CHINA'S RAPIDLY DEVELOPING COLD-STORAGE INDUSTRY

/Following is a translation of an unsigned article in the Japanese-language semimonthly publication of the Ajiya Tsushin Sha (Asia News Service), Chugoku Sangyo Shashin Tsushin (Photos and Features on Chinese Industry), No. 62, Tokyo, 15 February 1966./

There has previously been almost no data concerning China's cold-storage industry and its situation could not be grasped, but recently there have been several reports concerning this field by the New China News Agency, and centered on these, we shall present the status of China's cold-storage industry.

The fact that news concerning China's cold-storage industry has begun to appear in New China News Agency dispatches and in Chinese newspapers can be said to show that with recovery from the three continuous years until 1961 of natural calamities in China's agricultural production and the yearly increase in production of such things as meat, eggs, fish, and fruit, necessity for cold storage and refrigeration has arisen during the last few years, and cold-storage warehouses have been actively built and energy has been devoted to production of cold-storage machinery and equipment. Formal formation in April 1965 of the Chinese Cold-Storage Methods Association Preparatory Committee and the first meeting held on 22 April can be seen as responding to demands for cold-storage industry development. At the first meeting, 28 staff members were elected and such questions were discussed as the scope of activity of the association, specialization of various departments, preparations for establishment of branches in various places, and draft of a covenant (Takungpao, 11 May 1965).

240 Commercial Cold-Storage Warehouses in the Entire Country

Twenty-four cold-storage warehouses were built in the entire country during the half-century from the building of cold-storage warehouses by British tradesmen in such cities as Wuhan at the end of the 19th century to the 1949 liberation of the country, and total

storage capacity did not exceed about 30,000 tons. These cold-storage warehouses were largely managed by foreign and comprador capital and were distributed in such ports as Shanghai, Tientsin, Wuhan, and Harbin, and in production centers, and had as their purpose plundering of farm products of China's extensive farming villages such as meat and eggs and transporting of these outside the country (Peking Takungpao, 11 December 1965).

After the liberation, along with development of stock-farming, the fish industry, and fruit-growing, the broad livelihood of workers steadily increased and the consumption level of subsidiary food items greatly increased. In state-operated commercial sectors, cold-storage warehouses have been constructed one after the other to meet ceaseless expansion of fresh products development. Especially, more than 12 cold-storage warehouses were built in Peking, Shenyang, Canton, Chining, Hengyang, and elsewhere in 1965, commencing business one after the other. At present, commercial cold-storage warehouses throughout the country have risen to 240 and their total storage capacity has reached several hundreds of thousands of tons. There are cold-storage warehouses in all the country's provinces, cities, and autonomous districts, and in principal consumption areas for meat, eggs, poultry, fish, and fruit, such as the capitals of every province and autonomous district excepting the two autonomous districts of Tibet and Ninghsia, and in Peking and Shanghai, there are commercial cold-storage warehouses with a capacity of more than 3,000 tons each (Peking Takungpao, 11 December 1965).

In Peking, since the liberation, along with the increase in the standard of living of the townspeople, the No. 1 Cold-Storage Warehouse was built in 1955, the No. 2 Cold-Storage Warehouse was built in 1956, and since then other warehouses have been built, but recently, as demand for such things as meat, eggs, poultry, and fruit increased, the storage capacity of previous cold-storage warehouses became inadequate, and last year, another cold-storage warehouse with a storage capacity of 10,000 tons was built. This new cold-storage warehouse has a floor space of 18,000 square meters, is six stories high, and has ammonia cooling equipment, and a large-sized goods elevator is provided. Temperature in the warehouse goes down to -8 degrees centigrade, and various kinds of food products can be stored throughout the year (New China News Agency, 25 November 1965).

Also, construction of a large-sized cold-storage warehouse was completed in Wuhan in January of this year and commenced business. The capacity of the new cold-storage warehouse is 5.7 times the total storage capacity of the several cold-storage warehouses which were in the Wuhan area before the liberation. Technicians and workers who engaged in the design and construction changed the point that the adiabatic safety coefficient of foreign cold-storage warehouses is too large and made thinner by 5 centimeters the floor adiabatic layer of each story, and thereby, together with saving 40,000 yuan of investment and a large amount of valuable adiabatic material, increased capacity (New China News Agency, 5 January 1966).

