

201164

JPRS-CPI-84-004

14 June 1984

China Report

PLANT AND INSTALLATION DATA

19980306 084

DISTRIBUTION STATEMENT A

Approved for public release;
Distribution Unlimited

DTIC QUALITY INSPECTED 4

FBIS

FOREIGN BROADCAST INFORMATION SERVICE

REPRODUCED BY
NATIONAL TECHNICAL
INFORMATION SERVICE
U.S. DEPARTMENT OF COMMERCE
SPRINGFIELD, VA. 22161

6
39
A03

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

14 June 1984

CHINA REPORT
PLANT AND INSTALLATION DATA

CONTENTS

I. Metallurgical Industry.....	1
II. Transportation Equipment Industry.....	2
III. Electronic and Precision Equipment Industries.....	3
IV. Chemical Industry.....	7
V. Fuel and Power Industries.....	11
VI. Machine-Building Industry.....	13
VII. Agricultural Machinery Industry.....	20
VIII. Miscellaneous Industries.....	21
IX. Photographs of Industrial Facilities.....	31

I. METALLURGICAL INDUSTRY

Item: Sanming Iron and Steel Mill
[0005 2494 6921 6993 0617]

Location: Fujian, PRC

Data: In early January this year, this mill began using the microcomputer control equipment installed in the weighing and measuring system on its No 1 Blast Furnace, making this mill the first in Fujian Province to employ computers in steel production. The electronic computer installed in the weighing and measuring system of the No 1 Blast Furnace was jointly developed by the Automation Institute and the Electronic Computer Science Department of Fujian University and this mill.

Source: Fuzhou FUJIAN RIBAO in Chinese 8 Feb 84 p 1

II. TRANSPORTATION EQUIPMENT INDUSTRY

Item: Guangzhou Shipyard
[1639 1558 5307 0617]

Location: Guangzhou, Guangdong, PRC

Data: An eighteen-thousand-ton ocean-going bulk freighter, the largest of its kind built in South China, was launched here 5 March 1984. Built for a Hong Kong firm, this vessel measures 158.5 meters in length and 22 meters in width. It is equipped with satellite guided navigation equipment. According to a deputy chief engineer of this shipyard, two more ships of the same class will be built here this year and 1985. By 1986, construction of six 15,000-ton ocean-going cargo ships will be completed. The annual production capacity of this shipyard has grown 150 percent since 1979.

Source: Guangzhou YANGCHENG WANBAO in Chinese 5 Mar 84 p 1

III. ELECTRONIC AND PRECISION EQUIPMENT INDUSTRIES

Item: State-owned Plant No 282
[0948 3602 0059 0360 0059 0617]

Location: PRC

Data: This state-owned factory is an ordnance enterprise making multiple varieties of products. In recent years, it has been placing emphasis on metrology work and strengthening its enterprise management and realizing economic benefits as a result. In 1982, its economic indexes had reached an unprecedented level. Its energy consumption per 10,000 yuan in output value for the January-November 1983 period was 19,700 tons, a drop of 8.9 percent from 1982; the output value in terms of the total number of workers was 13,000 yuan, a 2.7-percent increase over 1982. It has received a commendation from the State Economic Commission for its outstanding performance. The leadership of this plant attributed its success to the emphasis placed on metrology work. In recent years, the enterprise has imported three coordinate measuring units from Italy, an atomic absorption spectrophotometer from Australia, and a large-sized metalloscope from Democratic Germany to raise the level of its metrology work.

Source: Beijing JILIANG GONGZUO [METROLOGY WORK] in Chinese No 1, 1984 p 21

Item: Shaanxi Metrological Testing Institute
[7104 6007 6060 6852 3261 6107 4282 4496 2076]

Location: Xi'an, Shaanxi, PRC

Data: In collaboration with the Hubei Metrological Testing Institute, this institute has developed China's first standard compression-type high vacuum facility, which has recently passed a state evaluation test. Vacuum technology finds wide applications in the fields of electronic engineering, nuclear energy, space research, and medicine, and in the food industry. Establishing compression-type high vacuum measuring and metering standards constitutes an important topic of Chinese and foreign scientists engaged in vacuum technology research. Researchers in Shaanxi and Hubei successfully overcame a series of technical obstacles prior to their development of this piece of equipment. In the opinion of more than 50 experts and professors from all parts of the country, who were present at the assessment meeting, this high vacuum measuring facility's primary technical indexes are superior to those of the international advanced level.

Source: Xi'an SHAANXI RIBAO in Chinese 28 Apr 84 p 3

Item: Qianfeng Radio Instruments Plant
[0467 6912 2477 4848 7193 0308 0892 0617]

Location: Chengdu, Sichuan, PRC

Data: The largest plant in the country specialized in the development and manufacture of serialized radio measuring instruments, this state-owned plant makes standard signal generator, modulation measuring instrument, frequency response analyzer, testing receiver, voltage meter, standard attenuator, network analyzer, and other radio measuring instruments. Its branch plants also manufacture JX-2 high frequency signal generator, XSY-1 television receiving signal generator, and WY30D-1 DC voltage regulation source (double output, 30V, 2 A), and other new products.

Source: Beijing DIANXIN JISHU [TELECOMMUNICATION TECHNOLOGY] in Chinese No 2, 1984, frontcover and inside frontcover

Item: Shashi Quartz Glass Plant
[3097 1579 4258 5391 3788 3863 0617]

Location: Shashi, Hubei, PRC

Data: This plant, employing 400 employees and workers, has developed and produced a batch of high-grade quartz fiber and quartz products in the first two months of 1984, some of which were shown at the National New Military Materials Exhibition held in Beijing in early March this year. Personnel here have also developed and produced a special type of light bulbs for reprinting. They are now in the process of developing sheath tubes for optical fibers--a basic material for optical fiber communications.

Source: Wuhan HUBEI RIBAO in Chinese 5 Apr 84 p 1

Item: Huazhong Institute of Engineering
[5478 0022 1562 1331 7108]

Location: Wuhan, Hubei, PRC

Data: This institute has successfully developed a 5,000-kilowatt continuous carbon dioxide laser that has the greatest output power in the country at the present time. Personnel here have also developed a 2,000-kilowatt continuous carbon dioxide laser industrial prototype which has passed the evaluation test at the same time. Designated as key state projects, these two lasers can be applied in the area of material processing--heat treatment, cutting, and welding. In the past 12 years, this institute has scored more than 10 achievements in research and development and has become a major base for the development of laser technology in China.

Source: Wuhan HUBEI RIBAO in Chinese 5 Apr 84 p 1

Item: Shanghai Radio Plant No 9
[0006 3189 2477 4848 7189 0046 0617]

Location: Shanghai, PRC

Data: China's first color television switch production line went into operation at this plant on 25 April. The line is capable of producing 1 million switches annually. Fifteen pieces of key equipment were imported from the Alps Electric Co. Ltd. of Japan while auxiliary equipment was made in China.

Source: Beijing XINHUA in English 1322 GMT 25 Apr 84 OW

Item: Shanghai Television Tube Glass Bulb Plant
[0006 3189 7193 6018 4619 3788 3788 3863 0617]

Location: Shanghai, PRC

Data: This plant, China's biggest television tube glass bulb plant, went into operation on 28 March. The plant will manufacture four million bulbs for 12-inch black-and-white television tubes annually with a production line imported from the Corning Glass Company of the United States. It will also produce bulbs for nine-inch to 26-inch black-and-white tubes. Its major raw materials will be supplied by China.

Source: Beijing XINHUA in English 1316 GMT 28 Mar 84 OW]

Item: Shanghai Cable Plant
[0006 3189 7193 4968 0617]

Location: Shanghai, PRC

Data: A 10,800-circuit medium coaxial consolidated communications cable, the first to be used in China's long-distance communications, was recently trial-produced and passed technical inspection at this factory. Compared with the similar cable of 1,800 circuits, the new cable provides 6 times more telephone communications routes. The cable will be put into operation on a newly-built communications line in the southwestern part of the country.

