applicant: Ng Fung Hong)			
Narcissus	meat, fish, poultry, game	S.N. 85555	
Narcissus	beer, ale, porter	S.N. 85540	4/29/76
Narcissus	coffee, cocoa, sugar, etc.	S.N. 85556	
(*Pending*; Applicant: Teck Soon Hong Ltd.)			
Sprouting	tea	S.N. 94157	7/21/76
Sprouting	tea	S.N. 94158	7/21/76
Sunflower	tea	S.N. 94156	7/21/76
Sunflower	tea	S.N. 95617	8/4/76
	Abandoned		
(*Pending*; Applicant: Hua Yuan Co.—abandoned 11/30/76)			
Gold Cup	shoes and athletic equip.	S.N. 82946	4/7/76
	Informal Application		
(*Pending*; Applicant: Sobin Chemical—informal application)			
Galloping Horse	equine acupuncture model	S.N. 65434	10/9/75

SHIPPING NOTES

Briefly

- **PRC—Hong Kong rates needed on SCIs**
- **Kudos for CTS**
- **TAT—More detail needed on L/Cs**
- **Women in China's merchant marine**
- **Chiangnan output up five times**

The nickel-a-ride Huang Pu Ferry, Shanghai's answer to the Staten Island Line.

The rates from PRC ports to Hong Kong on the SCI, please. Importers emphasize that the PRC shipping organizations must determine the full amount of freight charges all the way from the Chinese port through the port of transshipment to the US, and should include this information on the Special Customs Invoice. Buyers have received SCI's with the amount of freight charges from the Chinese port to the port of transshipment omitted. For instance, a firm recently received several hundred bales of grass mats which had been shipped from Swatow to Hong Kong, where they were loaded onto a US Lines vessel and transported to the US. The SCI made no mention of freight charges preceding arrival of the goods at Hong Kong, nor was US Lines able to shed any light on the missing information. Nor could FARENCO supply the information. The goods have been sitting at the dock while the company attempts to discover the true freight charges in order to determine accurately the value of the cargo for customs purposes. The tariff of the Far East Enterprising Co. (FARENCO) lists a rate for the Swatow-Hong Kong leg of the trip, but the importers are not sure whether this is directly applicable. They hope that China will include the relevant information on the SCI in the future to avoid such confusion. **Kudos for CTS.** One garment buyer gives high praise to China Travel Service, which is responsible for the operation of the TAT and TA systems. "CTS has been fantastically efficient," says the importer. "As an air forwarder, no one else has been better." Telex replies are always received within 12 hours. **Shanghai Cargo.** A very small amount of cargo from Shanghai is transshipped at Hong Kong, but the bulk of it moves out of Hsinkang, according to COSCO representative at the Canton Fair. He also commented that the **new pier at Whampoa does not handle containers,** although COSCO previously confirmed that Whampoa would complete construction of a container berth by late 1977. **Polishing Up TAT.** Some US banking officials have apparently advised their customers against using China's TAT (Train-Air-Truck or Train) system, arguing that it does not conform to international practice, the Chinese were told at a Canton Fair meeting with representatives from the American Chamber of Commerce in Hong Kong. Amcham suggested that further education was needed by the responsible Chinese authorities for potential US customers. The American organization further pointed out that one problem with TAT has been the lack of an airway bill, which has resulted in reluctance on the part of the US customer's bank to open an L/C for him. Amcham suggested a more detailed L/C might help the matter.

DOMESTIC DEVELOPMENTS

COSCO Captains and first mates will be taught English by a full-time teacher reassigned from Chungshan University, a recent visitor to China discovered. Such a move to familiarize ship crews with English may mean implications for some expanded PRC merchant marine and shipping routes. A large number of **women have joined China's merchant marine,** both because of a shortage of able-bodied seamen and as a result of the implementation of Mao's admonition that "women hold up half of heaven." **Chinese flag ships are always overmanned** in order to give experience to the large numbers of new trainees. **Another large, Shanghai-built passenger ship made its maiden voyage** from Shanghai to Wuhan on November 30, 1976. "The East is Red No. 14", which has a displacement of 3,700 tons, can carry over 1,250 passengers and 450 tons of cargo. It is equipped with two 2,000-hp diesel engines which allow it a cruising speed of 28 kilometers per hour. Construction of the vessel took six months. **Tonnage produced by Shanghai's Chiangnan Shipyard quintupled from 1965 to 1975,** and was 540 times the 1950 total. According to New China News Agency, eight of its 10,000 ton-class vessels now sail international routes.

NEW FROM THE NATIONAL COUNCIL

DIRECTORY

of Foreign Trade Exhibitions in the People's Republic of China (1971-1976)

China's Technology Preferences in the 1970s

- What is the real China market?
- What specific types of foreign technology are of interest to the People's Republic of China?
- What exact products and technology has your competition displayed in China in the past six years? And sold to China?
- How have China's foreign technology preferences changed during the 1970's and what opportunities do these represent for your firm?
- What happens at a foreign exhibition in Peking?

In providing the answers to these questions, the National Council's *Directory of Foreign Trade Exhibitions in China (1971-1976)* represents an essential market research tool for companies involved in doing business with the PRC, with cross-referenced details of over 10,000 models and products displayed—and, in most cases, sold—by over 2,200 foreign companies in China since 1970. As a tool for analysis of the present and future China market, this 500-plus page Directory is unique and vital for your PRC strategy.