In Fukien Province, a modern cold-storage plant was built for the first time in 1958, and by August 1964, the number of cold-storage

plants had increased to 15. In these cold-storage plants were also built ice-making plants and refreshing drink plants, and they make ice for fishing industry, medical, and industrial use and such things as ice candy and ice cream (Chungkuo Hsinwen, 19 August 1964).

Large-Sized Cold-Storage Plants Also at Various Marine Products Companies

In addition, at such fishing industry bases as Lu-ta, Yentai, Tsingtao, Shanghai, Chushan, and Nanhai, there are respectively state-operated marine products companies having modern marine products processing plants, ice-manufacturing plants, and cold-storage warehouses, processing such things as canned fish, frozen fish, frozen shrimp, and fish starch. Ice manufactured in ice-manufacturing plants is directly loaded in fishing vessels with automatic transportation equipment and used for maritime refrigeration (Chungkuo Hsinwen, March 1965).

The marine products company of Yentai in Shantung Province is one of China's largest fish-processing combines and has a cold-storage warehouse with a storage capacity of 9,000 tons, fresh fish storage, and an ice-manufacturing room.

Also, China's largest exclusive fishing port is presently under construction in Dairen and will soon be completed. The water basin of this fishing port is several tens of meters square and there are such facilities as more than one kilometer of breakwaters, several hundred meters of wharves, a large-sized ice-manufacturing room, and a large-sized cold-storage warehouse (Chungkuo Hsinwen, 28 January 1966).

Cold-Storage Facilities of Livestock Products Processing Plants

Along with development of the livestock industry, livestock products processing plants have also gradually been established and are developing yearly. In the four large stock-raising areas of Inner Mongolia, Heilungkiang, Kansu, and Tsinghai, there are several tens of large and medium-sized dairy products plants, and a large number of small-sized dairy products plants have also been constructed throughout the country. In Inner Mongolia, which is the country's largest livestock-raising district, there are four mechanized dairy products plants, two large-sized meat-processing combines, and a large number of medium and small-sized livestock products processing plants. Also, in addition to the large meat-processing combines in Wuhan and Pangpu, there are meat-processing combines in various cities throughout the country. All of the above dairy products and meat-processing combines have refrigeration equipment.

The Wuhan Meat-Processing Combine is China's largest, and the entire manufacturing process is mechanized, one day's processing capacity is from 7,000 to 10,000 head, and it has a five-story cold-storage warehouse with a storage capacity of 10,800 tons.

The Pangpu Meat and Egg Products Combine is a large-sized food products plant designed and built by China itself, making more than 100 kinds of meat and egg products, and it has a canning workshop with

a daily production of 10 tons.

The Hailar Dairy Products Processing Plant processes 150,000 tons of milk annually.

In addition, ventilation refrigeration equipment in food markets and food stores in various regions is gradually being provided. For example, Hsitan Food Store, Peking's largest, which opened in 1964, is provided with ventilation refrigeration.

Along with expansion and development of meat-processing capacity and refrigeration facilities as seen above, supply of meat and frozen meat has greatly increased. For example, communes of the Inner Mongolian Autonomous Region sold more than 2,800,000 head of cattle and sheep to the state, increasing 33 percent over the same period of the previous year, and also the same autonomous region's production of frozen meat and dairy products established an all-time record. Pork and frozen meat supplied to Shanghai from January through August 1965 by the neighboring provinces of Kiangsu, Chekiang, and Anhwei increased 60 percent over the same period of the previous year.

Cold-Storage Facilities Cannot Catch Up With Demand

Although China's cold-storage industry has made rapid progress since the liberation, it is said that it cannot catch up with the increase in production and consumption (Peking Takungpao, 11 December 1965). At present, about three fourths of the capacity of commercial cold-storage warehouses store pork, and last year the number of hogs raised reached an all-time record, and since the policy has been adopted that this will henceforth increase, it is pointed out that the cold-storage industry must be further expanded. At present, a group of cold-storage warehouses are under construction, and it is also reported that design of another group of cold-storage warehouses has begun (same as above).

Cold-Storage Machine Industry Also Rapidly Develops

Before the liberation, university training related to the cold-storage machine industry and cold-storage machine manufacture was nonexistent, but a cold-storage machine industry has now been established and for that reason specialist technicians are trained.

There are plants manufacturing cold-storage machinery and equipment such as the Dairen Cold-Storage Machinery Plant, Shanghai United Refrigeration Machinery Plant, Hangchou Oxygen Manufacturing Machinery Plant, and Wuhan Cold-Storage Machinery Plant, providing processing equipment for cold-storage warehouses. In addition, cold-storage freight cars and mechanically warmed cars are manufactured by the Wuchang Locomotive and Rolling Stock Plant, and electric refrigerators are also produced at the Peking Medical Instruments Plant and the Shenyang Medical Instruments Plant.