Source: Shanghai City Service in Mandarin 1100 GMT 9 Apr 84 OW]

IV. CHEMICAL INDUSTRY

Item: Tianguang Electrical Engineering Plant
[1131 0342 7193 1562 0617]

Location: Qin'an, Gansu, PRC

Data: The only factory in the country making ECL super high speed circuits, this state-owned plant has successively developed two major series of circuits--LSTTL and STTL circuits. The power consumption of LSTTL circuit is only one-fifth of the standard TTL, but its speed is twice as fast. In the past 3 years, this plant has developed 109 varieties and it is possible to develop 130 varieties in 1984. In 1983, on the basis of Schottky technology, it trial produced STTL very high speed circuits. As of now, it can supply 32 product varieties and 50 varieties by the end of this year, with the parametric indices fully reaching the level of similar products made abroad. The plant is currently developing large-scale integrated circuit series for 2900 four bit slice type micro-processors. It has successfully developed 2901 central processing unit which fully meets the indices of similar products made by the AMD Company of the United States and the Chinese-made version is expected to be ready in 1984.

Source: Beijing DIANZI JISHU YINGYONG [APPLICATION OF ELECTRONIC TECHNIQUE] in Chinese No 3, 1984 p 48

Item: Tianjin Radio Plant No 1
[1131 3160 5617 4848 7193 0001 0617]

Location: Tianjin, PRC

Data: Formerly known as the Hongguang Radio Plant, this enterprise has signed an agreement with the British DATRON Electronic Instruments Corporation for importing auto-calibrating digital universal meter technology and production line. The two enterprises will jointly develop and produce models 1081, 1071, 1061, and 1065 auto-calibrating digital universal meters and models 1000A, and 4000 auto-calibrating programmable multi-function instruments and other new digital meter products. The agreement also stipulates that this plant is responsible for repairs and gives a 2-year guarantee on its products.

Source: Beijing DIANZI SHIJIE [ELECTRONICS WORLD] in Chinese No 3, 1984 p 17

Item: Quanzhou Radio Plant No 3
[3123 1558 2477 4848 7193 0005 0617]

Location: Quanzhou, Fujian, PRC

Data: A new product, HD-317C infrared electronic automotive igniter, passed an evaluation test here on 11 February 1984. In May 1982, this plant imported a new automobile igniter, a new product of the eighties. Tests showed that it was unsuitable for Chinese-made motor vehicles. Subsequently, the Beijing Electronics Bureau under the Ministry of Space Industry, the Controls Bureau, and this plant jointly conducted research to improve the product to increase its reliability by employing some of the parts manufactured in China. The new product was installed on a trial basis on five medium models, including the Liberation brand truck and Shanghai brand small sedan, with remarkable results. This type of igniter operates by means of photoelectricity instead of the traditional platinum igniter and is simple in structure and easy to install. Its fuel economy performance is excellent, generally over 5 percent. The Quanzhou Branch of the Bank of China will provide the capital to mass produce the new product by this plant.

Source: Fuzhou FUJIAN RIBAO in Chinese 13 Feb 84 p 1

Item: Shanghai Communications Equipment Plant
[0006 3189 6639 0207 6080 0271 0617]

Location: Shanghai, PRC

Data: Formerly known as Plant No 519, this plant is subordinate to the Ministry of Post and Telecommunications. Its products include level oscillator, passive level meter, city telephone subscribers circuit carrier, PCM digital communications equipment, and teletypewriter.

Source: Shanghai XIANDAI TONGXIN [COMMUNICATIONS TODAY] in Chinese No 3, 1984 front and back covers

Item: Qilu Ethylene Project
[7871 7627 0044 7910 1562 4453]

Location: Zibo City, Shandong, PRC

Data: [1] Construction of this large petrochemical project began 1 April 1984. The first phase of this project is expected to be completed in 1986. When the whole project is finished by 1988, this petrochemical base will produce annually 500,000 tons of plastics, 80,000 tons of synthetic rubber, 200,000 tons of caustic soda, and 390,000 tons of other organic chemical raw materials. The total investment cost of this project is 4.65 billion yuan. The project has 16 sets of technical production facilities, including 10 sets of imported primary installations.

[2] Construction of this large ethylene plant with an investment of 4.65 billion yuan began on 1 April in the city of Zibo, Shandong Province. The plant, a major state project, is being built as part of the Shandong Qilu Petrochemical Corporation now in operation. Ten of the 16 sets of production equipment were imported from Japan, Britain and the Federal Republic of Germany. Using crude from the nearby Shengli Oilfield, China's second largest, as raw materials, the entire project is scheduled to be completed in 1988. It is designed to turn out annually 500,000 tons of plastics, 80,000 tons of synthetic rubber, 200,000 tons of caustic soda and 390,000 tons of other organic chemicals.

Source: Beijing [1] RENMIN RIBAO in Chinese 2 Apr 84 p 1
[2] XINHUA in English 1234 GMT 2 Apr 84 OW

Item: Hebei Provincial Petrochemical Department
[3109 0554 4164 4258 0553 1689]

Location: Shijiazhuang, Hebei, PRC

Data: The party organization of this department has set three goals for Hebei's petrochemical industry in 1984:

- 1) Small-scale chemical industry enterprises in Hebei will strive to realize an annual profit exceeding 100 million yuan by overcoming the shortages of raw material coal and sulfur phosphorus compound.
- 2) Increasing the output of agricultural insecticides, including acephatemet, antu, and warfarin.
- 3) The whole system will strive to reach the goal of having no deficits. At the end of 1983, 30 enterprises included in the budget of Hebei's petrochemical industry system had incurred losses totaling 5 million yuan.

Source: Shijiazhuang HEBEI RIBAO in Chinese 8 Mar 84 p 1

Item: China Petrochemical General Corporation
[0022 0948 4258 3111 4920 0361 0674]

Location: Beijing, PRC

Data: The following enterprises are subordinate to this corporation:
Yanshan Petrochemical General Corporation
Tianjin Petrochemical Corporation
Tianjin Petrochemical Fiber General Plant
Shanghai Petrochemical Complex
Shanghai Gaoqiao Petrochemical Corporation
Ethylene Engineering and Construction Headquarters of the Nanjing
Petrochemical Corporation
Jingling Petrochemical Corporation
Fushun General Petrochemical Industry Corporation
Jinzhou Petrochemical Industry Corporation
Qilu Petrochemical General Corporation
Lanzhou Chemical Industry Corporation
Maoming Petroleum Industry Corporation
Daqing Petrochemical Plant
Anqing Petrochemical Plant
Guangzhou Petrochemical Plant
Liaoyang Petrochemical Fiber Corporation
Sichuan Vinylon Plant

Source: Lanzhou HECHENG XIANGJIAO GONGYE [SYNTHETIC RUBBER INDUSTRY] in Chinese
No 2, 1984, inside frontcover

[Continued on Card 2]

[Continued from Card 1]

Item: China Petrochemical General Corporation
[0022 0948 4258 3111 4920 0361 0674]

Location: Beijing, PRC

Data: Dalian Petro-refinery No 7
Refinery of the Anshan Iron and Steel Corporation
Linyuan Refinery
Harbin Refinery
Lanzhou Petroleum Refinery
Dushanzi Refinery
Urumqi Petrochemical Plant
Cangzhou Petrochemical Plant
Jinan Petrochemical Plant
Changling Oil Refinery
Zhejiang Refinery
Jingmen Refinery
Wuhan Petrochemical Plant
Jiujiang Refinery
Shijiazhuang Refinery
Jiyuan Refinery
Yueyang General Chemical Plant
Dongting Fertilizer Plant
Zhejiang Fertilizer Plant
Ningxia Fertilizer Plant
Qianguo Refinery

Source: Lanzhou HECHENG XIANGJIAO GONGYE [SYNTHETIC RUBBER INDUSTRY] in Chinese
No 2, 1984, inside frontcover

V. FUEL AND POWER INDUSTRIES

Item: Jixi Mining Bureau
[7741 6007 4349 0523 1444]

Location: Jixi, Heilongjiang, PRC

Data: A 60-year-old mining zone, this bureau operates 12 mines, 62 production administration areas, and 78 work faces, and employs 90,000 employees and workers. Eighty-seven percent of its extracting and 67.5 percent of its tunneling operations are mechanized. Its raw coal output capacity has increased year by year as a result of tapping the hidden potentials of older mines and carrying out technical reforms. Its 1982 coal output registered 12.76 million tons and its 1983 output reached 13.14 million tons.

