JPRS 83148

28 March 1983

China Report

PLANT AND INSTALLATION DATA

No. 42

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CONTENTS

I. METALLURGICAL INDUSTRY

Item: Xinlin Steel Rolling Mill
[2622 2651 6509 6921 0617]

Location: Weinan Prefecture, Shaanxi PRC

Data: Since this plant instituted the economic responsibility system of daily floating wages, it has reduced the number of its production workers by one-third and increased its output by 200 percent. The system stipulates that when his daily output reaches 40 to 48 tons, the worker receives the basic wage; when his daily output exceeds 48 tons, and for each additional ton of rolled steel produced, the worker's daily wage will be increased by 0.57 yuan; when his daily output falls below 36 tons, the worker is issued only 25 yuan for living expense. In December last year, the number of production workers was reduced from 312 to 214. Yet, the rolled steel output increased from 969 to 3,024 tons. The production cost of rolled steel per ton also dropped 11 percent. In only 1 month, the mill increased its income by 160,000 yuan, and the worker's wages generally showed a substantial increase.

Source: Xi'an SHAANXI RIBAO in Chinese 19 Jan 83 p 1

Item: Shanghai Steel Mill No 5
[0006 6921 0063 0617]

Location: Shanghai, PRC

Data: [1] The country's first semi-continuous hot rolling machine capable of rolling ordinary carbon steel bands, alloy steel bands, and flat bars recently produced its first steel band here. Designed and built by this mill, this machine, which will soon go into operation officially, primarily produces strip steel for the light, textile and handicraft industries.

[2] This mill's strip steel hot rolling workshop was put into operation 29 December 1982. The workshop produces annually 80,000 tons of strip steel, including 10,000 tons of spring strip steel that can be made into 25 million "Three-Five" brand table clocks and 50,000 tons of ordinary carbon strip steel that can be made into 2.8 million "Forever" or "Phoenix" brand bicycles.

Source: Shanghai [1] WEN HUI BAO in Chinese 7 Jan 83 p 1

[2] JIEFANG RIBAO in Chinese 29 Dec 82 p 1

Item: Zhuo Xian Aluminum Processing Plant
[3214 4905 6986 0502 1562 0617]

Location: Zhuo Xian, Hebei, PRC

Data: This modernized plant was commissioned on 25 December 1982. Jointly funded and built by Hebei Province and the Ministry of Metallurgical Industry, this project is capable of producing 5,000 tons of aluminum foils, 5,000 tons of aluminum sheet bands, and 2,000 tons of extruded aluminum materials. Its principal equipment is imported and is controlled by microcomputers. Beginning in 1983, the country will fundamentally change its "situation of importing large quantities of aluminum foils and aluminum sheets."

Source: Beijing GONGREN RIBAO in Chinese 28 Dec 82 p 1

Item: Zhuo Xian Metallurgical Department
[3214 4905 0396 6855 6752]

Location: Zhuo Xian, Hebei, PRC

Data: The aluminum foil production equipment of this department's aluminum processing experimental plant was recently put into operation. With an annual aluminum foil output of 5,000 tons, this piece of equipment is the most advanced of its kind in China. The key components of the equipment were imported from Japan and the United States.

Source: Shanghai JIEFANG RIBAO in Chinese 19 Jan 83 p 3

Item: Meishan Iron Mine
[2734 1472 6993 4349]

Location: [Anhui]

Data: As of 7 December 1982, this mine has produced 1,000,500 metric tons of iron ore, topping the barrier of 1 million metric tons. It became the second unit among the country's ore-mining units to break this record. The first unit to hurdle this barrier was the Huashu Iron Mine in Gansu Province.

Source: Shanghai JIEFANG RIBAO in Chinese 25 Dec 82 p 1

Item: Hongdong Coking Plant
[3163 3159 3542 0553 0617]

Location: Shanxi, PRC

Data: [1] This plant, Shanxi's first large-sized chemical enterprise using coal as raw material, was officially put into operation on 1 January 1983. This mechanized and automated project has a designed annual output capacity of 560,000 tons of coke, 54,000 tons of synthetic ammonia and 85,000 tons of urea.

[2] This plant, Shanxi's first chemical industrial enterprise using coal as raw material, began operation on 1 January. Its designed annual capacity is 560,000 tons of metallurgical coke, 54,000 tons of synthetic ammonia and 85,000 tons of urea. Using coal from Huoxian and Fengxi Counties as raw material, its products will be supplied to other provinces in addition to meeting Shanxi's own needs.

Source: [1] Shanghai JIEFANG RIBAO in Chinese 5 Jan 83 p 3

[2] Beijing XINHUA Domestic Service in Chinese 1211 GMT 4 Jan 83 OW

Item: Longhai Railway
[7150 3189 6993 6424]

Location: Northwest China

Data: Electrification of the 60-kilometer-long section between Tianshui and Gangu has been completed following 1 year of construction work. At this point, the entire electrification project of the 164-kilometer section between Tianshui and the western section of the Longhai Railway has been completed and opened to traffic on 18 January 1983. Completion of the project helps to improve the transport capacity along the western section of the Longhai Railway.

Source: Xi'an SHAANXI RIBAO in Chinese 20 Jan 83 p 1

Item: Changchun Motor Vehicle Plant No 1
[7022 2505 4574 0001 3085 6508 0455 6644 0617]

Location: Changchun, Jilin Province, PRC

Data: Having satisfactorily completed the production quota for trucks of the Jiefang brand CA10C model, this plant will produce the trucks of the CA15 model beginning 1983. Since it was put into production in 1956, this plant has produced a total of 990,876 trucks of the CA10A, CA10B and CA10C models, accounting for about 50 percent of the country's total. At the beginning of 1982, the plant planned to produce 60,000 trucks of the CA10C model and this plan was overfulfilled by 500 trucks by 24 December. Now the plant has already received orders for 51,246 trucks of the CA10 model.

Source: Changchun Jilin Provincial Service in Mandarin 1100 GMT 26 Dec 82 SK

Item: Shanghai Television Tuner Plant
[0006 3189 7193 6018 6148 6168 0892 0617]

Location: Shanghai, PRC

Data: This plant with an annual output of 1 million tuners for high-frequency television sets was established here on 16 December 1982. Construction work and installation of imported equipment are nearing completion. This project was jointly set up by Shanghai Television Plant No 13 and the Meiduo Radio Coil Plant. The television tuner production line was imported from Japan.

Source: Shanghai JIEFANG RIBAO in Chinese 17 Dec 82 p 2

Item: Chengdu City Water Meter Plant
[2052 6757 1579 3055 5903 0617]

Location: Chengdu, Sichuan, PRC

Data: Employing 400 workers and employees, this plant, relying on science and technology, has developed new products and increased the output of its flow meters from 80,000 in 1981 to 210,000 in 1982 and raised its output value from 3.38 million yuan to 8 million yuan in 1 year. Since it started developing new products, it has produced four different models of flowmeters. In 1982, the plant has turned out LY-25 flowmeter for use in national defense. The PLA General Logistics Department has designated it as the sole plant to produce the special-purpose instruments and meters. Last year the plant produced 1,500 LY-25 flowmeters valued at more than 200,000 yuan. Renovation of its high voltage static spraying tandem line capable of spraying 350,000 to 500,000 meter cases annually has been completed.

Source: Chengdu SICHUAN RIBAO in Chinese 21 Jan 83 p 3

Item: Changzhou City Radio Components Plant No 2
[1603 1558 1579 3541 4848 7193 1708 0617]

Location: Changzhou, Jiangsu, PRC

Data: Upon the approval of the Changzhou City Planning Commission, this plant has merged with the Yuzhou Electronic Equipment and Materials Plant [1342 1352 7193 1311 0892 2624 0617] of Changzhou City. Beginning in 1983 all previous business transactions of Plant No 2 will be handled by the newly emerged plant.

Source: Beijing GONGREN RIBAO in Chinese 25 Dec 82 p 4

Item: Shaanxi Color Picture Tube Plant
[7104 6007 1752 5351 7341 6272 4619 0617]

Location: Xi'an, Shaanxi, PRC

Data: The Shaanxi Provincial Equipment Installation Company successfully test produced an edge folder for air conditioning ventilation ducts during construction of this plant. The machine includes a snap type straight line clamp folder to fold edges, a snap type bent head clamp folder to fold edges, a joint angle straight line clamp folder for folding edges, a joint angle bent head clamp folder for folding edges, a single plane clamp folder for folding edges. The machine is portable and versatile, easy to move, good in quality and highly efficient. It is suitable for use in processing air conditioning and ventilation ducts. It can be installed at the construction site and in shops for permanent use. In October, 1980, at the installation experience exchange meeting held by the General Bureau of Construction Engineering, it was determined as a machine to be popularized. At present it has already been used by more than 10 provincial and municipal construction units in Beijing, Hunan, Fujian and Sichuan.

Source: Beijing DIANLI JISHU [ELECTRIC POWER] in Chinese No 11, 1982 pp 76-77

Item: Zhenhai Petrochemical Plant
[6966 3189 4258 3111 0553 1562 0617]

Location: Zhenhai, Zhejiang, PRC

Data: Construction of the 300,000-ton synthetic ammonia and 520,000-ton urea facilities of this plant, formerly known as the Zhejiang Oil Refinery, is in full swing. Of 608 pieces of equipment in the synthetic ammonia section, 99 percent has been installed; 96,012 meters of 12,970 meters of pipeline has been laid. Construction work on the urea section is still in progress. The high-temperature and high-pressure boiler has successfully undergone a water pressure test and no leak was found. The recently installed meter air compressor has also been tested with good results. More than 1,000 instruments and meters of the central control room have also been tested.

Source: Hangzhou ZHEJIANG RIBAO in Chinese 8 Jan 83 p 1

Item: Yunnan Chemical Plant
[0061 0589 0553 1562 0617]

Location: Kunming, Yunnan, PRC

Data: In 1982 this plant finally ended its history of "incurring losses every year" and made a profit of 378,000 yuan. The Yunnan Provincial Chemical Bureau commended this plant for its achievements. The plant principally produces hydrochloric acid, caustic soda, carbide, 666 powder and polyvinyl chloride. Since its inception in 1962, it had operated at a loss every year. Following the Third Plenary Session of the 11th CPC Central Committee, it carried out reorganization of the enterprise and its production began to improve. Its loss incurred in 1981 was reduced from 5.39 million yuan in 1976 down to 220,000 yuan. Last year, after 1 year of efforts, the quality of its principal products, such as caustic soda and carbide, improved 100 percent and its production cost was lowered by 125,800 yuan.

Source: Kunming YUNNAN RIBAO in Chinese 22 Jan 83 p 1

Item: Zhanyi Chemical Fertilizer Plant
[3115 4135 0553 5142 0617]

Location: Zhanyi, Yunnan, PRC

Data: This medium-sized chemical fertilizer plant was recently placed into production. It has a designed output capacity of 60,000 tons of synthetic ammonia and 110,000 tons of urea.