About the Directory

There have been over forty industrial exhibitions in the People's Republic of China by foreign countries during the past six years. Twenty-six of these trade fairs were by western nations, including nearly all European countries and Japan. These exhibitions are showcases of the types of foreign technology China is interested in.

- The *Directory* is an essential reference guide to what other companies have displayed in the PRC
- the products and technologies exhibited in the PRC, 1971-1976, by model number and/or type
- how exhibitions are organized in China—and where China exhibits abroad · floorplans of major exhibits in the PRC · China's technology preferences, and how these preferences have changed · what happens at an exhibition in China
- what technical seminars in the PRC accomplish and how they work.

The *Directory* has been prepared by Molly Bruce Jacobs, a Chinese-speaking specialist in the subject of trade shows in China. The 500-plus page volume will be available in early 1977.

Countries included in the Directory are Australia, Austria, Belgium, Britain, Canada, Denmark, France, Germany, Italy, Japan, Mexico, Netherlands, Sweden and Switzerland.

The Directory costs $200.
Outside North America, add $7.00 for airmail postage.
Copies may be ordered from the National Council in Washington, D.C.

CHINA INTERNATIONAL NOTES

CHINA'S BUYING REPORTS

It was announced on January 4, 1977 that China has ordered a 6,000-ton four-stage **hot transfer forging press** from Sumitomo Heavy Industries (SHI) of Tokyo, Japan. This order is for Model TFPA—6,000 which, acclaimed as the world's largest press of its kind, ensures significant labor savings. The order, worth approximately $2.3 million, includes the press and necessary dye as well as all pertinent soft ware. This is SHI's second forging press order from China; the first, in 1974, was for a 3,000-ton press. May, 1978, has been set as the target delivery date for the press to arrive in the PRC. China will import about 1 million tons of **fertilizers** during the last half of the current fertilizer year (July 1976–June 1977). According to the Japan Ammonium Sulphate Export Co. a contract was signed by Japanese fertilizer makers on December 7 in Peking. The price of the contract has not yet been disclosed; however, the 1 million tons breaks down into 200,000 tons of **urea,** 500,000 tons of **ammonium sulphate** and 250,000 tons of **ammonium chloride.** Toyota Motor Sales Co. has announced that it has sold 251 **trucks** to China, partly at the autumn Canton fair. The value of the deal totals about $.66 million. With this, the company has received orders from China for a total of 615 trucks during 1976. The Demag-Schloemann consortium of 17 concerns from West Germany, Austria and Belgium with a contract to build a **cold rolling steel mill and continuous casting plant** in China has shipped the last equipment from Hamburg. Since the $268 million contract was signed over a year-and-a-half ago, about 43,000 tons of equipment has been moved to the Wuhan site in Hupeh province. Production is slated for the second half of 1977. It was announced in November, 1976 that China has purchased a **pyrite pelletizing plant** from four Japanese companies, Toyo Engineering, Kowa Seiko, Mitsui and Co. and Sangen-Tsukuba Trading. The deal, involving plant design, hardware supply, supervision of construction and operation guidance, is valued approximately $15 million. Payment will be made in installations spread over five years after the start of shipments. The plant, with an annual capacity of 300,000 tons of pelletized pyrite, is scheduled for completion by the spring of 1980. China has bought a **marine synthesized transmitter** (model: RMT 1500S) from **Redifon Telecommunications** of London. It will replace double sideband non-synthesized transmitters. The equipment will go to the China Merchant Steam Navigation Company. Two Japanese companies, Honshu Paper Manufacturing and Daishowa Paper Manufacturing, will sell 26,500 tons of **paperboard** to the PRC. The orders were made at the 1976 Autumn Canton Fair. Combined value of the two contracts is $4.8 million, a 10% rise over deals signed at the previous fair. **Toby Industries** of Japan has received an order for 7,000 tons of **deformed shaped steel** which is used mainly for the manufacture of conveyor frames. China may start importing **tin.** Despite the fact that China exported 12,000 tons in 1975 and 6,000 tons in 1976, China expects to become a net importer of tin due to increasing domestic consumption. **Malaysia** sold 5,000 tons of **rubber** and 30,000 tons of **logs** to the PRC in November, 1976. During the first half of 1977, China will import a total of 16,600 tons of **wire rope** from Tokyo Seiko, Kokoku Iron and Steel Wire and several other Japanese wire rope makers, according to a November 1976 press report. It is reported that the price agreed upon is 2-3% higher than that agreed upon at the 1976 Spring Canton Fair. Kawasaki Heavy Industries has announced that it has won a Chinese order for **20 shovel loaders** at the 1976 Autumn Canton Fair. The shovel loaders, valued at approximately $700,000, are medium size with bucket capacities of 2-3 cubic meters. According to a November 1976 press report, Imperial-Krauss-Maffei of Munich, West Germany will deliver a **complete lime-burning installation** to China. The installation, valued at $5 million, is for a giant steel works at Wuhan. It was announced on October 7, 1976 that China has ordered a **gas turbine** from **John Brown Engineering** (Clydebank) of Great Britain. The equipment is made up of a 32,000-hp

JAPANESE EXPORTS OF CHEMICALS TO CHINA CONCLUDED AT FALL CANTON FAIR

Product	Fall, 1976	(metric tons) Spring, 1976
Bensol	38,000	22,000
Methanol	13,000	18,000
Caprolactam	5,000	1,000
Acetic Acid	2,000	0
Octanol	5,000	0
Phenol	4,000	4,000
Alkalyl benzene	6,000	1,500
Phthalic acid anhydride	5,000	* 1,000
PVC	3,600	0
ABS resin	1,100	0
Poval	approx. 2,000	1,500
High pressure polyethylene	0	3,500
Medium, low pressure polyethylene	0	6,000
Polyester chips	0	* 5,000
Ethylene glycol	2,700	* 4,200
Plasticizers	1,500	* 2,000
Sodium tripolyphosphate	0	6,000

* Estimates.
Source: Japan East West Trade News 11/24/76.