Source: Beijing WUZI GUANLI [MATERIALS MANAGEMENT] in Chinese No 2, 1984 p 17

Item: Tongchuan Mining Bureau
[6894 1557 4349 0523 1444]

Location: Tongchuan, Shaanxi, PRC

Data: During the first 2 months of 1984, 13 mine shafts operated by this bureau extracted 123,000 tons of raw coal.

Source: Xi'an SHAANXI RIBAO in Chinese 6 Mar 84 p 1

Item: Heilongjiang Province Coal Industry Corporation
[7815 7893 3068 4164 3561 3516 1562 2814 0361 0674]

Location: Harbin, Heilongjiang, PRC

Data: Local collieries throughout Heilongjiang Province were assigned a raw coal production quota of 12.2 million tons this year, showing an increase of 37 percent over 1983. (Dong Deshu), deputy director of this corporation said today at the provincial local colliery work conference: In order to ensure the fulfillment of this year's production plan, the province will continue the construction of 24 pairs of coal pits and newly build 2 pairs of pits. Ten pairs of coal pits will be completed and put into operation by the end of this year to increase the province's coal production capacity by 1.17 million tons.

Source: Harbin Heilongjiang Provincial Service in Mandarin 1000 GMT 10 Mar 84 SK

VI. MACHINE-BUILDING INDUSTRY

Item: Jialing Machinery Plant
[0857 7117 2623 0892 0617]

Location: Chongqing, Sichuan, PRC

Data: Formerly a manufacturer of industrial steel balls and hunting rifle bullets, this state-owned plant joined seven other plants, including the Huawei Electronic Equipment Plant, Puling Machinery Plant, Hongshan Foundry, Changjiang Rubber Plant, Chongqing Motion Picture Machinery Plant, Nanchuan Machinery Plant, and the Chongqing Gong-Nong Spring Plant, in organizing an economic union. Using imported advanced Japanese technologies and through joint efforts, this plant produced CJ50 and JH70 motorcycles. During the 1981-83 period, its output value of motorcycles had reached 130 million yuan, accounting for 50 percent of the plant's gross industrial output value. It also turned over to the state 10 million yuan in taxes and profits. The success of this state-owned plant is indications of the "new situation in the cooperation between the military and civilian," the source points out.

Source: Chengdu SICHUAN RIBAO in Chinese 20 Mar 84 p 2

Item: Jialing Machinery Plant
[0857 7117 2623 2750 0617]

Location: Chongqing, Sichuan, PRC

Data: This plant, a national defense factory, has set an example in working with other factories to turn out products needed by consumers, today's PEOPLE'S DAILY reports. The paper highly commends the experience of this plant which incorporated eight local factories to form an integrated complex to produce "Jialing" brand scooters. It also works in cooperation with more than 100 other smaller factories in the locality and other parts of the country. The very year it was set up in 1980, it produced 2,500 scooters. The output went up to 100,000 units last year. Now the complex has an annual production capacity of 150,000 scooters, and is the largest scooter producer in China. The complex spent an investment of 6.3 million yuan on scooter production equipment, one-tenth as much as if a new scooter factory with the same production capacity were built. Four years ago, the plant operated at a loss. Products for civilian use now accounts for 68.9 percent of its total output value, and it has reported sizable profits. The integrated complex also cooperated with a Japanese firm in improving the manufacturing technology. The scooters are now up to advanced world standards.

Source: Beijing XINHUA in English 1158 GMT 26 Mar 84

Item: Nei Monggol Machine-Building Plant No 1
[0355 5536 0657 2623 2750 0455 6644 0001 0617]

Location: Nei Monggol AR, PRC

Data: This plant, an outstanding enterprise in maintaining quality control under the Ministry of Ordnance Industry, has been accepted by the China Quality Control Society as a direct organization member. This machine-building plant won a silver medal from the state for insuring the quality of model 692 tank in 1983.

Source: Beijing ZHILIANG GUANLI [QUALITY CONTROL] in Chinese No 4, 1984 p 9

Item: Shanghai Machine Tool Plant No 4
[0006 3189 4574 0934 2623 1643 0617]

Location: Shanghai, PRC

Data: In 1984, the output value of NC machine tools turned out by this plant is expected to reach 57 percent of the plant's gross output value and profits realized from the sale of these products are expected to reach 70 percent of the gross profits. This plant started to develop and manufacture NC machine tools in the sixties, but owing to poor product quality, the machine tools failed to perform efficiently, causing the stockpiling of seven NC machine tools and numerous other products. In recent years, by employing imported technologies and improving the product quality, this enterprise has begun receiving more orders and expanding its production last year. Actually it manufactured 33 fewer machine tools last year, but on the basis of market demand, the workers here built eight NC machine tools and the output value rose 21.9 percent and profit, 54 percent. At the same time, the plant has expanded its services to the customers, processing thousands of spareparts for some 50 enterprises in different trades.

Source: Shanghai JIEFANG RIBAO in Chinese 9 Apr 84 p 2

Item: Tangshan Metallurgical and Mining Machinery Plant
[0781 1472 0396 6855 4349 1472 2623 2750 0617]

Location: Tangshan, Hebei, PRC

Data: A leading manufacturer of belt conveyors, this factory produces Model DX high strength rubber belt conveyors, some of which are currently in operation in the gravel yard of the Gezhouba building site and at a wharf in Qinhuangdao Harbor.

Source: Hong Kong ZHONGGUO JIXIE [CHINA MACHINERY] in Chinese and English
Mar 84 backcover

Item: Handan Agricultural Chemicals Machinery Plant
[6725 6779 6593 2814 5522 2750 0617]

Location: Handan, Hebei, PRC

Data: This plant's main products include Model 3WS-7 compression sprayers, Model 3W2000 large traction sprayers, Model 3WB-16 shouldermounted sprayers, Model DMB4200 4 cylinder piston diaphragm pumps, Model 3WH40 3 cylinder piston pumps, and Model 40 mobile carrier sprayers. The factory is equipped with complete machine tools and technical knowhow.

Source: Hong Kong ZHONGGUO JIXIE [CHINA MACHINERY] in Chinese and English
Mar 84 p 66

Item: Tianjin Motive Power Machinery Plant
[1131 3160 0520 0500 2623 0617]

Location: Tianjin, PRC

Data: A meeting to assess the 8V130 diesel engine was held in Xiangfan City, Hubei, from 21 to 25 June 1983. The meeting was attended by nearly 70 representatives from 30 units, including government organs, colleges, research institutes, and fraternal factories. It was presided by the headquarters of the PLA Railway Corps. The 8V130 diesel engine was originally designed by this plant. In 1976, Xiangfan Plant No 6618 under the PLA Railway Corps obtained the blueprints from this plant and continued to develop the engine. In 1981 the PLA plant began cooperating with the Tianjin Internal Combustion Engine Institute and conducted intensive testings of the engine. Participants at the meeting were of the opinion that the 8V130 diesel engine is rational in design, structurally advanced, and high in fuel economy. The evaluation committee held that the development of the 8V130 diesel engine is successful and can be placed into limited production.

Source: Tianjin XIAOXING NEIRANJI [SMALL-SIZE INTERNAL COMBUSTION ENGINE] in Chinese No 1, 1984, inside backcover

Item: Wuhan Heavy Machine Tool Plant
[2976 3352 6850 0992 2623 1643 0617]

Location: Wuhan, Hebei, PRC

Data: China's first CK5240A numerical control vertical lathe designed and built by this plant officially passed the technical evaluation test conducted here on 31 March 1984. The successful manufacture of this machine tool demonstrates that China's heavy machine tool industry has taken another step in the direction of turning out more numerically controlled machinery. This machine tool, which is capable of processing a large work piece measuring 4 meters in diameter, 2.5 meters in height, and 50 tons in weight, finds extensive use in the energy, transportation, metallurgical, and mining industries.