Source: Shanghai JIEFANG RIBAO in Chinese 29 Dec 82 p 3

Item: Lucheng Compound Fertilizer Plant
[3406 1004 0553 0678 5142 2436 0617]

Location: Lucheng, Shanxi, PRC

Data: Construction will begin soon on this project, China's first large compound fertilizer plant, the Ministry of Chemical Industry announced. Using coal as its raw material, the plant is designed to produce an annual 900,000 tons of nitrophosphate with 300,000 tons of synthetic ammonia. The plant's equipment was imported from the Lurgi Corporation of West Germany and the Toyo Engineering Company of Japan at a cost of $250 million. Construction of the project was postponed for 3 years because of the nationwide economic readjustment, but equipment for the plant was imported in 1978, according to the ministry. The plant will require 1 million tons of coal and 450,000 tons of phosphate concentrates as raw materials. A special railway has been laid to the plant. A power generating unit with an annual capacity of 100,000 kilowatts will be put into operation in the first half of this year. At present, China has more than 2,000 large, medium and small chemical fertilizer plants with an annual production capacity of more than 12.7 million tons of pure fertilizer, mostly nitrogen fertilizer.

Source: Beijing CHINA DAILY in English 1 Feb 83 p 3

Item: Daqing General Petrochemical Plant
[2192 1987 4258 3111 0553 1562 4920 0617]

Location: Daqing, Heilongjiang, PRC

Data: This plant has achieved remarkable economic results in technical renovations. Compared with 1978, the plant's output value increased by 4.8 percent and its profits increased by 5.7 percent in 1982. Compared with 1981, the amount of crude oil processed in 1982 was reduced by 64,000 tons, while profits increased by 3.1 percent.

Source: Beijing XINHUA Domestic Service in Chinese 0122 GMT 5 Jan 83 OW

Item: Nanjing Chemical Industry Company
[0589 0079 0553 1331 1562 2814 0361 0674]

Location: Nanjing, Jiangsu, PRC

Data: Construction will soon begin on a four-billion-yuan petrochemical project here, in accordance with a recent decision of the State Planning Commission. This project, to be one of the largest in China, will consist of ten installations including a 300,000-ton acetylene plant and a 450,000-ton aromatic hydrocarbon plant. It will form an integrated petrochemical enterprise with this company. The project is designed to eventually produce annually 200,000 tons of plastics, 50,000 tons of raw materials for making synthetic rubber, and 900,000 tons of petrochemical materials, in addition to polyester materials enough to produce an amount of cloth that otherwise would require 550,000 tons of cotton. Construction of the project is scheduled for completion in 1986. The investment is expected to be recovered five years after the project is put into operation. The 100,000 tons of imported equipment has arrived at the site. Construction of storehouses, roads and bridges for the project is already underway.

Source: Beijing XINHUA in English 1502 GMT 5 Jan 83

Item: Jilin Chemical Industry Company
[0679 2651 0553 1331 1562 2814 0361 0674]

Location: Changchun, Jilin, PRC

Data: Eleven large petrochemical installations have gone into trial operation in Jilin Province, according to officials of this company. The installations produce raw materials for making plastics, [word indistinct], pharmaceuticals and pesticides, the officials said. The installations--five imported and six domestically produced--are designed to annually produce 115,000 tons of ethylene, 100,000 tons of ethyl alcohol, 57,000 tons of butanol and octanol, 80,000 tons of butadiene-styrene rubber, 60,000 tons of ethyl aldehyde and 60,000 tons of acetic acid, in addition to butadiene, styrene and other products. The company, a major petrochemical producer in the country, has also completed facilities capable of treating 192,000 tons of waste water daily, officials said.

Source: Beijing XINHUA in English 1218 GMT 16 Dec 82 OW

Item: Huolinhe Coal Mine
[7202 2651 3109 3561 4349]

Location: Horqin Grassland in eastern part of Inner Mongolia AR, PRC

Data: Since construction work started in 1979, this large coalfield has stripped 9.61 million cubic meters of earth and stones and is expected to strip an additional 5 million cubic meters by the end of 1982. When the four open-pit coal mines--East, West, North and South Coal Mines--are completed, the annual output may reach 20 million tons, making this coalfield one of China's major open-pit coal mines.

Source: Beijing GONGREN RIBAO in Chinese 9 Dec 82 p 2

Item: Rujigou Coal Mine
[3067 5487 3297 3561 4349]

Location: Ningxia Hui Autonomous Region, PRC

Data: The 1982 export volume of the anthracite extracted here, known locally as "Taixi coal," showed a 50-percent increase over 1981, setting a new high record. Because this mine is located west of Taiyuan, the coal extracted here is called "Taixi coal," meaning coal from west of Taiyuan. It is exported to Japan, Britain, France, Belgium and Southeast Asia.

Source: Shanghai JIEFANG RIBAO in Chinese 9 Dec 82 p 2

Item: Gengchun Coal Mine
[5105 2625 3561 4349]

Location: Yuxi Coalfield, Henan, PRC

Data: This newly completed project, subordinate to the Yima Mining Administration, was officially put into operation on 28 December 1982. The designed annual output capacity is 1.2 million tons of long-flaming coal.

Source: Shanghai JIEFANG RIBAO in Chinese 29 Dec 82 p 3

Item: Niululing Hydroelectric Power Station
[3662 6424 1545 3055 7193 4541]

Location: Hainan Island, Guangdong, PRC

Data: A 200,000-kilowatt generating unit of this station was put into operation on 20 December 1982. At this point, the capacity of newly added hydroelectric power generating units in the country had reached 635,000 kilowatts in 1982, 15,000 kilowatts over the state plan for 1982.

Source: Beijing GONGREN RIBAO in Chinese 23 Dec 82 p 1

Item: Luohe Power Plant
[3157 3109 7193 0617]

Location: Luohe Zhen in the eastern suburbs of Huainan City, Anhui, PRC

Data: Main construction work on this project began on 11 December 1982. The designed capacity of this plant is 1.2 million kilowatts. The installed capacity of the first-phase project is 600,000 kilowatts. Construction of the first 300,000-KW generating unit of the first-phase project is expected to be finished by the end of 1985.

Source: Shanghai JIEFANG RIBAO in Chinese 12 Dec 82 p 2

Item: Pudong Coal Gas Plant
[5543 2639 3561 3049 0617]

Location: Shanghai, PRC

Data: The Shanghai City Capital Construction Commission has decided to build this project in the Donggou District. Facing the Huangpu River on the west side, this plant will occupy 566 mu of land. When completed, it will become the largest urban coal gas supplier in the country. It will employ the traditional dry distillation and gasification processes. The first phase project will be partially completed before 1986 and will produce 1 million cubic meters of coal gas a day. The second phase project is scheduled for completion within the "Seventh Five-Year Plan" and it will supply an additional 1 million cubic meters of coal gas daily.

Source: Shanghai WEN HUI BAO in Chinese 10 Jan 83 p 1

Item: Huadong [East China] Power Grid
[5478 2639 7193 4986]

Location: East China

Data: On the basis of the State Plan, this power grid has decided to complete before 1987 two 500,000-volt ultra high voltage lines between Xuzhou and Shanghai and between the two Huais (Huainan and Huaibei), totaling 1,210 kilometers in length, and the corresponding transformer stations, so as to transmit the electricity generated from the large pit-mouth power stations in the two Huais and Xuzhou to the Changjiang River Delta area with Shanghai as the center, thereby satisfying the growing industrial and agricultural needs of the three provinces and one municipality in East China.

Source: Shanghai JIEFANG RIBAO in Chinese 17 Dec 82 p 5

Item: Shijingshan General Power Plant
[4258 0064 1472 4099 7193 4920 0617]

Location: Shijingshan, Beijing, PRC

Data: This plant officially began using the DJS-154 computer in March 1982 for business management. In nearly 5 months, the following achievements have been realized: The computer completed the task of computing the 10-day and monthly amounts of thermoelectric power for the Gaojing Power Plant in time and accurately and provided printouts and tables. The computer used "fitting error analysis" to seek the order of cycles. The computer used cyclic trend analysis, the even and stable time series method, the method of correlation between atmospheric circulation and meteorology and the amount of flow during the flooding season to compile a program for long-range forecast of the amount of flow entering the reservoir for the production office, and separately computed the forecasts of the amount of flow into the reservoirs during the reservoir flooding season, the drought season and the whole year for Panjiaou, Guanting and Miyun Reservoirs. The computer used the "incremental dynamic planning method" to compile a program to analyze the economic indicators for the plant, and it forecast the annual output of electricity for the hydroelectric power station. The computer was also used to test and compute data for the model test of the No 21 Boiler of the Shijingshan Power Plant and the No 8 Boiler of the Gaojing Power Plant. The results were good.

Source: Beijing DIANLI JISHU [ELECTRIC POWER] in Chinese No 11, 1982 pp 76-77

Item: Qingdao Electric Power Plant
[7230 1497 4099 7193 0617]

Location: Qingdao, Shandong, PRC

Data: In the past, damage due to wear of the axial flow ventilator manufactured by this plant was serious. Generally, the blades had to be replaced after every four months of operation. Many anti-wear measures were used but the results were not ideal. In 1980 the technique of oxygen-acetylene flame spraying of metallic powder popularized by the Shanghai Steel Research Institute was used and the blades of the ventilator were test sprayed. Observation of operation for four months showed that the blades were only slightly worn, and compared to the original condition of wear, the useful life was extended at least 3 times. The tested powder was NiCr-15 with a hardness of RC$\geq$45. The use of metallic powder spraying is technically simple, the coating is even, the degree of smooth finish of the surface is high, and different thicknesses can be sprayed according to the degree of wear of the working surface.

Source: Beijing DIANLI JISHU [ELECTRIC POWER] in Chinese No 11, 1982 pp 76-77

Item: Yueyang Power Plant
[1971 7122 4099 7193 0617]

Location: Yueyang, Hunan, PRC

Data: The No 6 Boiler of this plant is a WGZ130/39-1 model medium temperature and medium pressure solid slag removal pulverized coal fired boiler. It has four sets of direct flow spurt igniters placed at four corners on two side walls. Their positional order from top to bottom is: third air stream, second upper air stream, first upper air stream, second middle air stream, first bottom air stream, second bottom air stream. Since the furnace began operation in December 1971, combustion has always been unstable. At the same time, three ϕ 3.5-millimeter aperture heavy oil spouts had to be added to stabilize combustion, the boiler's efficiency was low, and the spout of the pilot light was frequently burned and disabled. Therefore, that plant improved the spurt igniters in March 1980. The improved spurt igniter uses the first air stream to feed pulverized coal in a concentrated manner. The vertical and narrow spurt igniters using the second air stream to inject air were arranged from top to bottom in the following order: third air stream, second upper air stream, secondary second upper air stream, first middle air stream, first bottom air stream, second bottom air stream, and a small amount of surrounding air stream was provided around the first air stream. After improving the spurt igniters, operation over a year and a half showed that the efficiency of the boiler and the stability of combustion both improved greatly and heavy oil spouts need not be added anymore.

Source: Beijing DIANLI JISHU [ELECTRIC POWER] in Chinese No 11, 1982 pp 76-77

Item: Changchun Power Plant
[7022 2504 4099 7193 0617]

Location: Changchun, Jilin, PRC

Data: The pulverization system of the boiler of this plant is equipped with one ϕ 2400 whirlpool separator. The body of the cylinder is made of steel plates of 6 millimeters thick. The inner wall is lined with steel plates of 5 millimeters thick as a wear resistant layer. Because of the long period of scouring by coal dust, the wall of the cylinder has been seriously worn. Although many wear resistant measures were implemented, they did not produce any expected results. In August 1978, during major repair of the boiler, a strong adhesive cement was used as a new way to cement molded slabstone on the inner wall of the separator to serve as a wear resistant layer. More then 2 years of operation proved that the wear resistant effect was good.