The Diaren Cold-Storage Machinery Plant recently successfully trial-manufactured the model 8AS17 refrigerator, and this new-model refrigerator has eight cylinders, a weight of three and one half tons,

and an hourly production capacity of 450,000 kilocalories. As a result of appraisal, it is said that the efficiency is good and that it meets design requirements.

At the Shanghai Refrigeration Machinery Plant, from the end of 1964 to July 1965, the structure of old products such as its own manufactured model P-11 and model KD-13 constant temperature and constant moisture equipment, -80 degrees low-temperature box, and refrigerator condenser units, as well as more than 10 accessory parts, were remodelled. This plant is a small plant with not very good facilities and more than 300 employees, but for the purpose of responding to demands of the state it has increased production centered on design revolution of products and is attaining outstanding results. The model P-11 constant temperature and constant moisture equipment previously had the volume of a small room, the production cycle was long, consumption of raw materials was great, and increase of production was quite difficult. Then, beginning in 1964, by means of design revolution the volume was reduced to one sixth. As a result, cost was lowered 60 percent, operation time was reduced to less than half, its efficiency increased one and a half times, and constant temperature and constant moisture control was more stable. Also, designing a new condenser, besides solving refrigerant leakage which for a long time had not been solved, more than 70 tons of copper and 450,000 yuan of funds were economized last year. The frame of the air-conditioner which had previously been gaudy and impractical was changed, and by means of that, the processing time for one frame was reduced by half and cost lowered to one sixth. Also, the -80 degrees low-temperature experiment box, which is an important product of the same plant, was thoroughly remodelled, and the time necessary to reduce the temperature from room temperature to the low temperature of -80 degrees was reduced from the previous eight to ten hours to one and a half hours, electricity consumed fell from 80 kilowatts to 6 kilowatts, volume of the product was reduced to three fourths, weight was made less by three fifths, cost of the product was reduced 23 percent, and some of the economic and technical characteristics exceeded the international advanced level.

By means of the above product design revolution, the production amount has greatly increased. Previously, the annual average increase had been from 30 to 40 percent, but the production amount from January to April of 1965 increased 60 percent as compared with the same period of the previous year, and quality also advanced greatly.

The Peking Medical Instruments Plant began production of electric refrigerators in 1958, and in 1965 it designed and produced a high-grade electric refrigerator. It is reported that some of the characteristics of this electric refrigerator surpass foreign first-rate products. The design and processing method of this new-type electric refrigerator have already been standardized, and in July of last year 50 were produced. Also, the Shenyang Medical Instruments Plant succeeded in November of last year in trial-manufacture of a small-sized refrigerator for the use of farm village traveling medical units. Its capacity is 50 liters, its weight only 35 kilograms, and it is convenient to carry. It uses either electricity or oil and can be used in remote mountain places

which do not have electricity.

Next, there are cold-storage machinery construction courses and departments for training of personnel for the cold-storage machine industry at the Wuhan Machinery College, Shanghai Marine Products College, Peking Commercial College, and Sian Chiaotung University, and they have already graduated several groups of students.

6899
DC-12239

P-1047
China
(Japanese)

ILLEGIB

ILLEGIB

PHOTOS AND FEATURES ON CHINESE INDUSTRY

ILLEGIB

ILLEGIB

ASIA NEWS SERVICE

Next 13 Page(s) In Document Exempt

This large fishery processing kombinat in Yen-t'ai, Shantung Province is equipped with cold storage, fresh fish storage and ice making facility. The cold storage has a capacity of 9,000 tons.

ILLEGIB

ILLEGIB

457798

ILLEGIB

Inside a cold storage at Yen-t'ai Fishery Kombinat Processing Plant (storage capacity of 9,000 tons). Picture shows frozen GUCHI [phonetic] fish.