THE PEOPLE'S BANK OF CHINA
OFFICIAL FOREIGN EXCHANGE QUOTATIONS
November 30, 1976

Monetary Unit		Per		Rate
*Albanian	Lek	Lek	100	Y 15.41
*The Korean People's Democratic Republic	Won	Won	100	Y 89.58
*The Democratic Republic of Vietnam	Dong	D	100	Y 67.19
Rumanian	Leu	Lei	100	Y 33.33
*Rumanian	Leu	Lei	100	Y 15.54
*Bulgarian	Lev	Lev	100	Y165.38
*Czechoslovakian	Koruna	CKR	100	Y 13.37
*The German Democratic Republic	Mark	Mdn	100	Y 40.31
*Hungarian	Forint	Ft	100	Y 9.84
Mongolian	Tugrik	Tug	100	Y 50.00
*Mongolian	Tugrik	Tug	100	Y 30.86
*Polish	Zloty	Zl	100	Y 8.43
*U.S.S.R.	Rouble	Rbs	100	Y129.00

*For Non Commercial Transactions Only
Source: People's Bank of China, Shanghai Branch

mechanical drive unit normally used for pipeline pumping. Hopes at JBE are that this will lead to further contracts as China develops her natural gas resources. During 1977 **Peru** expects to export 18% of its **refined copper** to China. As for Peruvian **blister copper,** China is in the lead with projected imports of 25,000 tons. Peru has a long-term contract with the PRC under a political agreement in exchange for rice, wheat and other commodities. According to November 1976 press accounts, the smallest **T series flexible power transmission coupling** ever made by Flexibox Ltd., a member of the Burmah Enginering Group, is destined for China where it will be used to test low power, high speed turbine engines. It was confirmed on December 22, 1976 by an Argentine Agricultural Department official that China bought 200,000 tons of bread wheat at $90.00 a ton for February/June, 1977 shipment. The wheat will be exported in five monthly 40,000 ton shipments starting in February, 1977. **Two petrochemical plants sold:** Japan's Teijin sold a $43 million, 80,000 m. tons-per-year polyester fiber plant to the PRC, according to the November 17, 1976 issue of *Chemical Week*. Also reported was a $33 million aromatics contract signed with the PRC by JGC Corporation along with Sumito Shoji Kaisha and C. Itoh. The second plant is scheduled to be onstream in late 1978. **Polyester fiber** has also been sold to the Chinese. As a result of talks at the last Canton Fair, **Celanese and Hoechst contracted in late November** to ship staple to China in the first half of 1977, 10,000 tons and 7,000 tons, respectively. By December, four other countries had signed contracts to supply polyester fiber to China in coming months. Teijin will supply 11,000 tons during January-June 1977, including some fiber from its Thai subsidiary, Thai Teijin Polyester, Toray Industries will ship a total of 7,200 tons during the same period, and Toyobo Company will deliver 1,800 tons. Additional sales were still under negotiation with Kuraray Company and Unitika Ltd. Total Japanese sales for the first six months of 1977 should thus be at least 28,200 metric tons. The price of the fiber was reportedly between the Japanese asking figure of 95¢ per kilogram and the initial Chinese bid of 88¢.

CHINA SELLING REPORTS

According to the January 1977 issue of "China Trade Report," Chinese **silk** is being sold to the semi-official Japan Silk Association at the price of $32.73 per kilogram, up about $1.75 from the previous price. The sale includes 6,600 bales of silk, the bulk of which will arrive in Japan by March. **"Bounties or grants"** are being imposed or paid on imports of **bicycles** from China to the U.S.A. Under the countervailing duty law, the U.S. Treasury is required to assess an additional duty on merchandise found to be receiving the payment or bestowal of a "bounty or grant." The Treasury must issue a final determination in the bicycle case by April 19, 1977. The first **Chinese automobiles** sold in the West, four-cylinder general purpose vehicles called "Peking," are on sale in **Paris** according to Cie Les Acheteurs Ausoucies. The cars, resembling U.S. Army Jeeps, are powered by a 2.445 CM2 engine and will cost the equivalent of about $7000. The car's top speed is 60 m.p.h. Aroma chemical manufacturers are ready to produce citral when **litzea cubeba** supplies from China dry up. But they won't dry up, importers say. While litsea will cost more, it will still be competitive with synthetic citral, and it will still be available. **Jamaica** has purchased 5,000 tons of **Chinese rice.** The sale is part of a recent trade economic agreement. The rice was being loaded less than 24 hours after the signing of the agreement in Peking. This is the first time Jamaica has bought rice directly from the PRC.