Source: Beijing DIANLI JISHU [ELECTRIC POWER] in Chinese No 11, 1982 pp 76-77

Item: Dandong Bureau of Electric Power
[0030 2639 7193 2814 1444]

Location: Dandong, Liaoning, PRC

Data: This bureau applied the new technique of serial capacitance compensation by sections on the Changdian-Kuandian line in the Dandong Prefecture with support from the Xi'an Power Supply Bureau and realized visible results. The Chang-Kuan line from Changdian to Kuandian is 40 kilometers long. The voltage level is 10 kilovolts. Because the no work load was insufficient, the voltage at the end of the line was only 6 kilovolts. For this, the new technique of serial capacitance compensation by sections was used. Compensation stations were set up at two places where the two negative load centers were located. One compensation station was set up 13 kilometers from the starting point of the line and another was set up 30 kilometers from the starting point. Total investment amounted to over 50,000 yuan. The two compensation stations began operation in December 1979. The voltage at the end of the line was raised to 8 kilovolts. To further improve the quality of the voltage, some serial compensatory capacitors were added, and thus the voltage at the end of the line was raised to over 9 kilovolts, the expected result. Now, the added installations have already operated for more than 2 years and the situation is normal.

Source: Beijing DIANLI JISHU [ELECTRIC POWER] in Chinese No 11, 1982 pp 76-77

Item: Guangdong Electric Power Experimental Institute [1639 2639 7193 0500 6107 7526 2076]

Location: Guangzhou, Guangdong, PRC

Data: To develop experiments in ultralow frequency voltage tolerance for large generators, this institute developed an electronic vacuum switch 0.1 cycle sine wave ultralow frequency high voltage generator. The output voltage was 0 to 50 kilovolts. The specified output power was 3,000 watts. The specified output current was 60 milliamperes. The duration of continuous operation is 10 minutes. The medium frequency step-up transformer and multiplier and synchronous switching device have an exterior dimension and weight of 600x400x5200 (millimeters) and 37.5 kilograms. The control box is 370x525x470 (millimeters) weights 56.5 kilograms.

Source: Beijing DIANLI JISHU [ELECTRIC POWER] in Chinese No 11, 1982 pp 76-77

Item: Hanchuan Machine Tool Plant
[3352 1557 2623 1643 0617]

Location: Hanzhong City, Shaanxi, PRC

Data: Moved from Beijing to the interior at the end of the 1960's, this plant was put into operation in 1971. One of the most important factories of the Ministry of Machine-Building Industry, it specializes in manufacturing high-precision, large-sized jig boring machines and large-sized or heavy-duty horizontal boring machines. From 1971 to 1980, this plant produced more than 1,500 machines, most of which were sold to factories in the country. Covering a total area of 525,000 square meters, this enterprise employs 2,600 workers and staff members and is equipped with more than 500 machine tools, including high precision machine tools and metrological instruments made by well-known companies throughout the world. T4280 and TG4280 Jig Boring Machines, Series T611 Boring Machines, and THK63100 Horizontal Machining Center are among its principal products.

Source: Beijing JICHUANG [MACHINE TOOL] in Chinese No 1, 1983 p 47

Item: Xi'an Coal Mining Machinery Plant
[6007 1344 3561 4349 2623 2750 0617]

Location: Xi'an, Shaanxi, PRC

Data: This plant recently built a 300-KW high-power roller-type coal mining machine which will shortly go into trial operation in a large coal mine in Shaanxi. The new-type coal mining machine can extract the overall height of a 4.5-meter thick seam in one operation. Controlled either manually or electrically, the machine can extract 900 tons of coal an hour. It is equipped with a monitoring display protection system to insure safe operations.

Source: Xi'an SHAANXI RIBAO in Chinese 15 Jan 83 p 1

Item: Shaoguang Electrical Plant
[4801 1472 7193 1562 0617]

Location: Changsha, Hunan, PRC

Data: China's largest chromium plate production line was put into operation here on 9 December 1982. Imported from Switzerland, this production line is capable of turning out 220,000 "homogeneous rubber" chromium plates in four different specifications annually. Chromium plate is a basic material for developing large-scale and ultra large-scale integrated circuits.

Source: Beijing GONGREN RIBAO in Chinese 28 Dec 82 p 1

Item: Shanghai General Internal Combustion Engine Accessories Plant
[0006 3189 0355 3595 2623 6792 0115 4920 0617]

Location: Shanghai, PRC

Data: With the approval of higher authorities, the Shanghai Internal Combustion Engine Accessories Plant, the Shanghai Xinhua Piston Rings Plant, and the Kangding Road Branch Plant of the Shanghai Heavy Duty Motor Vehicle Plant were merged into this plant. Beginning 1 January 1983, any future business transactions and all unfinished businesses will be handled by this general plant. The former Shanghai Internal Combustion Engine Accessories Plant is now known as the Shanghai Internal Combustion Engine Accessories Subplant.

Source: Shanghai JIEFANG RIBAO in Chinese 1 Dec 82 p 4

Item: Dongfang Boiler Plant
[2639 2455 6938 3619 0617]

Location: Probably Beijing, PRC

Data: This plant manufactured the SL-80 model drained water cooler aimed at solving the problem of leakage after a short period of operation because the seal of the tube plate of the drained cooler originally equipped on the 200,000 kilowatt generator was poor. The cooler uses a double surface flat washer structure for sealing to separately seal the equipment and the stroke. The washer material is an annealed aluminum ring with a hardness of H_B =15 to 30. The sealing washers between strokes are circular rubber-asbestos boards but there is a member at the center located underneath the diaphram of the stroke. The boards are stacked in three layers. A groove in the shape of the washers is carved on the tube plate so that the washers can fit into it. That drained water cooler has been used by the Xindian Power Plant and the Qingshan Thermoelectric Plant for many years and it has never leaked.

Source: Beijing DIANLI JISHU [ELECTRIC POWER] in Chinese No 11, 1982 pp 76-77

Item: Shijiazhuang Water Pump Plant
[4258 1367 8369 3055 3119 0617]

Location: Shijiazhuang, Hebei, PRC

Data: This plant and the Shenyang Casting Research Institute wanted to solve the problem of the short useful life of the impurities pump so they jointly developed a new type of impurities pump made of Cr15Mo3 copper containing vanadium-titanium abrasion resistant cast iron material. This abrasion resistant cast iron material uses chromium and molybdenum as the main alloy elements and a fixed amount of vanadium and copper titanium added to the cast iron. This was done in view of the actual situation of use of large impurities pumps which have to take in heavy parts, which are structurally complex and which have to work in rough conditions. The pump has a strong tenacity, a higher anti-corrosion property and it is tolerant to high temperatures. It also has a good comprehensive technological property. It was evaluated officially by the First Ministry of Machine-Building and the State Capital Construction Commission. Approval was given to this plant, the Chengde Alloy Cast Iron Plant and other units to batch produce the 15-3 impurities pump's wear resistant parts. The pump has already shown good comprehensive economic results.

Source: Beijing DIANLI JISHU [ELECTRIC POWER] in Chinese No 11, 1982 pp 76-77

[1 of 1]

Item: Harbin Electromachinery Plant
[0761 3643 3453 7193 2623 0617]

Location: Harbin, Heilongjiang, PRC

Data: China's first hydrogen cooled 60,000-kilovolt-ampere phase modulator was designed and manufactured by the Large Electrical Machinery Research Institute and this plant. The phase modulator uses an outdoor hermetic system of cooling by internally circulating hydrogen. The exciter of the generator is a silicon controlled automatic regulation exciter. The specified capacity of the phase modulator is 60,000-kilovolt-amperes (lead), the specified voltage is 11,000 volts, the specified speed of rotation is 1,000 revolutions/minute, the rotor uses a protruding pole winding structure. The specified excitation current is 1,170 amperes, the specified excitation voltage is 182 volts. The generator is installed at the Langli Substation in the suburb of Changsha City in Hunan Province. On 30 March 1982, the generator was started up and joined the network for testing under atmospheric condition. It carried 30,000 kilovolt-amperes of no work load, and the generator operated well. After 72 hours of operation, the generator was dismantled for inspection. Each part showed no abnormal wear. Oil leaks and water leaks did not occur in the bearing and the cooler. On 24 April, the generator was started up again and linked to the network, and various operational tests

[Continued on Card 2]

[1 of 2]

Item: Harbin Electromachinery Plant
[0761 3643 3453 7193 2623 0617]

Location: Harbin, Heilongjiang, PRC

Data: with hydrogen cooling began. After operating with no load, with a no work load of 30,000 kilovolt-amperes under a hydrogen pressure of 0.5 kilogram/square centimeter, with a load of 45,000 kilovolt-square centimeter, with a load of 45,000 kilovolt-amperes under a hydrogen pressure of 0.75 kilogram/square centimeter and excitation-free tests, the generator was again operated with a no work load of 60,000 kilovolt-amperes under a hydrogen pressure of 1 kilogram-square centimeter on 25 April. After exchange and delivery tests, the performance of the various aspects of the generator was examined and they all satisfied the requirements of the technical conditions. The generator produces less vibration, less noise; its excess capacity is large, its operation is stable and the performance of automatic regulation of excitation is good. The generator officially began operation on 26 April of this year.

Source: Beijing DIANLI JISHU [ELECTRIC POWER] in Chinese No 11, 1982 pp 76-77

Item: Changxing Cement Plant
[7022 5281 3055 3136 0617]

Location: Changxing County, Zhejiang, PRC

Data: Construction work on this project, the largest modernized cement plant in Zhejiang, has been largely completed. Ninety percent of the machinery for the 500,000-ton project in the first stage has been installed. Single-unit trial run of the 110,000-volt main transformer station has begun. Three hundred forty pieces of machinery, including two kilns, six grinders, two decelerators, [a] drying apparatus, three cranes, and two packing machines, weighing over 4,300 tons, have been installed.

Source: Hangzhou ZHEJIANG RIBAO in Chinese 6 Jan 83 p 1

Item: Dalian Cement Plant
[2192 6647 3055 3136 0617]

Location: Dalian, Liaoning, PRC

Data: With the help of personnel from the State Building Materials Institute, this plant has successfully trial produced Grade A oil well cement, the quality of which is up to the standards of similar product made abroad. The Chinese-made product has been successfully tested at the Daqing Oilfield.

Source: Beijing GONGREN RIBAO in Chinese 12 Dec 82 p 1

Item: Litang Cement Plant
[7812 1048 3055 31v6 [as printed] 0617]

Location: Binyang County, Guangxi, PRC

Data: Recently built and placed into operation, this plant has a designed output capacity of 500,000 metric tons.

Source: Shanghai JIEFANG RIBAO in Chinese 29 Dec 82 p 3

Item: Shaoxing Polyester Fiber Plant
[4801 5281 5112 7927 4928 4850 0617]

Location: Shaoxing, Zhejiang, PRC

Data: Construction work for this plant with a designed annual capacity of 5,000 tons is under way. The plant, which is expected to go into operation next year, is to be equipped with imported Japanese machinery, said an official from the plant site.