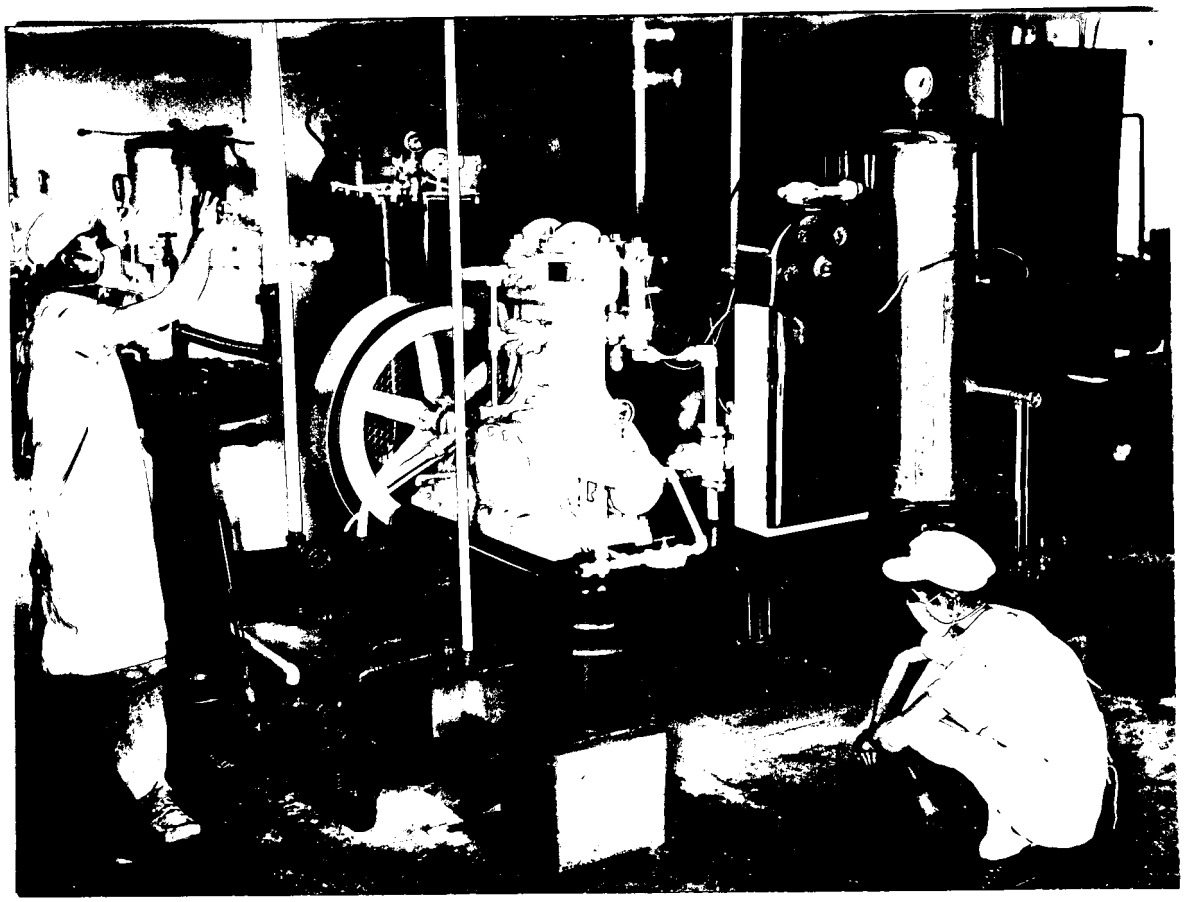
ILLEGIB

ILLEGIB

ILLEGIB

Carbonated water producing shop attached to No. 3 Plant of Shanghai Steel Works. This shop provides carbonated water and cool drinks to summer employees. This particular shop produces 40 tons of carbonated water per day.

ILLEGIB



ILLEGIB

8 66108

ILLEGIB

Wuhan Meat Processing Kombinat, a largest of its kind, has been completely mechanized from slaughtering to processing of meat. This kombinat processes 7,000 to 10,000 heads. Its cold storage has a storage capacity of 10,800 tons.