MISCELLANEOUS

Flexibox Limited has sold £500,000 (US $805,000) worth of **mechanical seals and components,** according to the November issue of the *Sino-British Trade Report*. The sale, the third to be signed with the Chinese by the Manchester, England-based member of the Burmah Engineering Group, represents the largest order the company has ever made. In 1973, Flexibox Limited participated in the British Technology Exhibition held in Peking. All of the company's contracts have been with TECHIMPORT. The firm did not participate in November's 48-group exhibition. **Romanian BAC III for China?** December, 1976 reports from London indicate that negotiations are in progress in Bucharest between British Aircraft Corporation and the Romanian Government for license production of the BAC III transport aircraft. Romania would have sales rights for the Eastern Bloc countries and possibly the PRC. China announced the **successful launch of an unmanned satellite** from the Shuang-Cheng-tzu launch site on December 7, 1976. The vehicle

is in the 6,000-10,000 lb. class; the launch was made by CSS-X-3 booster. It was the seventh Chinese spacecraft to be placed in orbit since 1970. **South Korea** may seek **indirect trade relations** with the PRC, as suggested by the Korean Overseas Economic Research Institute in November, 1976. Indirect trade could be initiated either through a third party such as Hong Kong or Singapore or through partnership with influential overseas Chinese business interests in Southeast Asia. The report projected that South Korea's trade with China would reach $157,000,000 in exports per year and $180,000,000 in imports. During the **Concorde's** stopover in Hong Kong (November, 1976), some 30 Chinese commercial representatives inspected the Anglo-French supersonic airliner. There are no firm indications, however, that the PRC will exercise its options on two of the $70 million planes. In light of China's efforts to conserve foreign exchange, the high cost of the Concorde dulls speculation of a Chinese purchase in the near future.

FOREIGN AID

AFGHANISTAN, 11/8/79, The PRC ambassador met with the Afghan Minister of Planning to discuss projects financed from the $55,000,000 loan extended by the PRC.

ALBANIA, 11/76, **Urea plant at Fieri,** a joint Albanian-Chinese construction program, completed.

ALBANIA, 11/17/76. Inauguration of the Valias **Coal Dressing Plant,** which was built with Chinese aid and is one of the largest mineral-processing installations in Albania.

ALGERIA, 11/76, Chinese and Algerian technicians have co-operated in the experimental **growing of soya beans** for the fourth successive year.

ETHIOPIA, 11/10/76, Chinese **medial team** arrived at an Addis Ababa hospital to take up duty there after a year's service in the country's drought-affected regions.

GABON, 10/76, Chinese **agrotechnical team** has completed mission and will return home.

GUYANA, 10/76, Chinese **clay-brick factory and paddy-rice technical teams** have completed their work and will shortly leave for home.

IRAQ, 11/7/76, Chinese technicians will construct a **sports hall** in Baghdad.

LOAS, 10/25/76, **Broadcasting station** in Oudomsay Province, built with Chinese assistance has been completed.

NIGER, 9/23/76, Chinese Embassy in Niger presented four **cinema projectors** to the Government of Niger.

ROMANIA, 11/76, Chinese technicians and engineers are working at a **cable works** at Zalau in Satu Mare County.

SOMALIA, 11/76, The first section of the 970-kilometer Belet Ven-Burao **highway,** begun in 1973, was handed over at a ceremony in Mogadishu. This is the 360 kilometer Belet Ven-Galeaio section.

SRI LANKA, 10/76, A **freshwater breeding station** that is to be the nucleus of fish breeding facilities is being established with assistance from the PRC.

VIETNAM, 9/23/76, Co Loa **film** studio, located in Hanoi, was inaugurated. It was built with Chinese assistance and its annual capacity for processing film is 7,500 thousand meters.

VIETNAM, 11/76, Extensions and improvements in the Viet Tri **chemical works,** north-west of Hanoi, have been completed with Chinese aid.

YEMEN ARAB REPUBLIC, 12/76, Yemeni and Chinese **agro-technicians** at the Baterna Agricultural technique experiment and popularization station are experimenting with advanced farming methods.

ZAIRE, 10/19/76, Chinese technicians will help construct a **sports stadium** in Kinshasha.

EXHIBITIONS

BAHRAIN, 11/30/76, Chinese **economic and trade** exhibition.

ETHIOPIA, 12/1/76, Chinese **economic and trade** exhibition of agricultural, light and heavy industrial products.

IRAN, 10/19/76, The Fourth Teheran International Trade Fair, at which China displayed over **1,100 machines.**

JAMAICA, 12/4/76, Chinese two-week exhibition of **arts and crafts,** sponsored by the Jamaican National Art Gallery, closed.

JAPAN, 10/76, Chinese **carpet** exhibition and sale, cosponsored by the Tokyo-based Shin-Shin Trading Co. and Kobe Taiyo Bussan Co. The Fair was held at nine major department stores throughout Japan.

JAPAN, China fair scheduled to be held in September 1977, in Kitakyushu, the Western Japan Association for Promotion of Internal Trade disclosed in October. This will be the fifth China Fair to be held by the PRC in Japan since the normalization of diplomatic relations between Peking and Tokyo in 1972.

LAOS, 10/30/76, That Louang International Fair, at which the Chinese displayed **agricultural products, textiles, light industrial products** and handicrafts.

NEW GUINEA, 11/76, Chinese **economic and trade** exhibition in Papua attracted 40,000 people.