Source: Beijing XINHUA in English 0815 GMT 9 Feb 83 OW

[1 of 1]

Item: Shijiazhuang Cement Plant
[4258 1367 8369 3055 3119 0617]

Location: Shijiazhuang, Hebei, PRC

Data: The DFD electronic kilowatt-hour minute and hour counter developed by the North China Electric Power Experimental Research Institute began operation on 9 May 1981 at this plant and on 22 August 1981 at the Shanhaiguan Bridge Plant to evaluate its reliability and to carry out a test of minute and hour counting of fees for electricity consumption. After undergoing various rigid tests in continuous operation for 1 year, the meter still ran accurately and its performance was reliable. For example: In summer the highest temperature reached 39°C and in winter the lowest temperature dropped to about 0°C. During the season of thunderstorms and rain, lightning and rain struck the meter. Throughout the year, power failures occurred a total of 174 times. The total cumulative duration without electricity totaled 394 hours and 44 minutes. According to statistics: From 1 August 1981 to 28 May of this year, a total of 301 days, the cumulative running time was only slower than the standard time announced by the radio station by 1 minute and 12 seconds, slowing an average of 0.24 seconds a day. Its error can completely satisfy the requirements for minute and hour counting. Test point experiments prove that the electricity fee system based on pricing by the minute and hour can greatly improve automatic adjustment of the load by the user and move the peaks to fill the troughs. For example,
[Continued on Card 2]

[1 of 2]

Item: Shijiazhuang Cement Plant
[4258 1367 8369 3055 3119 0617]

Location: Shijiazhuang, Hebei, PRC

Data: the average load during the daily peak period at this plant is 5 percent higher than the average daily load. This dropped to 7 percent lower than the average daily load, equivalent to reducing the peak load by 12 percent. The average load of the low trough period was higher than the average daily load by 10 percent, and as a result, this benefited the safe and economical operation of the power network, and at the same time, the user can benefit from the price difference between peaks and troughs. For example, that cement plant realized a benefit of 10,348 yuan throughout the year. The DFD electronic kilowatt-hour minute and hour counter has shown after 1 year of on-site operation that the meter's major performance indicators all satisfied the designed requirements, and the meter has provided a means of measurement for rewarding and penalizing efforts to realize minute and hour counting of fees and efforts to rationally implement electricity rates. It benefits the adjustment of the daily load curve and the safe and economical operation of the power network. It has been deeply trusted by users and power supply departments. The meter is now being produced by the Beijing Automated Equipment Plant.

Source: Beijing DIANLI JISHU [ELECTRIC POWER] in Chinese No 11, 1982 pp 76-77

Item: Shanghai Quartz Glass Plant
[0006 3189 4258 5391 3788 3863 0617]

Location: Shanghai, PRC

Data: Scientists in Shanghai have trial-produced a new generation of single mode fiber optics, the city's Science and Technology Commission reported here today. Used to transmit telephone messages within cables, the capacity of the optical fiber system is 100 times greater than the existing one. The commission said this is only one of 650 major research successes reported by the city's scientists last year. The success in the fiber optic research and application, which is close to advanced world standards, will aid modernization of China's communications, the commission said. The fiber optics development work was done by scientists of the Shanghai Science and Technology University and this plant. Other research successes include a new type of textile finishing agent produced by the Shanghai Resin Plant. The agent which has been developed abroad in the last decade is expected to help improve the quality of polyester yarn and fabrics.

Source: Beijing XINHUA in English 0706 GMT 28 Jan 83 OW]

Fig. 1 View of the Nei Monggol Electronic Computer Station in Hohhot City's central district
[Source]: Beijing GUANGMING RIBAO in Chinese 11 Feb 83 p 2]

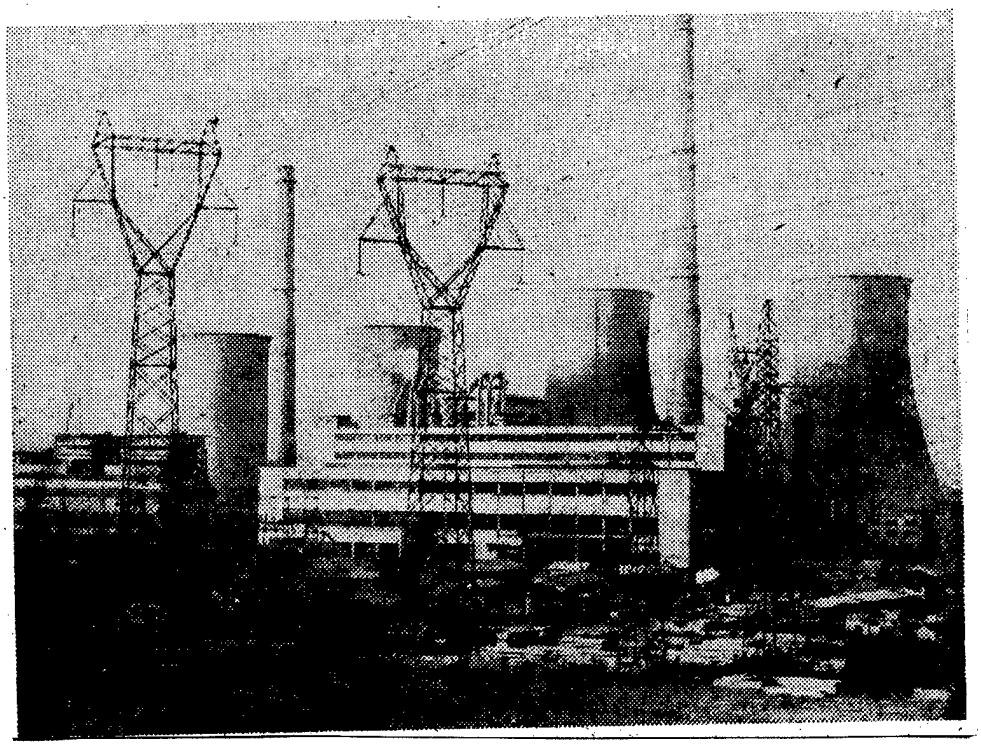


Fig. 2 The Jingmen Thermal Power Plant in Hubei has put another 200,000-KW thermal power generating unit into operation. This power plant has a total installed capacity of 420,500 kilowatts.
[Source: Shanghai JIEFANG RIBAO in Chinese 23 Dec 82 p 3]

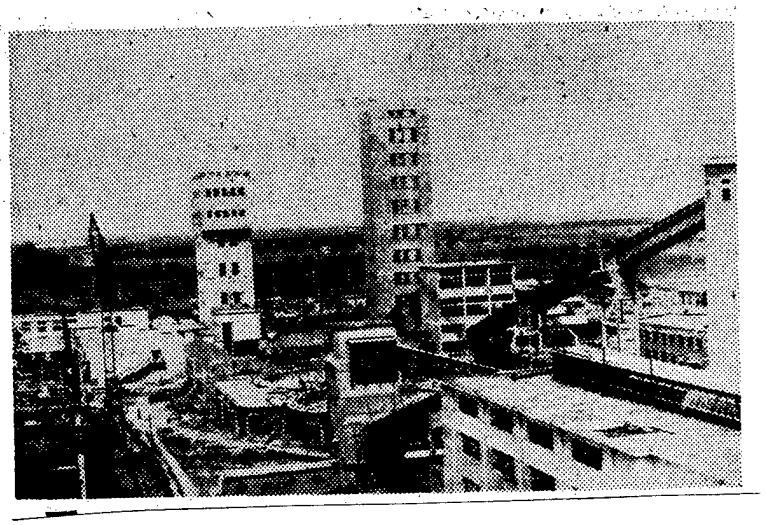


Fig. 3 Photograph of the new Zhuxianzhuang Coal Shaft located in Su Xian in the heart of the Huaibei Coal Field, Anhui. It has an annual output capacity of 1.2 million tons. Coal extracted is shipped to Shanghai for industrial use.

[Source: Shanghai JIEFANG RIBAO in Chinese 27 Dec 82 p 1]

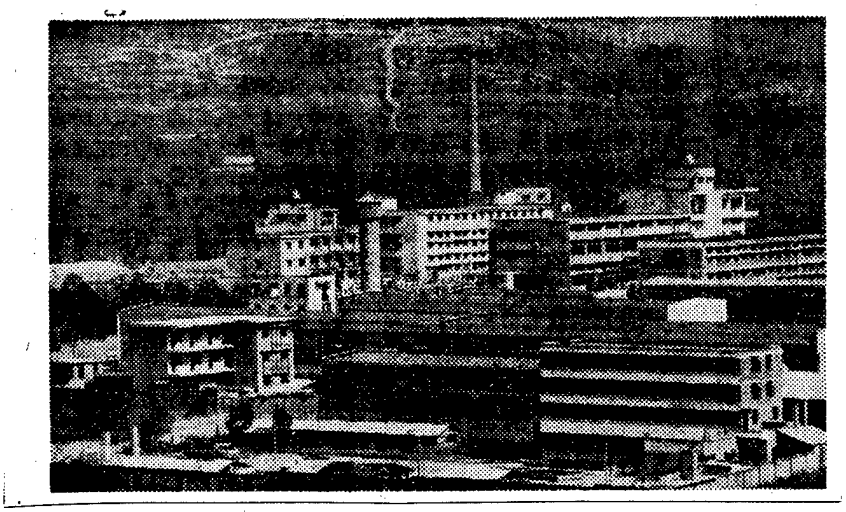


Fig. 4 The Kunming Perfume Plant, one of largest natural perfume plants in the country, is now in operation. It produces 1,400 tons of perfume a year.

[Source: Shanghai JIEFANG RIBAO in Chinese 1 Jan 83 p 2]

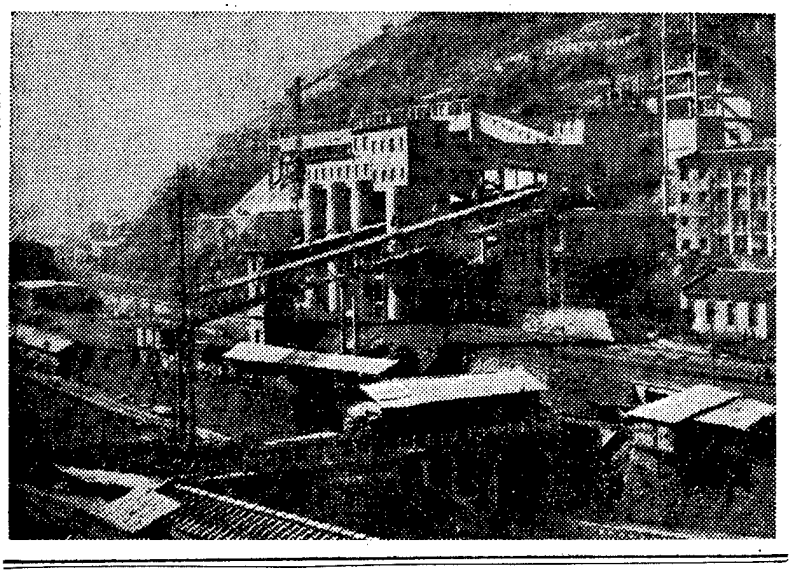


Fig. 5 Photo of the coal storage houses and transport system of the Shihao Coal Mine of Chongqing, Sichuan. Recently placed into operation, this highly mechanized mine has an annual output of 900,000 tons.