Source: Wuhan HUBEI RIBAO in Chinese 2 Apr 84 p 1

Item: Shanghai City Machinery Manufacturing Technology Institute
[0006 3189 1579 2623 2750 0455 6644 1562 5669 4282 4496 2076]

Location: Shanghai, PRC

Data: Since it adopted the practice of assuming profits and losses in 1979, this institute has been more than self-supporting. A local scientific research organization subordinate to the Shanghai City Electromachinery Bureau No 1, this institute is primarily engaged in the research of forging, casting, and heat treatment technologies and in equipment applications research. It currently employs 840 people, 260 of whom are scientific researchers. In the past 5 years, it has not only become self-sufficient, but realized a profit of 6.5 million yuan. It attributed its success to the adoption of a responsibility system and to sound economic accounting.

Source: Beijing RENMIN RIBAO in Chinese 27 Mar 84 p 3

Item: Shenyang Machine Tool Plant No 3
[3088 7122 4574 0005 2623 1643 0617]

Location: Shenyang, Liaoning, PRC

Data: One of the key machine tool building enterprises in the country, this plant began manufacturing machine tools in 1949. Since then it has produced 103 kinds of general-purpose and 210 kinds of specialty machine tools. Its current products include horizontal multi-spindle automatic and semi-automatic lathe, conventional, vertical or semi-automatic turret lathe, NC lathe, engine lathe, end milling and center drilling machine, combined machines and transfer lines composed of above-cited machines. Four thousand nine hundred employees and workers are employed here. During the 1957-1982 period, 27 types of machine tools manufactured by this plant had been exported to 52 countries and regions.

Source: Beijing JICHUANG [MACHINE TOOL] in Chinese No 2, 1984 p 47

Item: Shanghai Internal Combustion Engine Institute
[0006 3189 0355 3595 2923 4282 4496 2076]

Location: Shanghai, PRC

Data: This institute called a work conference of the diesel engine trade under the agricultural machinery system from 22 to 26 September 1983. At the meeting which took place in Yichang, Hubei, and was attended by 134 representatives from 97 units, including diesel engine manufacturing plants, colleges, research institutes, the Agricultural Machinery Bureau, and Hubei's Machinery Department, this institute presented a report on the implementation plans of the Internal Combustion Engine Development Center and its research programs for the next 2 years. Three technical documents concerning examination and evaluation of diesel engine quality were discussed at the meeting. The diesel engine section of the internal combustion engine trade has been divided into four large groups: small-size one-cylinder, 95 series, high-speed, and medium-speed groups. Initial plans for the next 2 years have also been formulated at the meeting.

Source: Shanghai NEIRANJI GONGCHENG [CHINESE INTERNAL COMBUSTION ENGINE ENGINEERING] in Chinese No 1, 1984, inside backcover

Item: Jinan Machine Tool Plant No 1
[3444 0589 2623 1643 0001 0617]

Location: Jinan, Shandong, PRC

Data: A major factory producing engine lathes and high-precision lathes, this 40-year-old plant is equipped with 800 sets of main equipment and more than 550 sets of metal-cutting tools. It covers a building area of 170,000 square meters and employs 4,000 people, 240 of whom are technicians and engineers. So far, it has turned out 130,000 sets of machines. Its current principal products include engine lathe, high precision lathe, threading lathe, precision leadscrew cutting lathe, taper threading lathe, spline hobbing machine, modular machine tool, and transfer machine in 6 main series and over 40 specifications and varieties.

Source: Beijing JICHUANG [MACHINE TOOL] in Chinese No 1, 1984 p 47

Item: Qianshao Machinery Plant
[0467 0763 2623 2750 0617]

Location: Qingdao City, Shandong, PRC

Data: This plant is described as subordinate to the Ministry of Aviation Industry. It advertises for sale measuring tools made of fine-grained gabbro-aplite.

Source: Beijing JICHUANG [MACHINE TOOL] in Chinese No 12, 1983, inside backcover

VII. AGRICULTURAL MACHINERY INDUSTRY

Item: Shunde Agricultural Machinery Plant
[7311 1795 6593 2623 0617]

Location: Shunde County, Guangdong, PRC

Data: Formerly a small-scale enterprise manufacturing water pumps, rice mills, and oil presses, this plant began trial producing 10-horsepower diesel engines in 1973 and in 1974, its annual output was 1,200 diesel engines. Since 1975, the state has invested a total of 765,000 yuan on this enterprise to improve its operations. In addition, the plant raised on its own 1,384,700 yuan to carry out technical reforms. By 1982, its annual output capacity had reached 35,000 diesel engines. In the past 3 years, the plant has realized a profit of 5,157,000 yuan, equivalent to the total investment cost of this plant project, the Deli brand 190-12 diesel engine manufactured by this plant is in great demand at home and abroad. The plant is currently equipped with 538 pieces of equipment, 420 of which were refitted, designed, and built by the plant itself.

Source: Shanghai JIXIE ZHIZAO [MACHINERY] in Chinese No 2, 1984 p 28

Item: Shijiazhuang Tractor Plant
[4258 1367 8369 2151 2139 2623 0617]

Location: Shijiazhuang, Hebei, PRC

Data: This plant is producing six models of Hebei-55 and Hebei 12 tractors. Model Hebei-55J is equipped with safety sealing cab, air conditioner and air-brake.

Source: Hong Kong ZHONGGUO JIXIE [CHINA MACHINERY] in Chinese and English
Mar 84 p 65

VIII. MISCELLANEOUS INDUSTRIES

Item: Huaxin Cement Plant
[5478 2450 3055 3136 0617]

Location: PRC

Data: When it was put into operation in February 1949, this plant had an annual cement output capacity of 23,000 tons and a gross output value of 985,000 yuan. After 30 years of development, the plant now has three rotary kilns, each measuring 3.5 meters in diameter and 145 meters in length and an asbesto cement workshop. Its 1983 planned output was 910,000 tons, but the actual output was 963,000 tons; its planned output value was 63.2 million yuan, while its actual output value reached 65.1 million yuan; its planned annual profit was 20 million yuan, while its actual profits had reached 20.22 million yuan. In recent years, this enterprise has supplied 19 million tons of cement for the "construction of the national economy."

Source: Beijing ZHONGGUO JIANCAI [CHINA BUILDING MATERIALS] in Chinese No 2, 1984 pp 30-31

Item: Xinchuan Cement Plant
[2450 1557 3055 3136 0617]

Location: Tongchuan, Shaanxi, PRC

Data: A meeting was recently held in Tongchuan City to hear a 1983 progress report on this plant's 300,000-ton rotary kiln expansion project and a proposed construction plan for 1984. In accordance with the general design, construction work on the main project is scheduled for completion in 1984 and the primary machinery and equipment will be installed the same year. The entire project will be completed and placed into operation in 1985.

Source: Beijing ZHONGGUO JIANCAI [CHINA BUILDING MATERIALS] in Chinese No 2, 1984 p 13

Item: Datong Cement Plant
[1129 0681 3055 3136 0617]

Location: Datong, Shanxi, PRC

Data: As a result of a major overhaul, the No 4 kiln of this plant has increased its operating rate from 65.88 percent to 91.38 percent, its output per unit from 15.95 tons to 16.46 tons, and its monthly clinker output from 9,355 tons to 11,191 tons. Thanks to the increased clinker output of the No 4 kiln, this plant was able to fulfill its 1983 output quota 11 days ahead of schedule, producing 702,400 tons of cement.

Source: Beijing ZHONGGUO JIANCAI [CHINA BUILDING MATERIALS] in Chinese No 2, 1984 p 41

Item: Jiangshan Cement Plant
[3068 1472 3055 3136 0617]

Location: Jiangshan County, Zhejiang, PRC

Data: This plant's 1982 cement output was 357,000 tons, 13.7 percent greater than 1981. Its profits in 1982 was 5,714,100 yuan, an increase of 37.56 percent over 1981. By the end of October 1983, it had produced 392,600 tons of cement, fulfilling the 1982 production quota of 380,000 tons 72 days ahead of schedule and realizing a profit of 6,690,000 yuan. One thousand five hundred sixty-seven employees and workers are employed here. The plant attributes its success to emphasizing strict labor discipline and proper training of young workers who comprise about 70 percent of the work force at this plant.