PHILIPPINES, 10/76. Chinese **trade** exhibition at which over half a million Filipinos viewed an **entire rice mill,** a Red Flag limousine, a laser knife, the scale model of an agricultural commune, a centralized electronic railway traffic control system, an electronic data computer, television cameras and television sets, a **7980-kilogram rubber mixing mill,** a 6000-kilogram die maker, geological prospecting equip-

Officials of Kevin Hughes, one of 37 British firms participating in 48 Group's exhibition last November.

ment, X-ray machines, tractors, pesticides and chemicals.

SELECTED CHINESE DELEGATIONS ABROAD

BANGLADESH, 11/28/76, **Trade** delegation led by Hsi Yeh-sheng.

CAMBODIA, 12/24/76-1/4/77, Government **economic** delegation led by Fang I, Minister of Economic Relations with foreign countries.

CZECHOSLOVAKIA, 11/19/76, **Scientific and technical** delegation led by Sun Yu-yu, Vice-minister of the first Ministry of Machine Building, attended the 18th session of the Sino-Czechoslovak Joint Commission for Scientific and Technical Cooperation.

DENMARK, 12/76, **Offshore oil equipment** delegation concluded their 44-day trip to **Britain** before heading for Denmark.

FINLAND, 12/1/76, Government **trade** delegation led by Peng Chin-po, deputy department director of Ministry of Foreign Trade.

FRANCE, 12/76, Mission led by Chou Hai-ting, Deputy Director of Technical Department of the China Broadcasting Administration to study **recording techniques** used by French Radio.

GREAT BRITAIN, 9/8/76. **Molecular biology** group of Chinese Academy of Sciences was composed of six members and led by Shen Shan-chiung, Vice-chairman of the Revolutionary Committee of the Shanghai Institute of Plant Physiology. The group also visited France.

IRAN, 11/76, National **People's Congress** delegation led by Wu Lan-fu and Chi Peng-fei.

JAPAN, 11/16/76, **Electronic industry friendship** delegation of Chinese Society of Electronics led by Liu Yin, Vice-President of the society with Li Chao-chi, council member of the society.

KUWAIT, 11/22-28/76, National **People's Congress** delegation led by Wu Lan-fu, Vice-Chairman of the NPC Standing Committee.

NAIROBI, 10/76, Delegation led by Yang Yun-yu attended 19th session of **UNESCO.**

NORWAY, 9/7/76, **Forestry study** group led by Wang Pin, Deputy Director of the Forestry Bureau under the Ministry of Agriculture and Forestry, concluded a five-day visit to **Denmark** (9/2-6/76) before leaving for Norway.

PHILIPPINES, 12/8/76. Chinese **journalists** delegation led by Kung Mai, leading member of the editorial department of the Hsinhua News Agency.

POLAND, 11/12/76, Chinese Ministry of Communications delegation, led by the Deputy Minister, Yu Mei, attended thirteenth session of shareholders meeting of the **Chinese-Polish Shipbrokers Company.**

ROMANIA, 10/29/76, Delegation of **archaeology and museums** made up of seven members and led by Peng Yen.

ROMANIA, 12/12/76, **Tele-communications technical** delegation led by Chi Tui-chao, Deputy Director of the Director-General of Tele-communications of the Ministry of Posts and Telecommunications.

SRI LANKA, 12/7/76, Government **trade** delegation made up of 9 members and led by Chai Shu-fan, Vice-Minister of Foreign Trade, to renew the trade agreement between the two countries and to fix prices for Chinese rice and Ceylonese raw rubber.

SWITZERLAND, 9/23/76, **Telecommunications** delegation led by Wang Shu-chia, Vice-President of the Research Institute of the Ministry of Posts and Telecommunications, attended the sixth plenary session of the Telegraph and Telephone Consultative Committee of the International Telecommunication Union.

SWITZERLAND, 1/4/77, **Telecommunications** delegation led by Lu Ko-chin with Hsu Chung-ming as deputy leader attended the world radio administrative conference on satellite broadcasting called by the Interna-

PEOPLE'S BANK OF CHINA OFFICIAL FOREIGN EXCHANGE QUOTATIONS

November 30, 1976

Monetary Unit		Per		Buying Rate	Selling Rate
Algerian	Dinar	DA	100	Y 49.78	Y 50.82
Australian	Dollar	A$	100	Y234.58	Y235.60
Austrian	Schilling	SCH	100	Y 11.07	Y 11.13
Belgian	Franc	BF	10,000	Y511.63	Y514.19
Canadian	Dollar	CAN$	100	Y192.35	Y193.31
Danish	Krone	DKR	100	Y 32.22	Y 32.36
Federal Republic of Germany	Mark	DM	100	Y 78.51	Y 78.91
Finnish	Marrka	FMK	100	Y 49.42	Y 49.66
French	Franc	FFR	100	Y 38.05	Y 38.25
Ghana	Cedi	C	100	Y164.91	Y165.73
Guinea	Syli	SY	100	Y 8.93	Y 8.97
Iran	Rial	RL	10,000	Y269.06	Y270.40
Iraqi	Dinar	ID	100	Y650.99	Y654.25
Italian	Lira	LIT	10,000	Y 21.94	Y 22.04
Malaysian	Ringgit	M$	100	Y 74.55	Y 74.93
Japanese	Yen	JY	100,000	Y642.54	Y645.76
Mali	Franc	MFR	10,000	Y 38.28	Y 38.48
Moroccan	Dirham	DH	100	Y 42.65	Y 42.87
Netherlands	Guilder	FL	100	Y 75.16	Y 75.54
Norwegian	Krone	NKR	100	Y 36.05	Y 36.23
Pakistan	Rupee	PRS	100	Y 19.15	Y 19.25
Sierra Leone	Leone	LE	100	Y149.47	Y150.21
Singapore	Dollar	S$	100	Y 76.93	Y 77.31
SriLanka	SriLanka Rupee	SRS	100	Y 21.62	Y 21.72
Swedish	Krona	SKR	100	Y 45.14	Y 45.36
Swiss	Franc	SFR	100	Y 77.89	Y 78.29
Tanzania	Shilling	SH	100	Y 23.21	Y 23.33
U.K.	Pound	£	100	Y312.96	Y314.52
U.S.	Dollar	US$	100	Y189.27	Y190.21
Zambia	Kwacha	K	100	Y316.64	Y318.22
Hongkong	Dollar	HK$	100	Y 39.03	Y 39.23