ILLEGIB

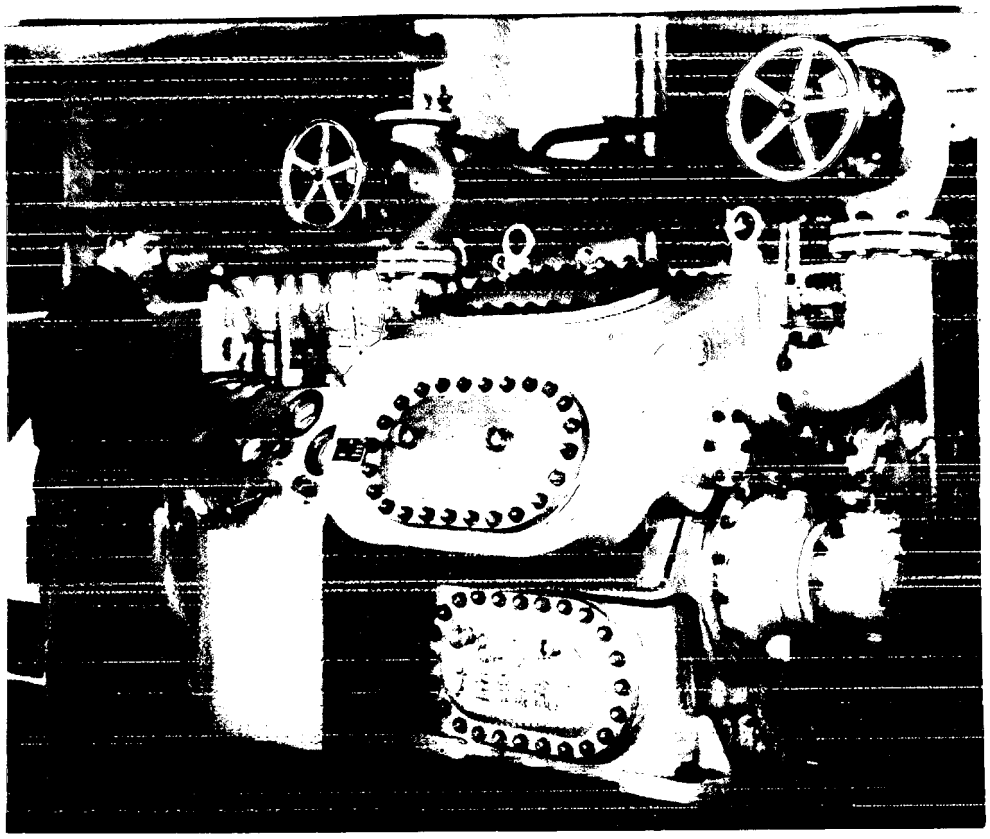
1059219

ILLEGIB

ILLEGIB

Ta-lien Refrigeration Plant succedded in test manufacture of 8 AS 17 type refrigerator. This is an 8 cylinder machinery weighing 3.5 tons with a production capacity of 450,000 large calories per hour.