[Source: Shanghai JIEFANG RIBAO in Chinese 9 Jan 83 p 3]

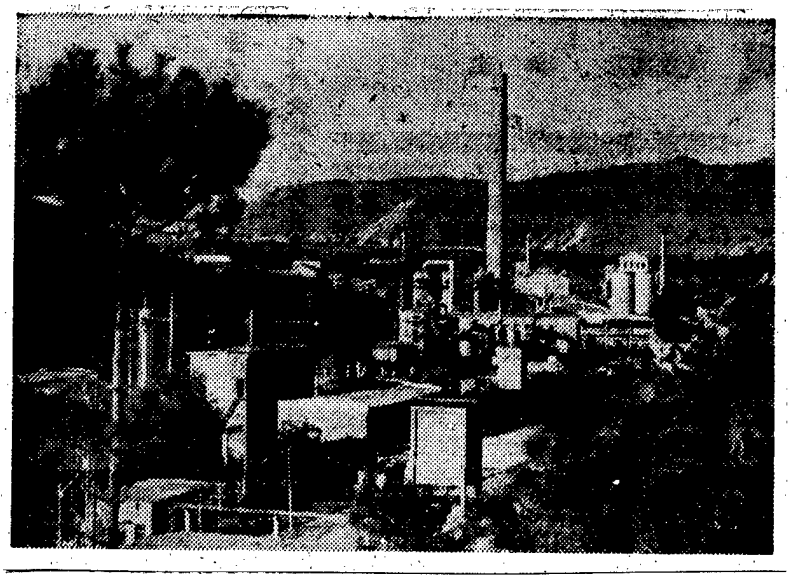


Fig. 6 View of China's first domestically-designed and installed facility using the wet method to produce concentrated superphosphate. Built at the Yunnan Phosphate Fertilizer Plant, this project, which was completed in November 1982, is capable of producing 100,000 tons of concentrated superphosphate annually.
[Source: Shanghai JIEFANG RIBAO in Chinese 23 Jan 83 p 3]

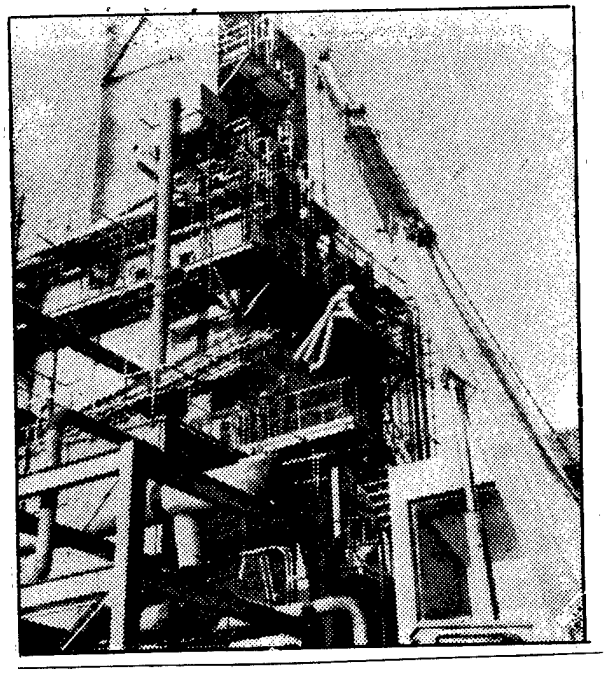


Fig. 7 Installation of the synthetic ammonia section for the Zhenhai Petrochemical Plant, formerly known as the Zhejiang Oil Refinery, is in full swing.

[Source: Hangzhou ZHEJIANG RIBAO in Chinese 8 Jan 83 p 1]

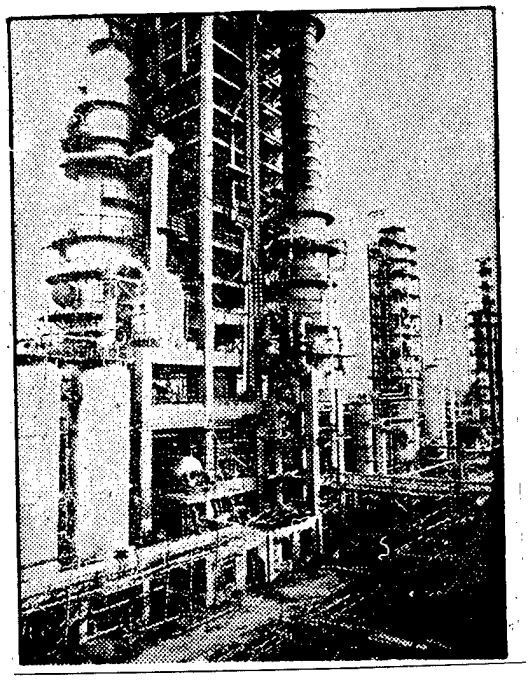


Fig. 8 View of the coaxial type lifting tube catalytic cracker successfully rebuit by the Lanzhou Oil Refinery.

[Source: Lanzhou GANSU RIBAO in Chinese 1 Jan 83 p 2]

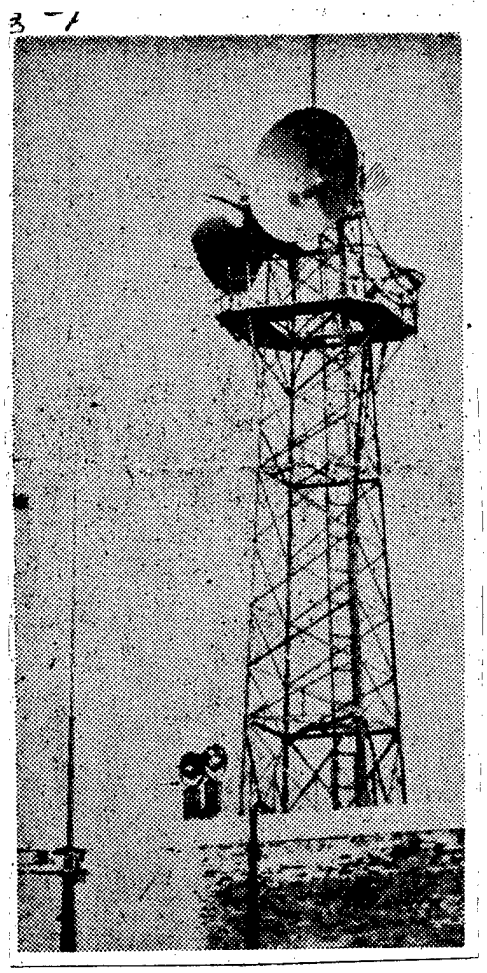


Fig. 9 Photo of a 400-meter-high microwave receiving tower. The 330,000-volt ultra-high-voltage transmission/transformer project starting from the Qinling Power Plant to the Zhuangtou Power Station via the transformer station in the southern suburbs of Xi'an in Shaanxi was put into operation on 21 December 1982.

[Source: Xi'an SHAANXI RIBAO in Chinese 23 Dec 82 p 1]

Fig. 10 The radio Centralized Station built in Shengsi County, Zhejiang, is currently the largest fishery centralized station in the country. Thousands of fishing boats receive instructions from their headquarters through this station.

[Source: Hangzhou ZHEJIANG RIBAO in Chinese 24 Nov 82 p 1]

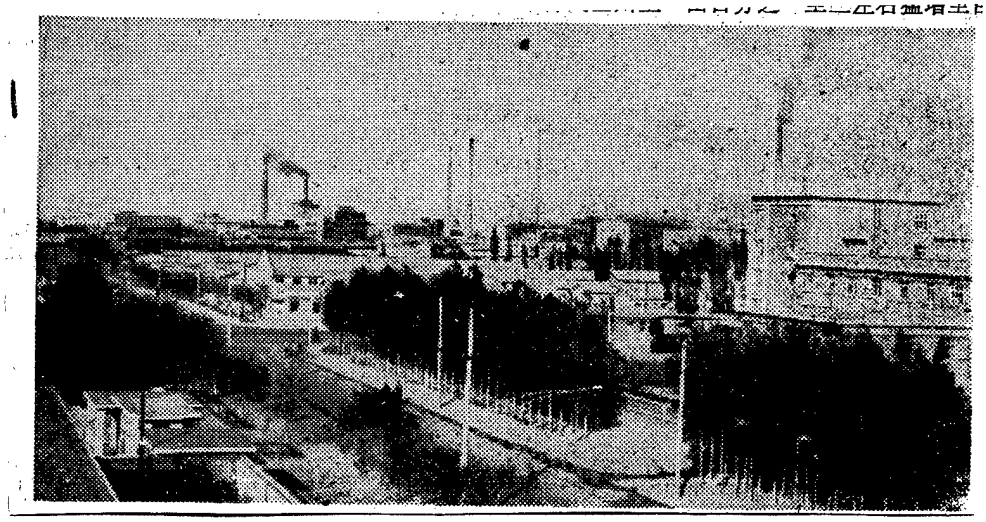


Fig. 11 The Jinchuan Smelting Plant in Gansu as viewed from a distance. Jinchuan has become China's largest nickel base and the center for refining platinum and other precious metals.

[Source: Shanghai WEN HUI BAO in Chinese 15 Dec 82 p 1]

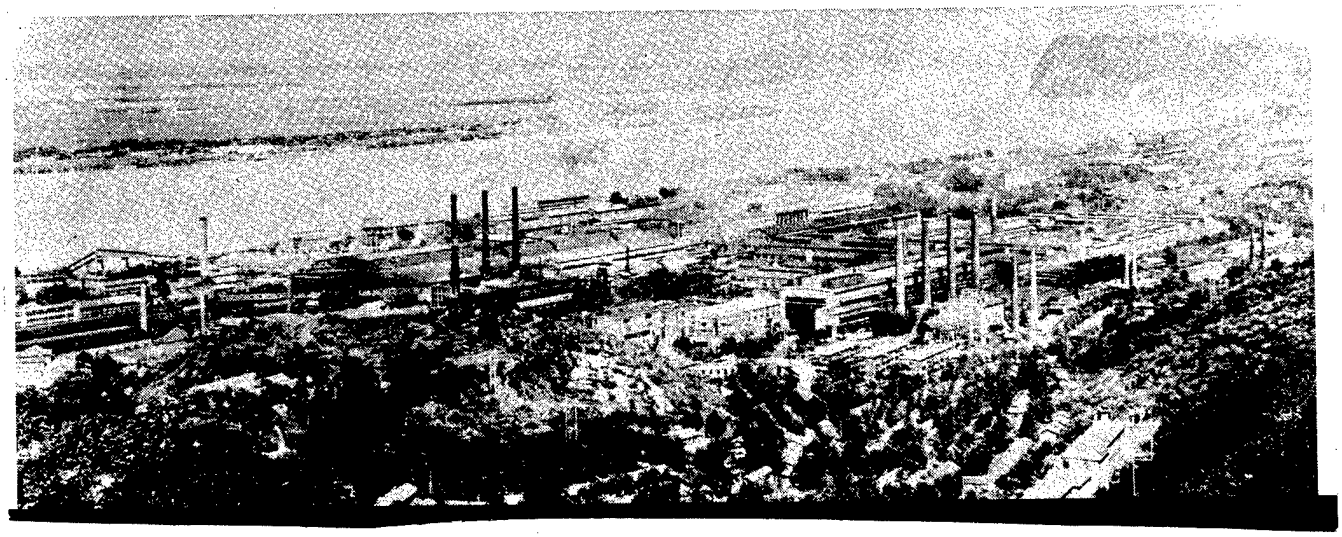


Fig. 12 The modern Daye Steel Plant in Huangshi City, Hubei.