Source: Beijing ZHONGGUO JIANCAI [CHINA BUILDING MATERIALS] in Chinese No 2, 1984 pp 36-37.

Item: Xiangxiang Cement Plant
[3276 6763 3055 3136 0617]

Location: Xiangxiang County, Hunan Province, PRC

Data: In 1983, this plant produced 960,525 tons of cement and realized a profit of 23.1 million yuan, averaging 10,022 yuan per worker. It turned over to the state 27,216,500 yuan, including 21.3 million yuan in profits and 5,916,500 yuan in taxes. The increase in profits delivered to the state accounts for 89 percent of the increase in output value.

[There are 103 cement plants "owned by the whole people" at the county level in Hunan Province, producing a total of 4,080,800 tons of cement. Based on current price level, their gross output value is 269 million yuan and they turn over to the state 58.21 million yuan in profits and taxes.]

Source: Beijing ZHONGGUO JIANCAI [CHINA BUILDING MATERIALS] in Chinese No 2, 1984 pp 32, 64

Item: Dukou Cement Plant
[3256 0656 3055 3136 0617]

Location: Dukou, Sichuan, PRC

Data: As a result of readjustment of the enterprise, this plant registered an increase in cement output of 280,748 tons for 1983, an 11.04-percent rise over 1982. Its 1983 gross output value showed an increase of 17,499,800 yuan, an 11.64-percent increase over 1982. Its profits for 1983 reached 4.72 million yuan. Its Panzhihua brand ordinary cement 525 has been appraised as top-quality product by Sichuan Province.

Source: Beijing ZHONGGUO JIANCAI [CHINA BUILDING MATERIALS] in Chinese No 2, 1984 p 64

Item: Jiahua Cement Plant
[0857 5478 3055 3136 0617]

Location: Leshan, Sichuan, PRC

Data: In the past 3 days, this plant has been increasing its output of specialty cement in support of the state key construction projects. Its 1983 specialty cement output reached 30,500 tons, accounting for 72 percent of the plant's total output. It is the sole manufacturer of 120° oil well cement, sulfate-resistant cement, and G-grade high-water-resistance cement in the country. This plant is currently turning out 18 kinds of specialty cement, supplying petroleum units, including Chuandong, Zhongyuan, Bohai, and Daqing, with its special products.

Source: Chengdu SICHUAN RIBAO in Chinese 1 Jan 84 p 2

Item: Gulangyu Capacitor Plant
[7849 3186 1546 7193 1369 0892 0617]

Location: Xiamen, Fujian, PRC

Data: Since importing an aluminum electrolytic capacitor production line, this plant, which has incurred losses amounting to 200,000 yuan prior to September 1983, has been realizing profits and has paid back several hundred thousand yuan it owed the bank. From September 1983 to the last 10 days of January this year, this plant has turned out more than 6 million electrolytic capacitors and has reduced its production cycle from 2 weeks to 8 days. Because of the quality of its products, the enterprise has received orders for 10 million capacitors. Its products are sold to Beijing, Tianjin, Shanghai, Sichuan, and Hong Kong.

Source: Xiamen FUJIAN RIBAO in Chinese 10 Mar 84 p 1

Item: Beijing Polypropylene Film Plant
[0554 0079 5112 0014 7910 5631 5229 0617]

Location: Beijing, PRC

Data: This plant went into operation here on 27 April. The plant was designed to produce annually 5,000 tons of monolayer film, three-layer sealable film and seven-layer barrier film for the foodstuff industry. The equipment was imported from the Federal Republic of Germany through Arde Flexipackaging Ltd. of Hong Kong. The project is part of a 10-year program under which Beijing Municipal Government plans to update its foodstuff industry to meet the growing needs of the people.

Source: Beijing XINHUA in English 1106 GMT 27 Apr 84 OW

Item: Shenyang Plastics Plant No 19
[3088 7122 1043 2436 0577 0046 0617]

Location: Shenyang, Liaoning, PRC

Data: Two imported automated production lines for making plastic pipes, doors and doorframes went into operation at this plant on 19 March. One line, capable of producing 2,400 tons of big caliber plastic pipes annually, was imported from the Cincinnati Company in the United States. Another line, designed to manufacture 20,000 plastic doors and doorframes a year, was imported from the Milacron Company in Austria.

Source: Beijing XINHUA in English 1435 GMT 21 Mar 84 OW

Item: Haikou Tire Plant
[3189 0656 6544 5158 0617]

Location: Haikou, Hainan Island, Guangdong, PRC

Data: This plant has recently completed the installation of two China-made 55-inch model B double mold vulcanizing machines. The highly automated vulcanizing machine is considered fairly advanced in the country. Purchased from the Guilin Rubber Machinery Plant in Guangxi, these two pieces of equipment took only 3 months to install and undergo trial runs. By the first 10 days of March this year, the two new vulcanizers have turned out 250 sets of tires, and the up-to-standard rate was more than 95 percent.

Source: Haikou HAINAN RIBAO in Chinese 28 Mar 84 p 1

Item: Shazhou Glass Plant
[3097 3166 3788 3863 0617]

Location: Shazhou, Jiangsu, PRC

Data: Construction of this plant's four-machine-unit kiln expansion project which was approved by the Jiangsu Planning Committee, is under way. The expansion project, which is scheduled for completion in 1985, will permit this plant to raise its annual output from 368,000 standard crates to 1.2 million standard crates, making it another plate glass production base in Jiangsu Province. Since it went into operation in 1981, this joint county-commune operated factory has made great strides in production by relying on scientific and technological developments. It has also received help from the Yaohua Glass Plant in Shanghai in training its personnel.

Source: Nanjing XINHUA RIBAO in Chinese 6 Apr 84 p 1

Item: Kunming Plate Glass Plant
[2492 2494 1627 2647 3788 3863 0617]

Location: Kunming, Yunnan, PRC

Data: A vacuum aluminum plating mirror production line was recently completed here. It adopts the method of using aluminum instead of silver in making mirrors to save the state large amounts of silver. With the help of departments concerned in Shanghai, this project was designed and installed in 8 months' time and was completed and commissioned in October 1984. It has an annual output capacity of 100,000 square meters.

Source: Beijing ZHONGGUO JIANCAI [CHINA BUILDING MATERIALS] in Chinese No 2, 1984 p 64

Item: Qiqihar Building Materials Plant
[7871 7871 0761 1422 2624 1696 0617]

Location: Qiqihar, Heilongjiang, PRC

Data: The aerated concrete cutting unit imported from Poland by this plant's aerated concrete slab workshop has successfully undergone a trial operation on 15 December 1983. The annual design production capacity of the first phase project is 100,000 cubic meters of aerated concrete products, which will create an output value of 7.34 million yuan and realize for the state 1,987,000 yuan in profits and taxes.

Source: Beijing ZHONGGUO JIANCAI [CHINA BUILDING MATERIALS] in Chinese No 2, 1984 p 41

Item: Harbin Glass Plant
[0761 1422 3453 3788 3863 0617]

Location: Harbin, Heilongjiang, PRC

Data: Construction of a 6-machine unit kiln has been completed at this plant. Since it began operation 5 months ago, production has been stable. As of the end of 1983, the kiln has produced 150,000 standard crates of plate glass.

Source: Beijing ZHONGGUO JIANCAI [CHINA BUILDING MATERIALS] in Chinese No 2, 1984 p 64

Item: Hebei Weft Knitting Plant
[3109 0554 4885 4882 0617]

Location: Ding Xian, Hebei, PRC

Data: This newly built modern plant was recently put into operation. Equipped with imported machinery, it produces more than 1,000 tons of knitted face fabrics, over 2,000 tons of dyed and finished fabrics, and 400,000 garments annually.