ILLEGIB

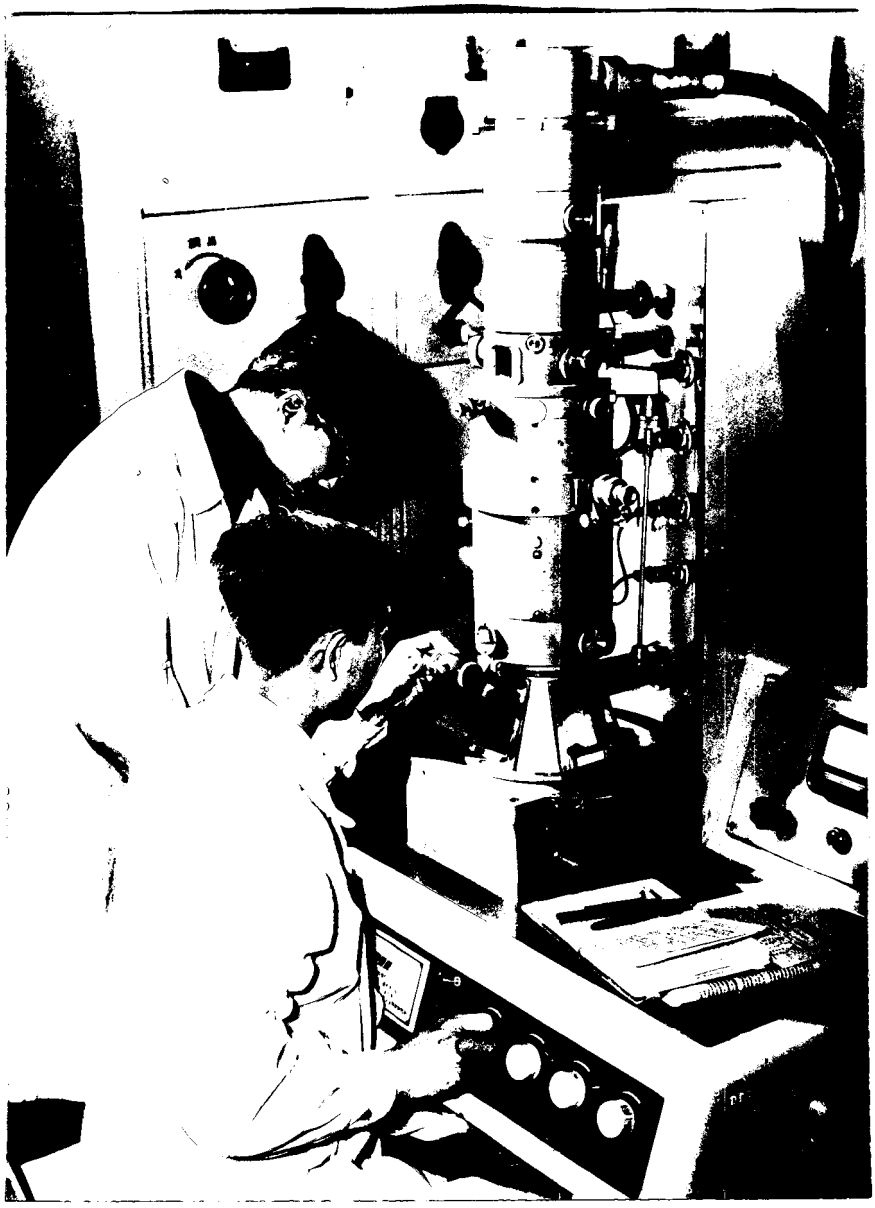


ILLEGIB

ILLEGIB

25X1 CHINA [redacted] HA-ERH-PIN 45 45 N 126 38 E
Ha-erh-pin Industrial Univ. Checking sedimentation condition of aluminum
alloy with 1001000 pwr electron microscope dvlpt jointly by Shang-hai
25X1 Optical Instr Plt. 1965. [redacted]
Confidential (4-9) CIA 1105859

ILLEGIB



ILLEGIB

ILLEGIB

Checking on sedimentation condition of aluminum alloy through an electron microscope with magnification power of 100,000 established at a laboratory at the Harbin Industrial University. This microscope was built jointly by this university and the Shanghai Optical Instrument Plant.

25X1

CHINA [redacted] SHANG-HAI 31 14 N 121 28 E

25X1 Shang-hai Watch Plt. Students fr Shang-hai Univ of Sci & Tech assembling machinery. 1965. [redacted]