[Source: Beijing ZHONGGUO JIANSHE [CHINA RECONSTRUCTS] in Chinese and English No 12, 1982 p 68]

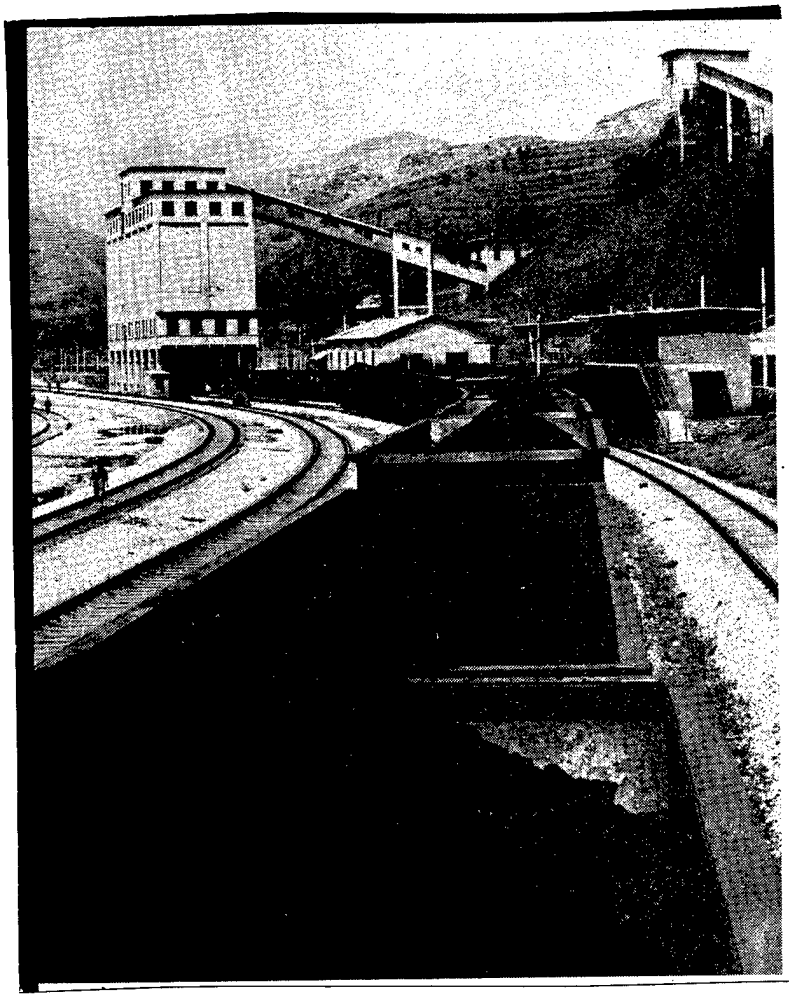


Fig. 13 Another sectional view of the Liupanshui Coal Mine in Guizhou Province.
[Source: Beijing BEIJING REVIEW in English No 5, 1983 p 18]

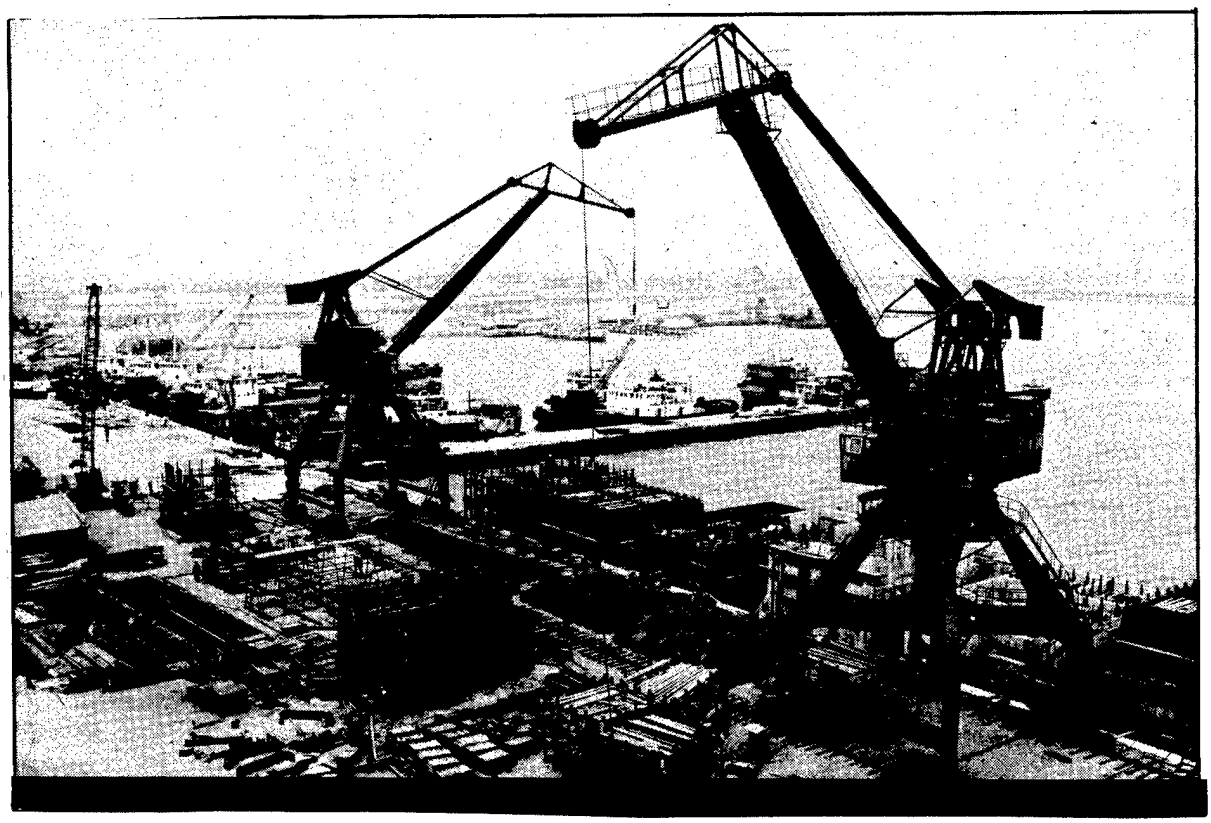
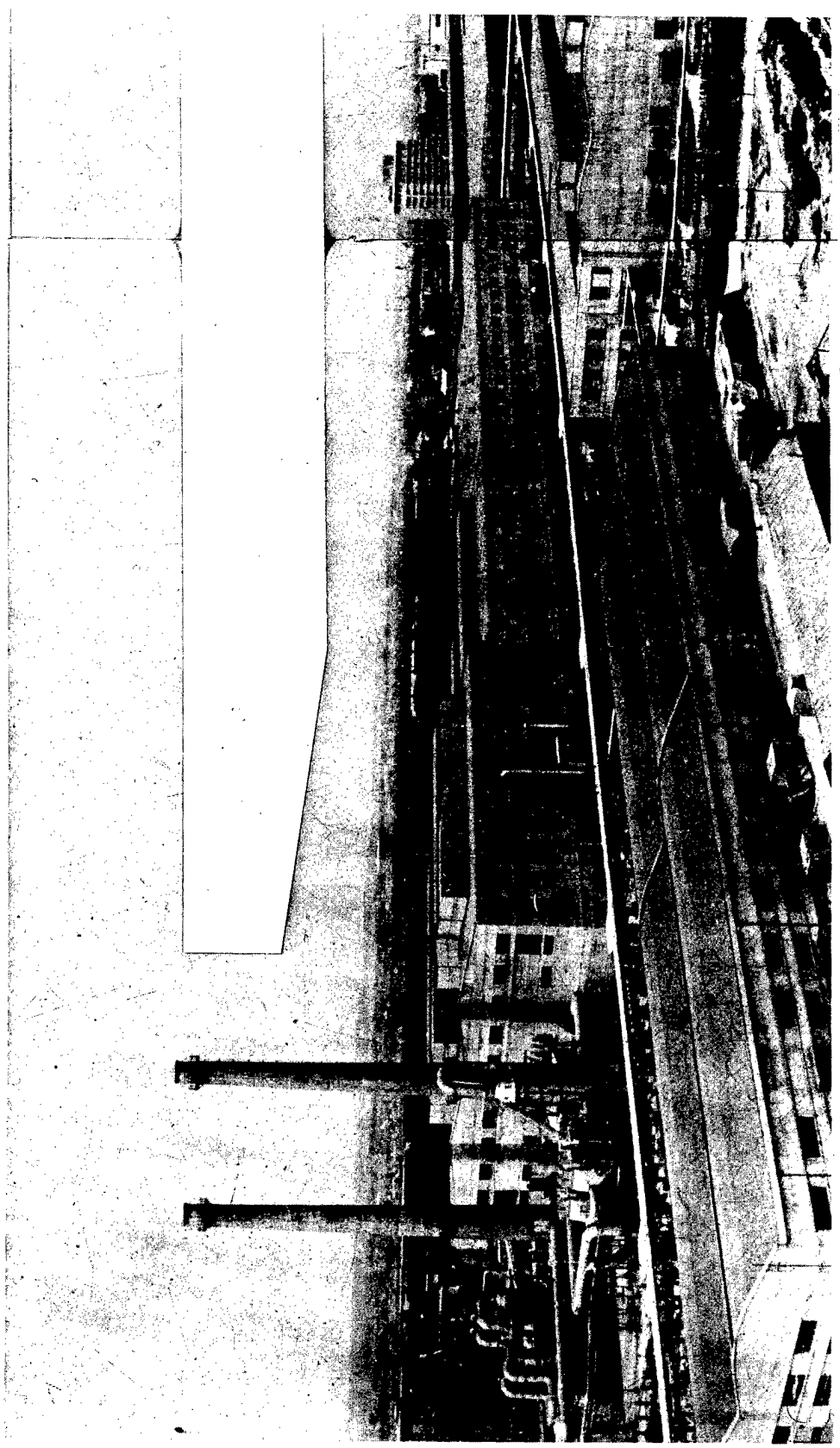


Fig. 14 A coal dock in Qinhuangdao under construction.

[Source: Beijing BEIJING REVIEW in English No 5, 1983 p 18]