Source: Shijiazhuang HEBEI RIBAO in Chinese 8 Mar 84 p 1

Item: Fuzhou Cannery
[4395 1558 4984 7333 0617]

Location: Fuzhou, Fujian, PRC

Data: This cannery has succeeded in using computers to control sterilization in the canning process. Beginning 1981, with the help of the 502 Institute of the Ministry of Space Industry, this plant conducted experiments in employing computers to control the sterilization process in canning operations. It succeeded in this project and has considerably reduced the labor intensity of workers.

Source: Fujian FUZHOU RIBAO in Chinese 21 Feb 84 p 1

Item: Liguo Sugar Mill
[0448 0748 4743 0617]

Location: Ledong County, Hainan Island, Guangdong, PRC

Data: This expanded mill has pressed over 70,000 tons of sugarcane in the past 3 months and produced 8,400 tons of sugar, of which 6,560 tons are top-grade granulated sugar. It has realized a profit of 1.13 million yuan, an increase of 460,000 yuan over the preceding sugarcane pressing season. Formerly its daily sugarcane pressing capacity was only 700 tons. The expansion project has permitted it to raise the daily sugarcane pressing capacity to 1,000 tons. Since March this year, it has been pressing 1,022 tons of sugarcane a day.

Source: Haikou HAINAN RIBAO in Chinese 3 Apr 84 p 1

Item: Honghua Sugar Mill
[4767 5478 4743 0617]

Location: Hainan Island, Guangdong, PRC

Data: Following more than 9 months of construction work, this mill was officially put into operation on 31 March this year. Its daily sugarcane pressing capacity is 500 tons. The total construction cost of this project is 9.8 million yuan. It is primarily funded by the Hainan Bureau of Agriculture and Land Reclamation and bank loans. When completed, this mill will create favorable conditions for sugarcane production in the nearby area.

Source: Haikou HAINAN RIBAO in Chinese 3 Apr 84 p 1

Item: Shanghai Light Bulbs Plant
[0006 3189 3597 3133 0617]

Location: Shanghai, PRC

Data: The absorption of foreign advanced technologies has enabled this plant to use 69 kinds of raw materials produced domestically for the manufacture of People's brand black and white picture tubes. This is the reason that Chinese-made materials account for two-thirds of the materials used for manufacturing black and white picture tubes here. This plant has the capacity to produce 90 percent of the molding parts which previously had to be imported.

Source: Shanghai WEN HUI BAO in Chinese 24 Apr 84 p 1

IX. PHOTOGRAPHS OF INDUSTRIAL FACILITIES

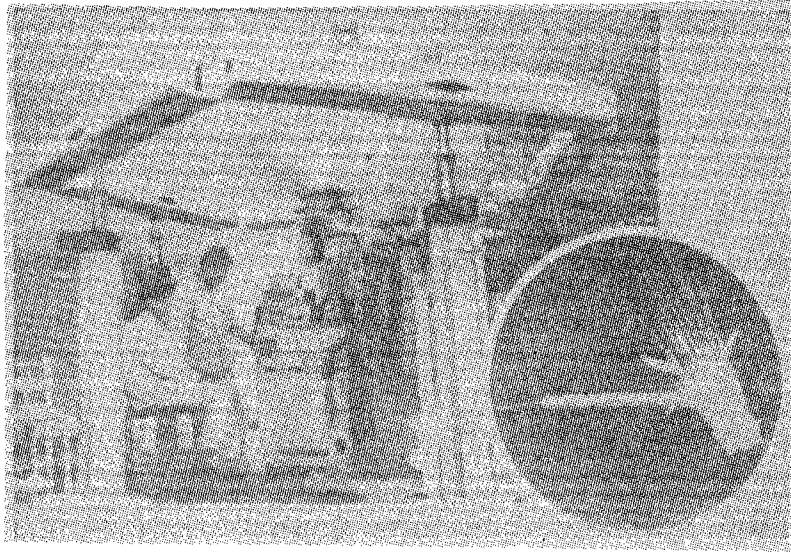


Fig. 1 Photo shows workers of the Shanghai Quartz Glass Plant making optical fibers with a graphite resistance furnace they built themselves. Lower right photo shows an optical cable made with numerous optical fibers. [Source: Tianjin TIANJIN RIBAO in Chinese 30 Mar 84 p 3]

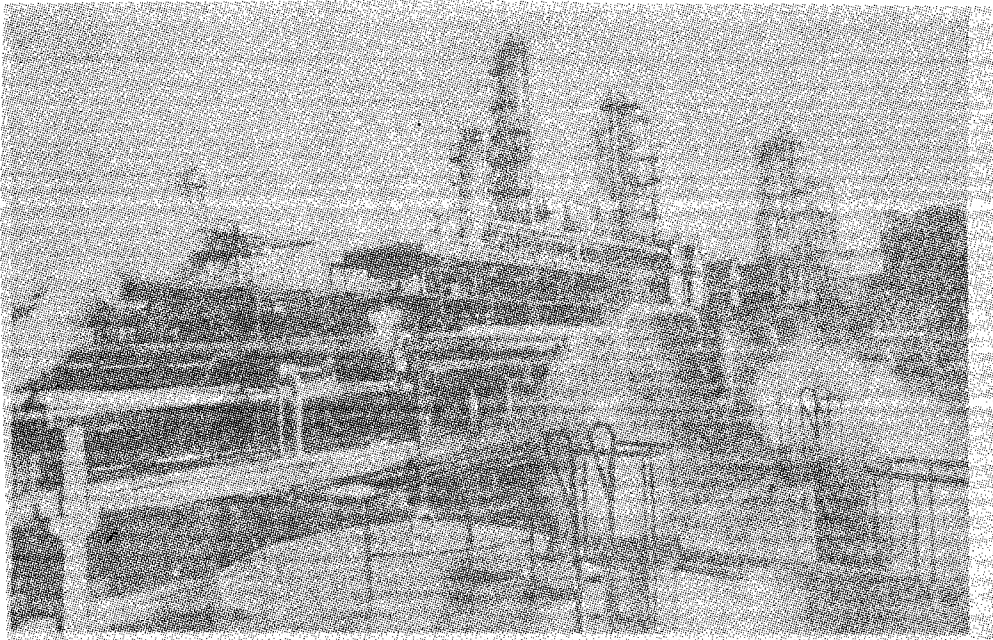


Fig. 2 The combination workshop of the Shijiazhuang Oil Refinery is suspending production for scavenging operation. [Source: Shijiazhuang HEBEI RIBAO in Chinese 8 Apr 84 p 1]

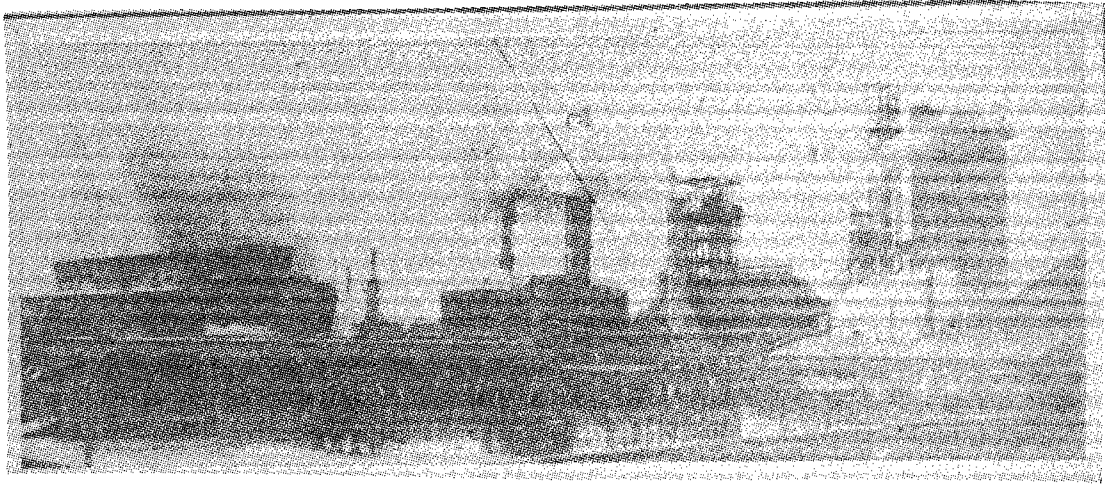


Fig. 3 View of the Liaohe Chemical Fertilizer Plant which has an annual urea output capacity of 485,000 tons. Since it started operation in 1979, this enterprise has supplied the state with 2.46 million tons of urea and 1.42 million tons of synthetic ammonia. By 1982, it has completely recovered the fund invested by the state, and by the end of 1983, it has turned over to the state 129 million yuan in profits.
[Source: Shenyang LIAONING RIBAO in Chinese 22 Feb 84 p 1]