Confidential (25) CIA 1105861

ILLEGIB

ILLEGIB

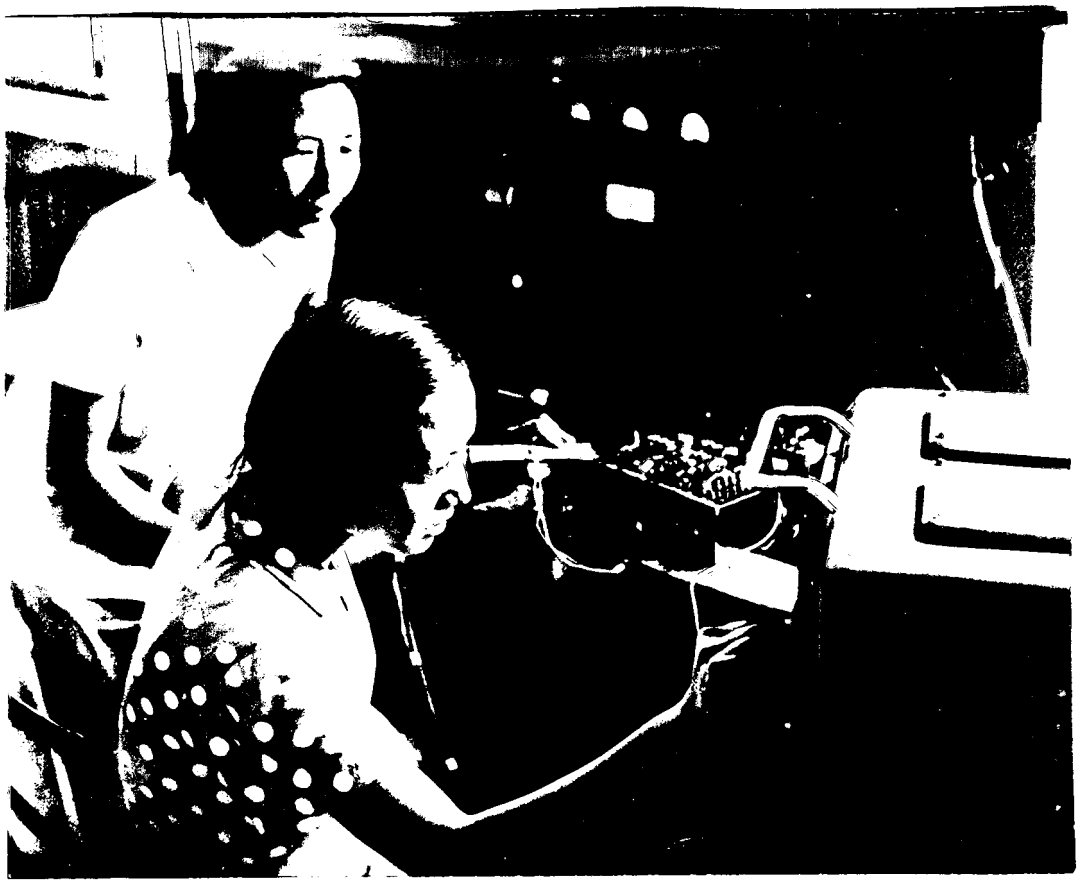
ILLEGIB

Students of Shanghai University of Science and Technology assemblying a machinery at the Shanghai Watch Plant

Approved For Release 2003/12/19 : CIA-RDP78-04546A003200020013-3

25X1 CHINA [redacted] PEI-CHING 39 55 N 116 23 E
China Univ of Sci & Technology automation section. 1965. [redacted] 25X
Confidential (4-23) CIA 1105860

ILLEGIB



ILLEGIB

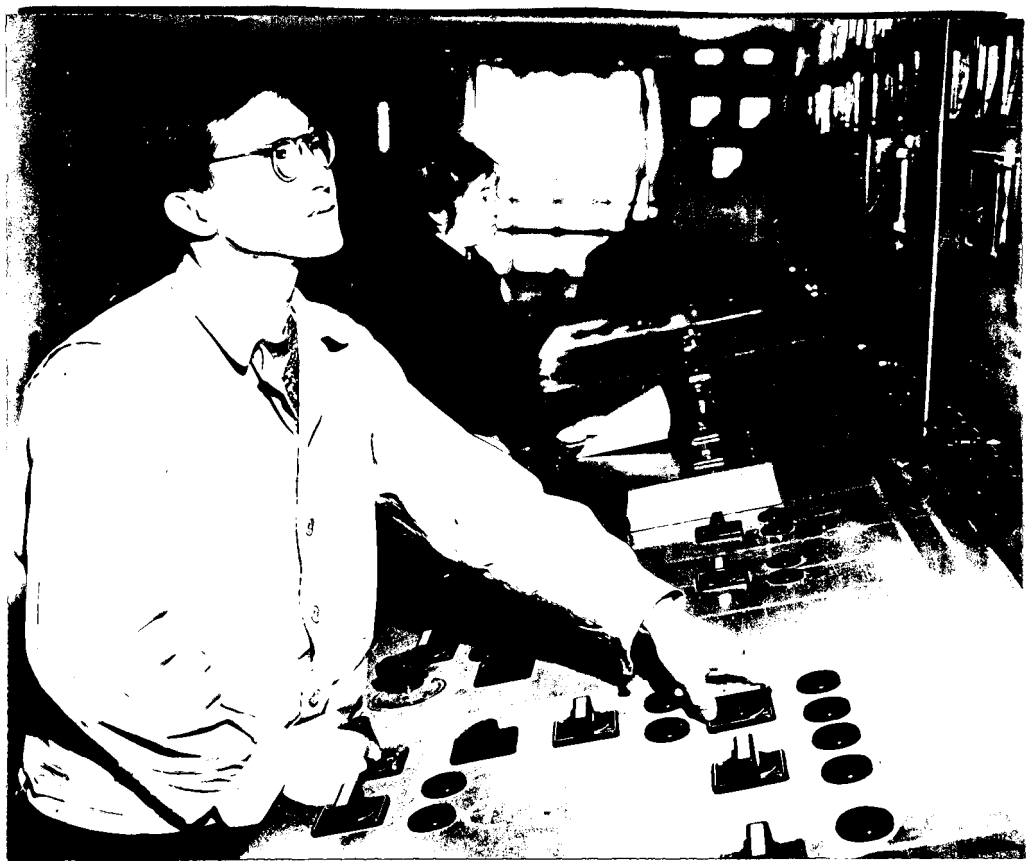
ILLEGIB

A girl student from the Automation Section of the China University of Science and Technology in Peiping is carrying out an experiment under the guidance of Hisa P'ei-su, a woman scientist. This China University of Science and Technology established in 1958 trains high class scientists and technicians. Ch'ien Hsueh-sen, a specialist in dynamics; Yen Chi-tz'u, a physicist; Hua Lo-ken, a mathematician; and Chao Chiu-chang, a geo-physicist teach at this university.