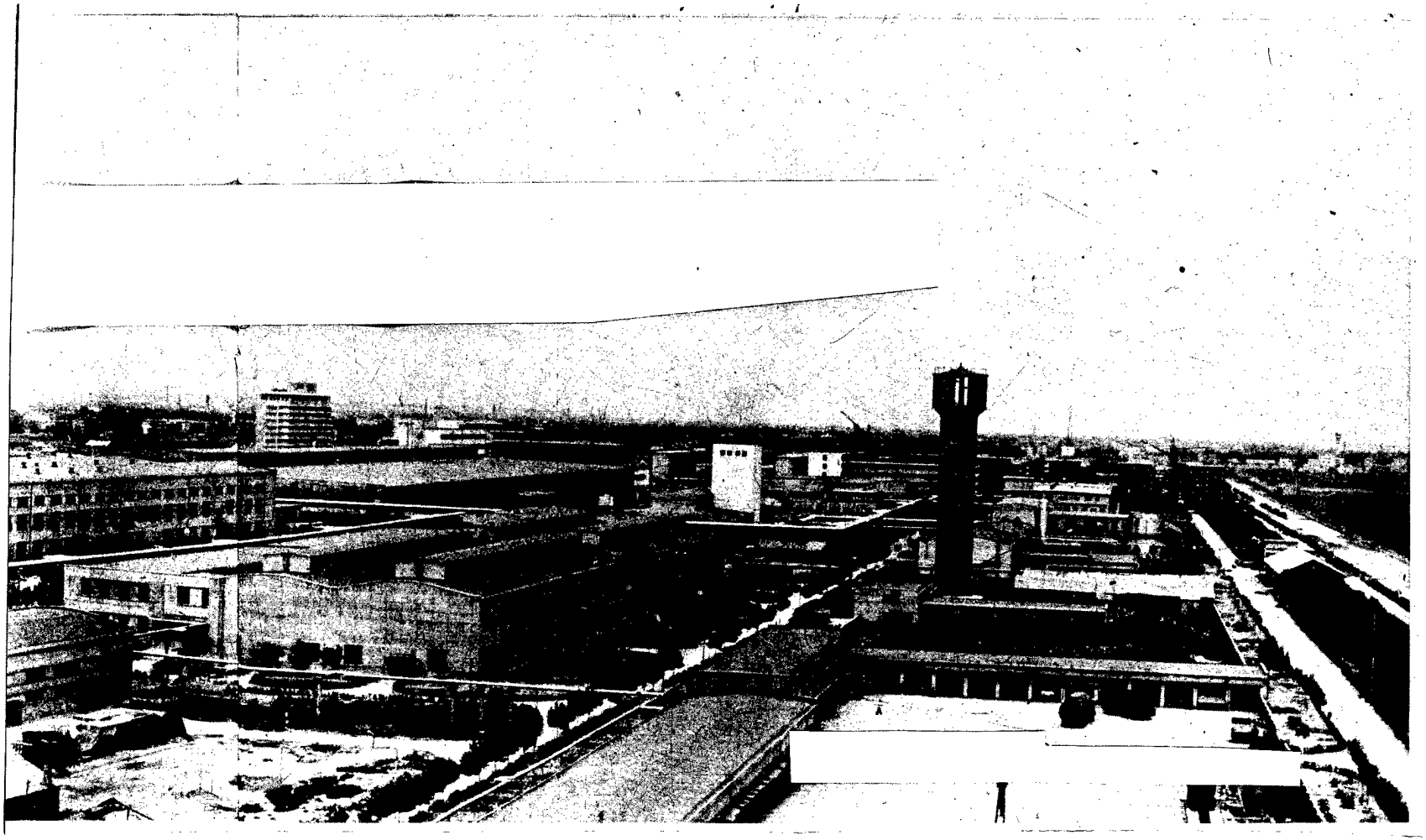


Fig. 15 Overview of Shaanxi Color Picture Tubes Plant in Xianyang, Northwest China.

[Source: Beijing ZHONGGUO SHICHANG [CHINA MARKET] in Chinese and English No 2, 1983 pp 38-39

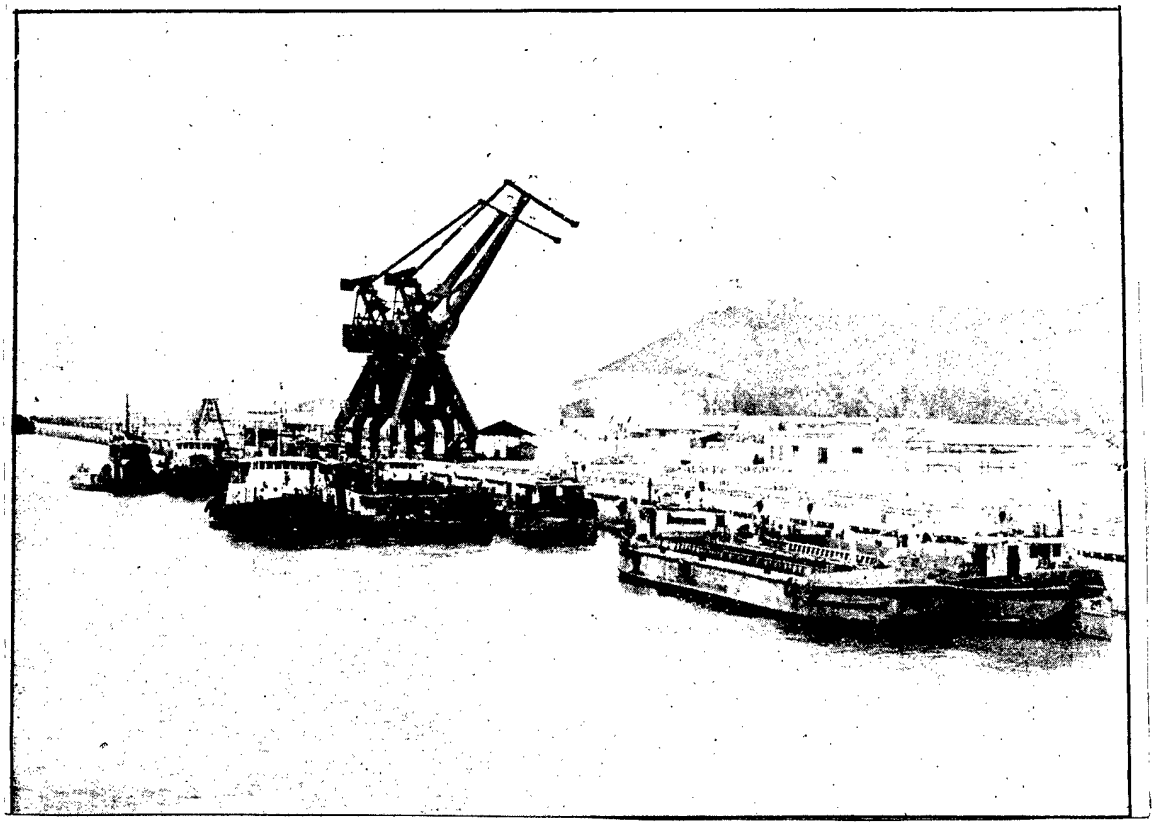


Fig. 16 Photo of the Dongdu Port wharf of Xiamen, Fujian. This pier will be in operation shortly.

[Source: Hong Kong JINGJI DAOBAO [ECONOMIC REPORTER] in Chinese Supplement on Fujian's Foreign trade 13 Sep 82 p 17]

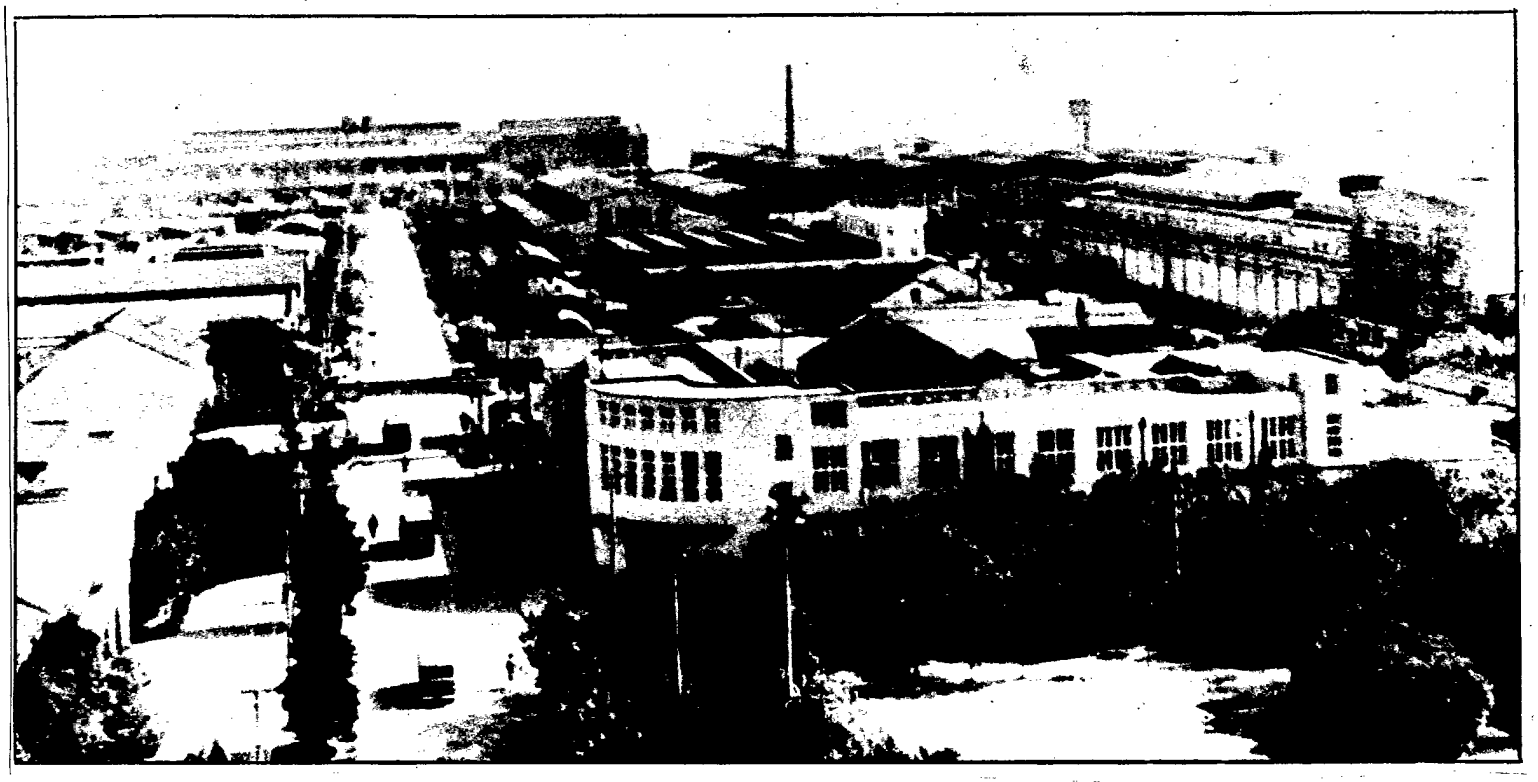


Fig. 17 View of the Shanghai Machine Tools Plant.

[Source: Beijing ZHONGGUO DUIWAI MAOYI [CHINA'S FOREIGN TRADE] in Chinese and English No 3, 1983 p 52]