Source: People's Bank of China, Shanghai Branch

tional Telecommunications Union.

UNITED KINGDOM, 10/76, **MACHIMPEX** delegation led by Liu Ching, General Managing Director of the corporation, and composed of eleven members, attended the 1976 Farnborough Air Show and toured U.K. **aerospace** companies for two weeks.

VIETNAM, 10/11-11/7/76, **soil observation** team led by Hsi Cheng-fan.

SELECTED DELEGATIONS TO CHINA

ALBANIA, 10/21/76, **Trade** delegation led by Viktor Nushi, Vice-Minister of Trade.

BULGARIA, 11/14/76, **Scientific and technical** delegation led by S. Sulemezov attended 14th session of the Sino-Bulgarian Commission for Scientific and Technical Cooperation.

BURMA, 10/76, **Civil aviation** delegation led by U. Nyunt Thein, director of the department of civil aviation.

BURUNDI, 12/13/76, **Trade** delegation led by Desire Makuza, Secretary of the Burundi National Office of Commerce.

CAMBODIA, 9/3/76, **Government economic and trade** delegation led by Mey Prang, president of the Committee of Communications.

CANADA, 10/76, **Geophysics and geochemistry** study group led by James Kiely.

CHAD, 10/25/76, **Government** delegation led by Major Kamouque Wadal Abdelkader, Minister of Foreign Affairs.

DENMARK, 10/25/76, Twenty-four member **Trade** delegation of Danish Chambers of Commerce led by Knud Olesen, president of the Copenhagen Chamber of Commerce.

FRANCE, 10/76, **Trade** delegation of the National Council of French Patrons.

FRANCE, 10/13/76-11/13/76, **Study group** of **uranium mining and geology** led by Valery Ziegler, assistant to the representative of nuclear material of the Commission of Atomic Energy of France, studied uranium mine and geology institutions and toured Peking, Kiangsi Province, Shanghai and Hangchow. The group was invited to the PRC by the Atomic Energy Bureau under China's Academy of Sciences.

FRANCE, 10/76, Group of 12 **missile experts** discussed modernization of the Chinese army's delivery guidance.

FRANCE, 11/76, **Trade** delegation of French industrialists in the **aeronautical, automobile, construction, chemical, mechanical engineering and textile industries** led by Francois Ceyracn, President of France's leading employers' body.

FRANCE, 12/15/76, **Trade** delegation led by M. Larrera de Morel, director of External Economic Relations of the Ministry of Economy and Finance, attended the first session of the China-France Mixed Committee.

GREAT BRITAIN, 10/76, **National Coal Board** delegation led by N. Siddall, Deputy Chairman, toured coal

48-GROUP'S EXHIBITION IN PEKING

GREAT BRITAIN, 11/76, Orders worth approximately $2 million were won by 37 British companies in the course of and following the '48 Group' exhibition which closed November 20, 1976. Items sold include **copying machines, precision control equipment for machine tooling, sophisticated measuring gear, television lighting systems and television cameras.** During the exhibition, 29 technical seminars were conducted on the following subjects of Chinese choice:

- A dual gauge sprocketless drive flying spot color telecine.
- Metal halide light sources—a new lamp for television.
- Modern television transmitter design concepts.
- Design philosophy for a range of modern broadcast cameras.
- Developments in image sensors.
- The application and performance of two new detectors for liquid chromatography.
- Television automatic monitoring systems.
- A background correction system for single beam atomic absorption spectrophotometers.
- Development of operator interface techniques.
- A new instrument for high precision atomic absorption analysis.
- Characteristics and design philosophy of microwave sweep oscillator up to 120 GHz.
- Situation display—a daylight viewing automatic plotting radar.
- The provision of electronic equipment suitable for the marine environment.
- Improvements in spectrochemical instruments for the analysis of complex materials.
- Systems applications of computer control receivers.
- Logic systems architecture—2900 range architecture.
- AC/DC precision resistance standards and an instrument for their intercomparison and determination of temperature co-efficient.
- Design aspects of strain gauges for use transducers.
- Czechralski crystal growth of metals, oxides and compound semiconductors.
- The techniques and practice of the detection of flammable gases.
- The Wallace optical extensometer for elstomeric materials.
- Computer tomography with the EMI scanner in brain and body.
- Technical aspects of remote control for process automation.
- A micro-processor system for process control.
- Interconnection of multi-layer printed circuit boards.
- Cossor precision secondary radar.
- Application of data logging (i) in research and industry (ii) the 1911 computer-controlled frequency response analyser (iii) digital voltmeter techniques.
- The varotal M.R.L.—a new concept zoom lens for television.
- Automatic testing equipment for TV systems.