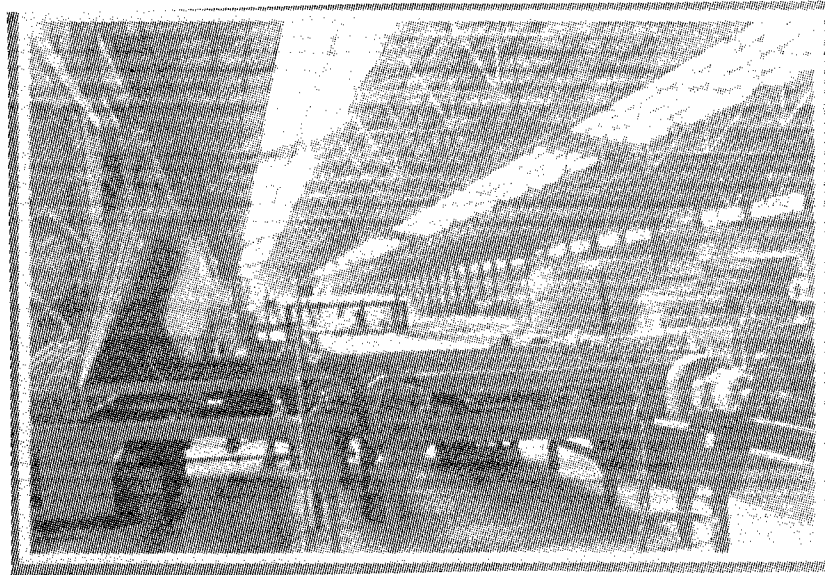


Fig. 4 View of the gypsum board production line of the Beijing New-type Building Materials Plant, China's first large new-type building materials base. It has the capacity to produce enough building materials for the construction of 600,000 square meters of housing annually.
[Source: Beijing ZHONGGUO JIANCAI (CHINA BUILDING MATERIALS) in Chinese No 1 1984, inside frontcover]

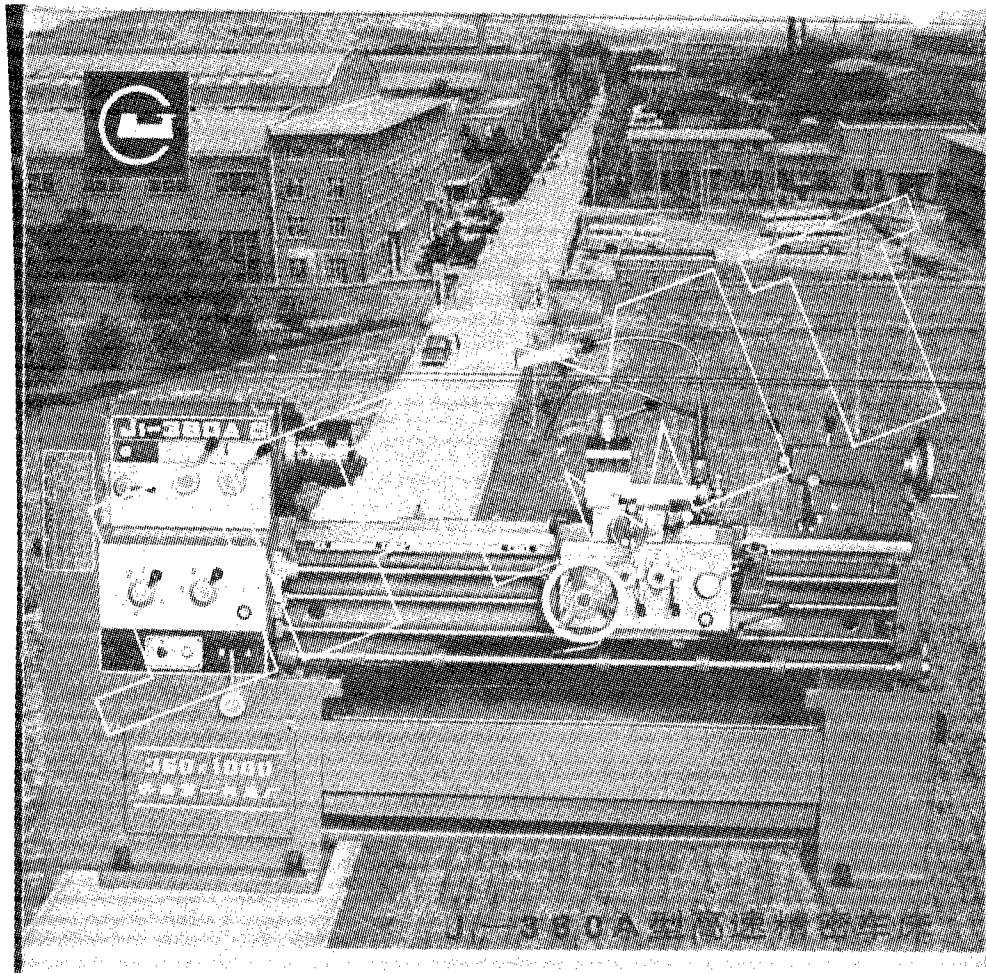


Fig. 5 Sectional view of the Jinan Machine Tool Plant No 1, a major manufacturer of high speed precision lathe in China.
[Source: Beijing JICHUANG (MACHINE TOOLS) in Chinese No 1, 1984 frontcover]



Fig. 6 External view of the Urumqi Satellite Communications Testing Ground Station
[Source: Beijing XIANDAIHUA (MODERNIZATION) in Chinese No 3, 1984, inside backcover]

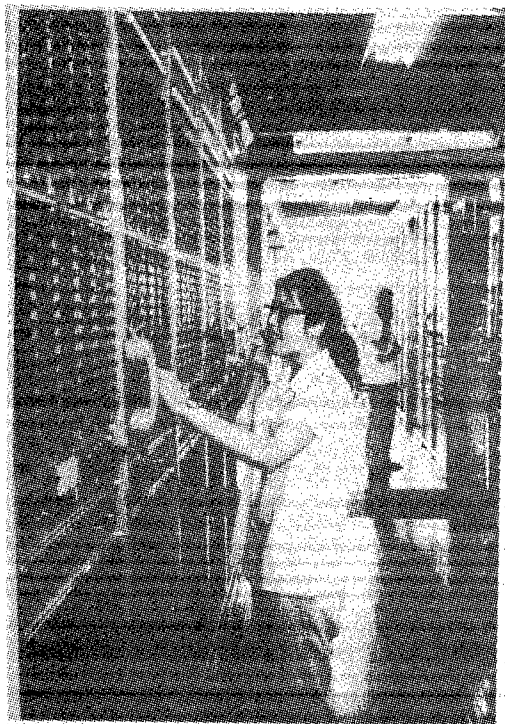


Fig. 7 The Beijing-Wuhan-Guangzhou co-axial 1,800 circuit equipment has been partially installed in the building of the Beijing-Long-Distance Telephone Bureau. Photo shows technicians of the wave carrier room hard at work.
[Source: Beijing XIANDAIHUA (MODERNIZATION) in Chinese No 3, 1984, inside backcover]