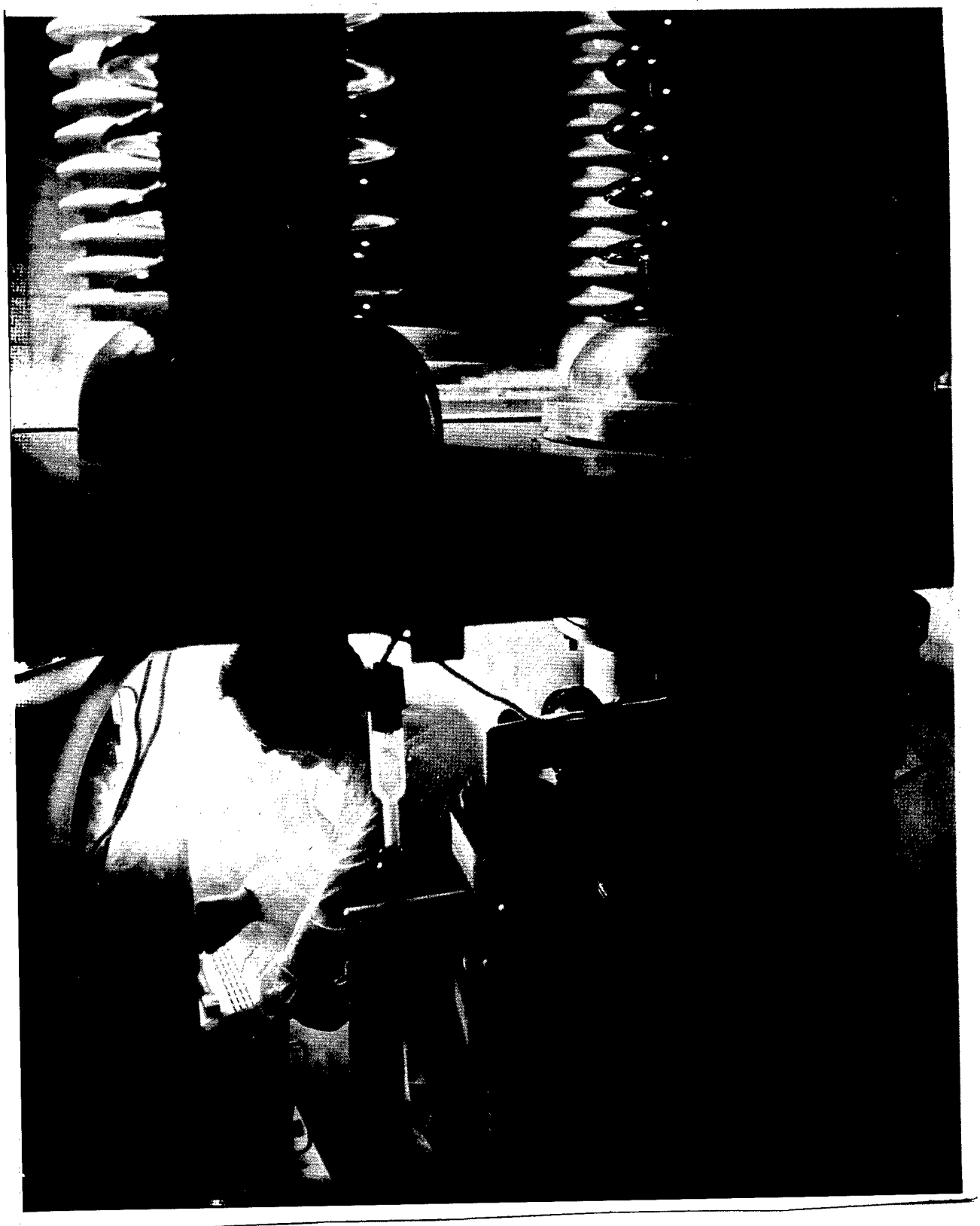


Fig. 18 A scientist checking the vacuum index of China's first 600,000 electronic volts high-energy ion implanter.

[Source: Shijiazhuang HEBEI HUABAO [HEBEI PICTORIAL] in Chinese No 6, 1982 p 22]

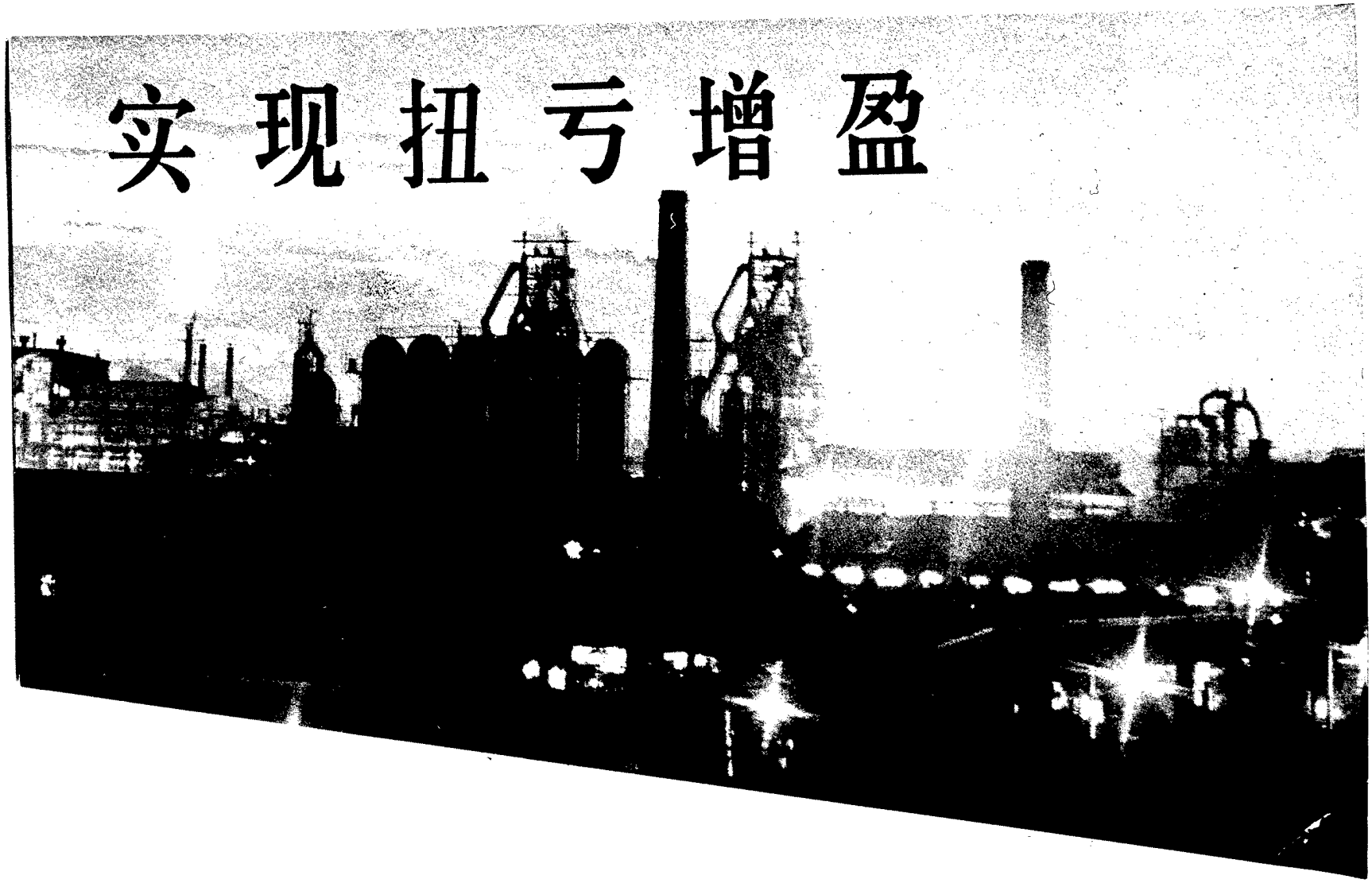


Fig. 19 A night scene at the Liuzhou Iron and Steel Mill in Guanggxi.

[Source: Nanning GUANGXI HUABAO [GUANGXI PICTORIAL] in Chinese No 6, 1980 p 7]

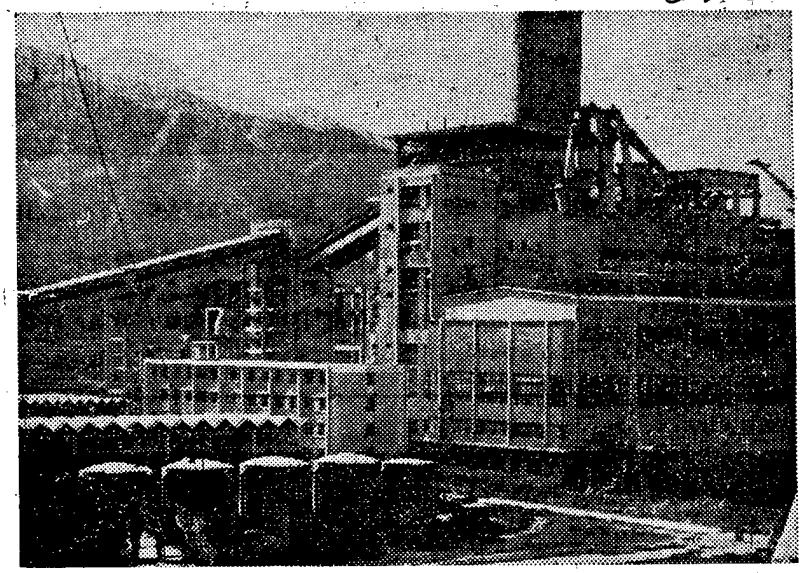


Fig. 20 Construction work on the second phase project of the Qinling Power Station has been completed. The No 1 generating unit with an installed capacity of 200,000 kilowatts will soon undergo trial run. This power station is located in the Weibei Coalfield, Shaanxi. Its second phase project has a total installed capacity of 800,000 kilowatts.

[Source: Shanghai JIEFANG RIBAO in Chinese 7 Feb 83 p 2]

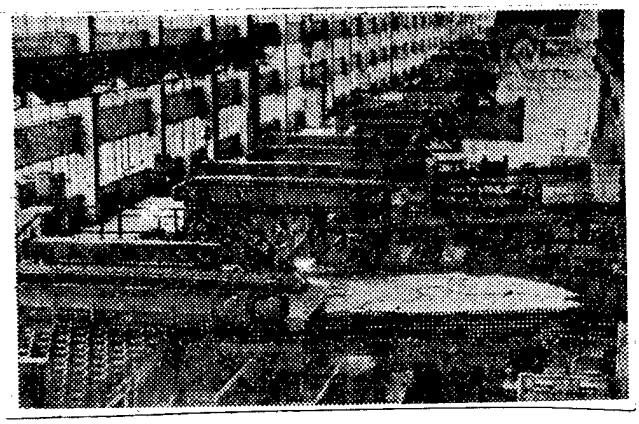


Fig. 21 Sectional view of a new workshop of the Tongliao Glass Plant in Nei Monggol. Equipped with all Chinese-made equipment, the Tongliao Glass Plant, the second of its kind employing the floating method in China, has a designed annual output capacity of 1.1 million crates.
[Source: Shanghai JIEFANG RIBAO in Chinese 7 Feb 83 p 2]

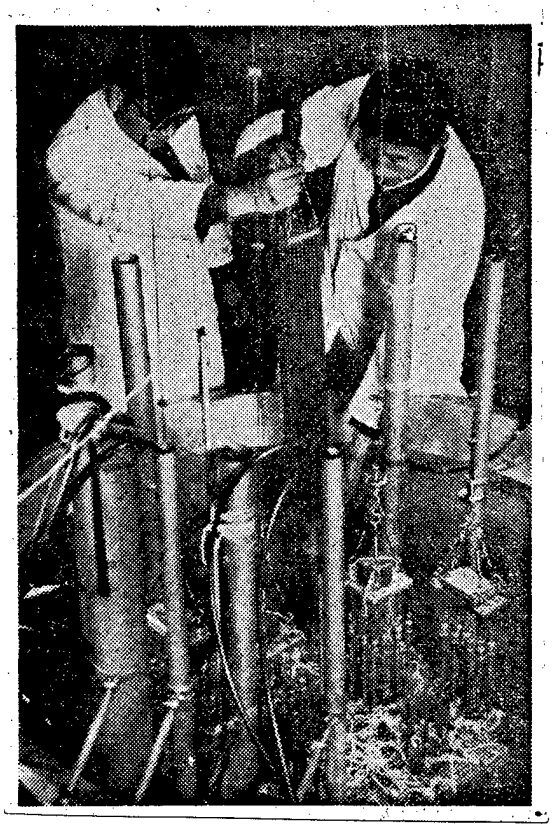


Fig. 22 Early phase construction of China's first 300,000-KW pressure water type reactor nuclear power station is under way in East China. About 80 percent of the scientific tests and equipment design work has been completed. Photo shows S/T personnel conducting nuclear fission zero power simulated tests with the nuclear experimental facility.
[Source: Shanghai WEN HUI BAO in Chinese 6 Feb 83 p 1]

CSO: 4013/144

END