Source: *China Trade & Economic Newsletter*

mines, factories and research institutes in Peking, Shanghai, Kiangsu, Shansi, Shantung and Liaoning.

ITALY, 11/1/76, Delegation led by Ambassador Mario Mondello, Director of the Economic Department of the Foreign Ministry, attended the session of the Sino-Italian Amalgamated Committee.

JAPAN, 10/28/76-11/10/76, Team of PVC makers led by Tades Mera, Chief of the Export Division of Kureha Chemical Industry, negotiated on the export of PVC resin to the PRC.

JAPAN, 11/76, **Ammonium-sulphate sales** mission led by Jiro Hishiyama of Mitsui Toatsu discussed fertilizer exports to the PRC.

JAPAN, 12/76, **High polymer scholars'** led by Yoshio Iwakura.

MALAYSIA, 10/76, **Trade** delegation made up of 12 members and led by Primary Industries Minister Datuk Musa Hitam promoted increased export of Malaysian products, especially palm oil and timber.

MALAYSIA, 11/1/76, **Economic** mission led by Datuk Musa Hitam, Malaysian Minister of Primary Industries.

NORTH KOREA, 12/2-14/76, Three-member **railway delegation** led by Kim Jin Ho, Director of Bureau of Ministry of Railroads.

NORTH KOREA, 12/18/76, **Government trade** delegation led by Kim Sok-chin, Vice-minister of foreign trade.

PAKISTAN, 10/16/76, **National Bank of Pakistan** mission led by Managing Director A. Jamil Nishtar.

PHILIPPINES, 10/17/76, Delegation of the **Philippine National Oil Company.**

PHILIPPINES, 10/29/76, **Journalists** delegation led by Teodoro Berbano.

PHILIPPINES, 10/76, **Archaeology and anthropology** delegation led by Mrs. Socorro Paterno.

PLO, 12/26-31/76, **"Al-Fatah"** delegation led by Hamden 'Abd al-Quadir.

SINGAPORE, 12/76, **Trade and goodwill delegation** comprised forty members from four Chambers of Commerce and the Singapore Manufacturers' Association and led by Tan Keong Choon.

SWITZERLAND, 10/17/76, **Radio** delegation led by H. A. Laett, General Manager of the Swiss Radio Company.

SYRIA, 10/14/76, **Health** delegation led by Dr. Madni Elkhyiami, Minister of Health.

TANZANIA, 9/8/76, **Shipping** delegation led by J. Sepeku, managing-director of the Tanzanian side of the Chinese-Tanzanian Joint Shipping Co. attended 10th meeting of the board of directors of the company.

WEST GERMANY, 10/76, **Bankers** mission.

WEST GERMANY, 10/7/76, Delegation of the **General Association of German Retailers** led by its president, Fritz Conzen.

AGREEMENTS

BANGLADESH, 11/30/76, Two-year **trade and payments** agreement and an annual trade protocol. Bangladesh will export to the PRC commodities including jute, leather, rayon, paper, and newsprint; PRC exports will include coal, cement, billets, pig iron, dyes and chemicals, machinery, tools and light industrial products.

BULGARIA, 11/20/76, Protocol of the 14th session of the Sino-Bulgarian Commission for **Scientific and Technical** Cooperation.

CENTRAL AFRICAN REPUBLIC, 10/16/76, Trade agreement and **economic and technical** cooperation agreement.

CZECHOSLOVAKIA, 11/25/76. Protocol of the 18th session of the Sino-Czechoslovak Joint Commission for **Scientific and Technical** Co-operation.

HUNGARY, 10/76, Protocol on the 15th meeting of the Commission for **Scientific and Technical** Co-operation.

IRAQ, 11/7/76, Sino-Iraqi **Economic and Technical** Co-operation Agreement was signed and incorporated.

MALAYSIA, 11/76, **Trade** agreement in which the PRC agreed to accept prompt delivery of 30,000 cubic meters of **logs** and 5,000 tons of **rubber.** In addition, the PRC agreed to close its insurance business in Malaysia.

MONGOLIA, 10/11/76, **Trade protocol** for 1976.

PAKISTAN, 11/20/76, **Shipping** agreement by which the PRC will permit increased participation of the Pakistan Shipping Corporation's vessels in lifting Chinese cargo from Hong Kong and Chinese ports.

SRI LANKA, 12/15/76, **Trade** protocol for 1977. The first such agreement was signed in 1952. The latest is the last under the current (fifth) Five-Year Trade and Payments Agreement between the two countries. 完