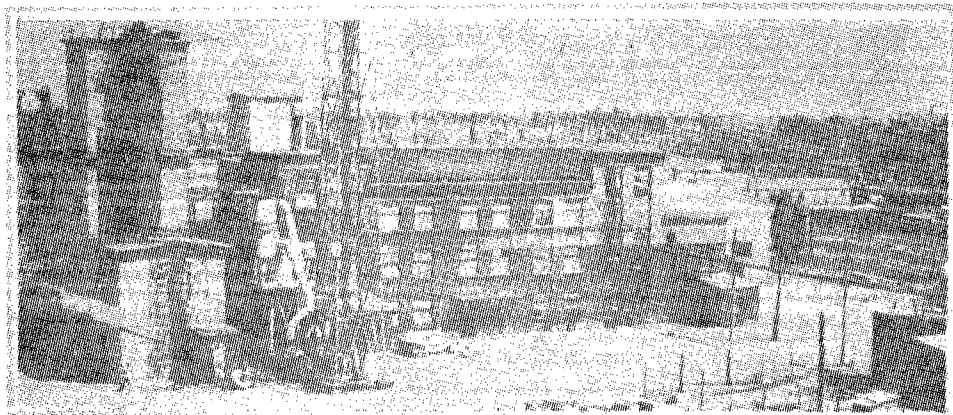


Fig. 8 Photograph of the No 3 Rare Earth Plant of the Baotou Iron and Steel Company. The plant turns out rare earth metal concentrates.
[Source: Beijing GANGTIE (IRON AND STEEL) in Chinese No 12, 1983, inside backcover]

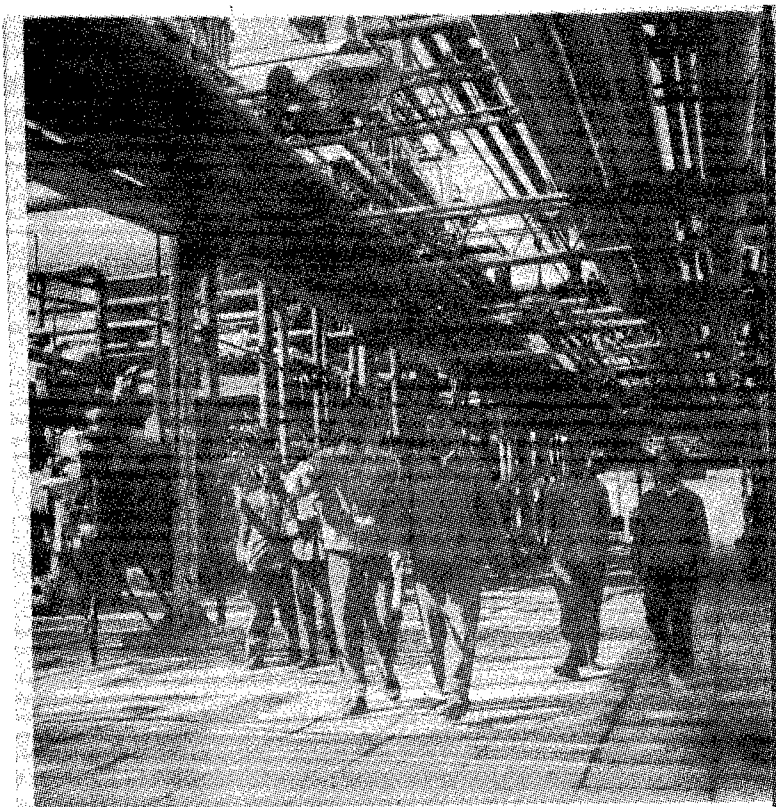


Fig. 9 Inside view of the Dushanzi Oil Refinery in Xinjiang.
[Source: Beijing MINZU HUABAO (NATIONALITIES PICTORIAL) in Chinese No 2, 1984, inside backcover]

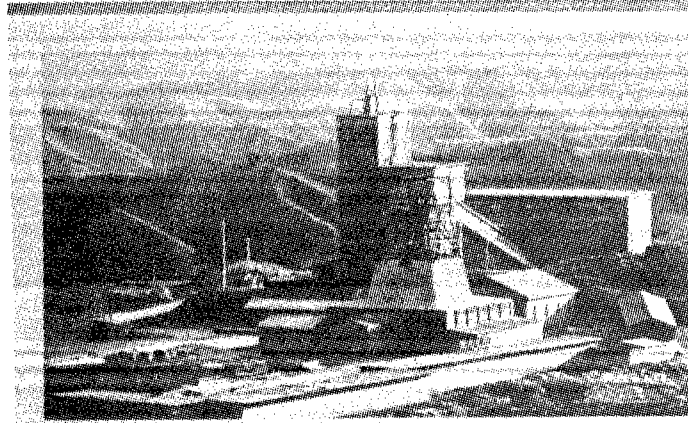


Fig. 10 Photo of the Dongzhu Shaft of the No 2 Mining Zone in Jinchuan, China's largest nickel production base and platinum precious metals refining center, 380 kilometers west of Lanzhou, Gansu Province.
[Source: Beijing RENMIN HUABAO (CHINA PICTORIAL) in Chinese No 4, 1984, p 18]

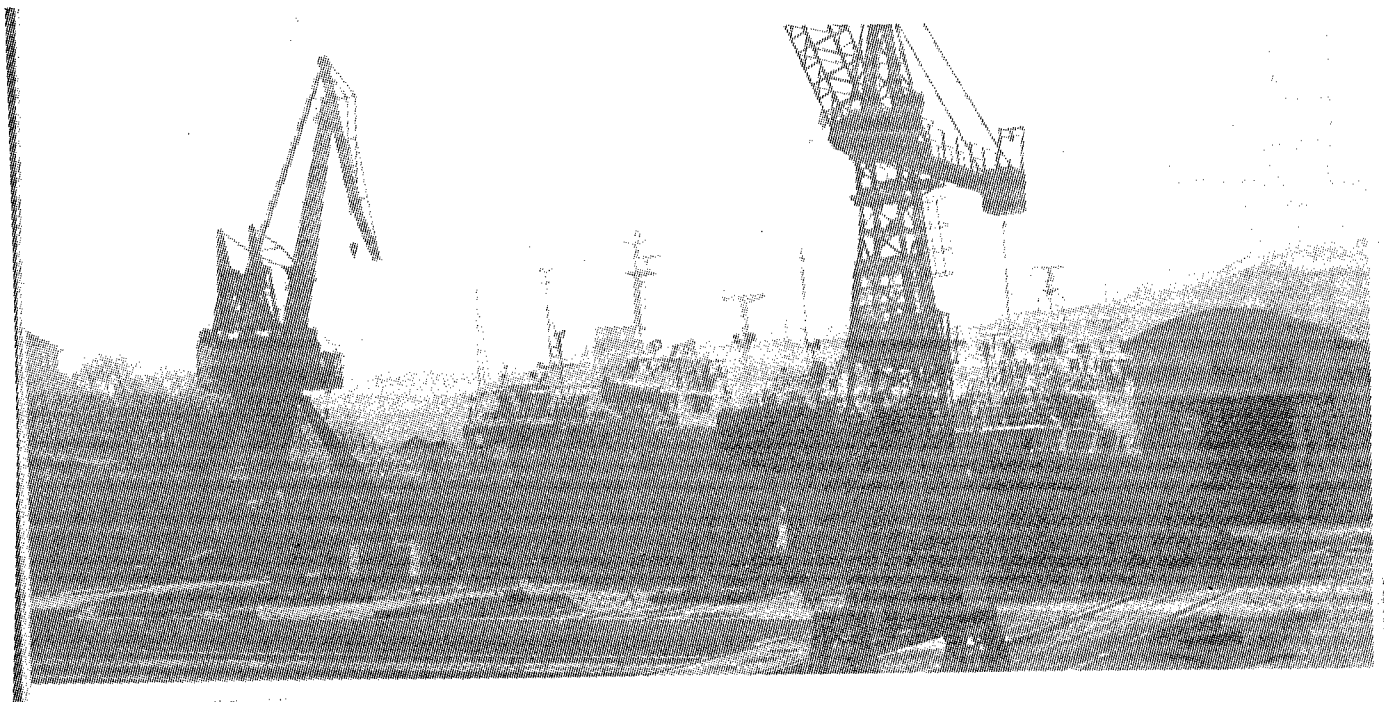


Fig. 11 A section of the Weihai Shipyard in Shandong.
[Source: Jinan SHANDONG HUABAO (SHANDONG PICTORIAL) in Chinese No 3, 1984, p 2]