PEOPLE'S BANK OF CHINA
OFFICIAL FOREIGN EXCHANGE QUOTATIONS
RATE IN RMB YUAN
November 30, 1976

BANKNOTES

Monetary Unit		Per		Buying Rate	Selling Rate
Australian	Dollar	A$	100	Y229.92	Y235.68
Austrian	Schilling	SCH	100	Y 18.61	Y 11.13
Belgian	Franc	BF	10,000	Y471.53	Y514.19
Canadian	Dollar	CAN$	100	Y187.14	Y193.31
Federal Republic of Germany	Mark	DM	100	Y 76.50	Y 78.91
French	Franc	FFr	100	Y 36.57	Y 38.25
Singapore	Dollar	S$	100	Y 75.55	Y 77.31
Malaysian	Ringgit	M$	100	Y 73.38	Y 74.93
Netherlands	Guilders	FL	100	Y 72.77	Y 75.54
Norwegian	Krone	NKR	100	Y 34.38	Y 36.23
Danish	Krone	DKR	100	Y 30.54	Y 32.38
Japanese	Ten	JY	10,000	Y627.18	Y645.76
Swedish	Krono	SKR	100	Y 43.46	Y 45.36
Swiss	Franc	SFR	100	Y 75.34	Y 78.29
U.K.	Pound	£	100	Y301.09	Y314.52
U.S.	Dollar	US$	100	Y185.11	Y190.21
Hongkong	Dollar	HK$	100	Y 38.64	Y 39.23

Source: People's Bank of China, Shanghai Branch

US ION IMPLANTATION DELEGATION VISITS CHINA

Eight of America's leading experts on ion implantation participated in a two-week technical tour of the PRC in late September and early October of last year. The group, led by Dr. Fred Chernow of the University of Colorado's Electrical Engineering department, visited several Chinese research facilities as well as three manufacturing plants. Although technical exchanges have become increasingly popular between Chinese and American scientists since 1972, this particular trip represents the first time both Chinese and American scholars presented talks in the course of the same exchange.

Ion implantation is a fairly recent technical advancement, first developed by AT&T's Bell Laboratories less than twenty years ago. Aside from defusion, it is the only major technique for placing impurities in crystals of silicon, a necessary step in the production of integrated circuits. As such, ion implantation is an essential phase of modern computer science.

Exchange Via Osaka

Since the entire development of ion implantation technology has occurred since the hiatus in Sino-American relations in 1949, the US scientific community knew little about Chinese work in this area until quite recently. At the August, 1974, Fourth International Ion Implantation Conference, held in Osaka, Japan, American participants, including Dr. Chernow, noticed that for the first time Chinese personnel had come to observe. Having sponsored a US-Japan Symposium on Ion Implantation in 1971, Dr. Chernow decided to pursue the possibility of a similar exchange between American and Chinese scientists concerned with ion implantation.

After issuing an invitation to the Chinese to travel to the United States for such a seminar, Dr. Chernow received a letter from the Chinese Electronics Society suggesting that a meeting in the PRC would provide a better opportunity for the Americans to interact with Chinese technicians. As a result of this correspondence in late 1974, Dr. Chernow turned to the National Science Foundation for support and proceeded to submit to the Chinese a list of American experts interested in participating. The Chinese responded with formal invitations to the recommended Americans.

The tenor of the entire exchange apparently reflected a willingness on China's part to accede to all of the Americans' requests. Not only was the complete list of participants accepted, but the Chinese allowed their guests to select their own topics for presentations rather than suggest certain areas of interest, as is usually the case.

In the course of the trip, which included trips to Peking Normal University, Hsinhwa University, and the Shanghai Institute of Metallurgy (something of a misnomer since the institute deals almost exclusively in semi-conductor technology), the group presented eight technical talks, including an address on uses of galium arsenide in ion implantation by Fred Eisen of Rockwell International; a talk on III-V compounds other than galium arsenide by Professor Chernow; a lecture on the theory behind ion implantation by Dr. David Brice of Sandia Laboratories; a discussion of profiles in ion implantation by Professor James F. Gibbons of Stanford Electronics Laboratories; a lecture on ion implantation in metals by Dr. Fred Vook also of Sandia Laboratories; a talk on backscatter technology by Professor Jane Meyer of Caltech; and finally, two discussions of devices associated with ion implantation, one by Dr. MacRae of Bell Laboratories and one by Billy Crowder of IBM's Yorktown Height's research division.

The Chinese scientists presented reciprocal talks on various aspects of ion implantation, centered around machines used for ion implantation and practice applications of the technique. The impression of the American was that although the Chinese were well-versed in the latest Western literature on the subject, their scientific methodology overemphasified practicality at the expense of pure theory. Because of this imbalance as well as China's late entry into the field, the country's research seemed some seven to ten years behind international standards.

Factory Production

Nevertheless, the Chinese are concerned with improving their level of scientific research. In fact, the American visit was only the second group of ion implantation experts to visit China, the first being a delegation from Japan. Moreover, the efforts that China has made in this area have not been wholly unrewarded. The Shanghai Factory Number 5, which the US delegation toured, was producing small scale integrated circuits, and the Shanghai Radio Factory Number 14 was manufacturing large scale integrated circuits, representing technologically advanced production. Elsewhere, a Peking plant produced somewhat lower-level hybrid circuits, and a Sian manufacturing plant was reportedly turning out ion implantation machines in a semi-serial fashion.

Within the research laboratories of China, however, the equipment was reportedly crude by western standards. In general, Chinese scientists are encouraged to assemble their own measuring and testing machines, down to vacuum pumps. In the course of their tours, the American saw no foreign equipment in China's scientific institutes, although they sensed a growing trend towards improved research conditions.

The scientific exchange was unique in that it provided one of the first opportunities for American and Chinese scientists to share their experiences and to observe each other's work. It was one of the first times the American specialists have been allowed to get down to business with their Chinese counterparts in the PRC's laboratories. Certainly this is in the mutually beneficial spirit of the Shanghai Communique. 完

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