25X1 CHINA [redacted] PEI-CHING 39 55 N 116 23 E
Ching-hua Univ electrical engineering section. 1965. [redacted] 25X
Confidential (4-9) CIA 1105858

(2)

ILLEGIB



ILLEGIB

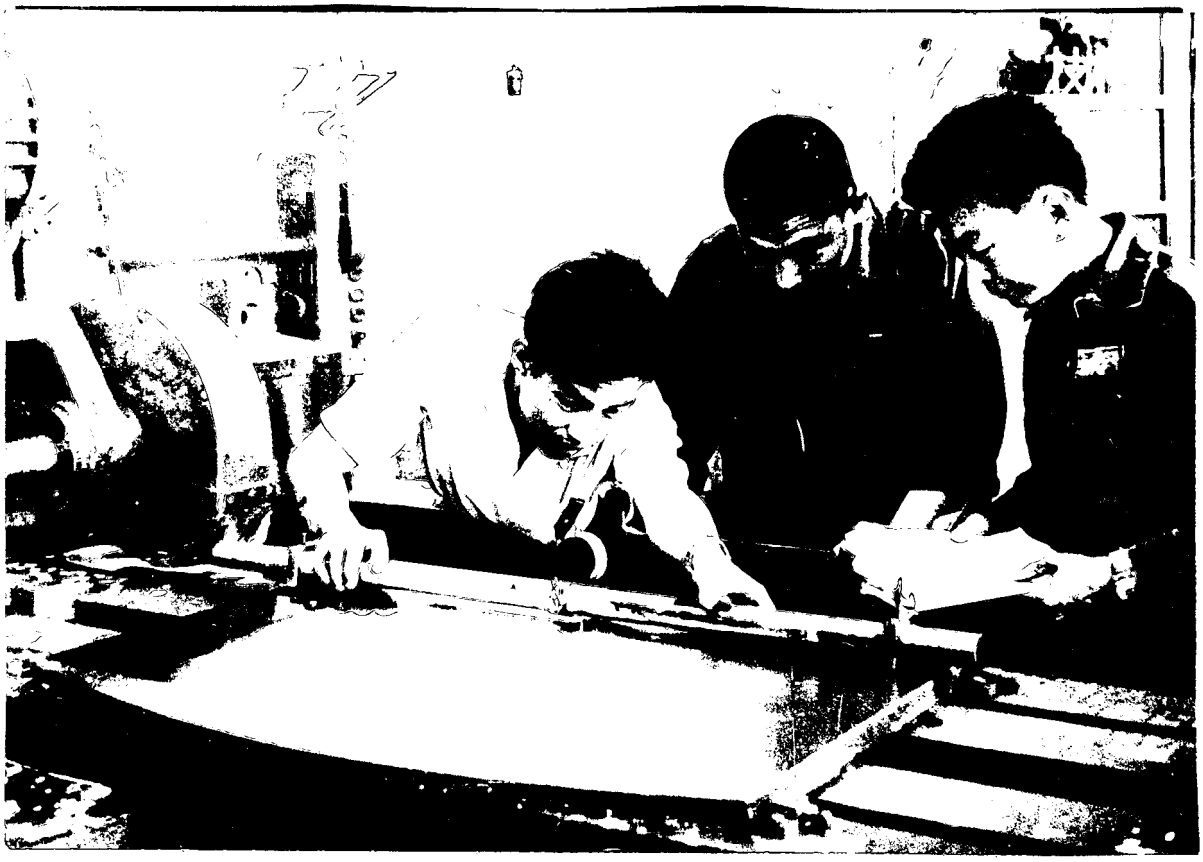
ILLEGIB

Research student of Electrical Engineering Section of the Ch'ing-hua University carrying out experiment at mock up test room to study electrical system.

Over 100 graduates who graduated from Peking Industrial University in 1965 carrying out graduate work at the Peking People's Machinery Plant. Students and a veteran worker in the middle are checking a sliding grinder built out of scrap materials.

Approved For Release 2003/12/19 : CIA-RDP78-04546A003200020013-3

ILLEGIB



ILLEGIB

ILLEGIB

High voltage electric laboratory at Central China Industrial College

1731 AN

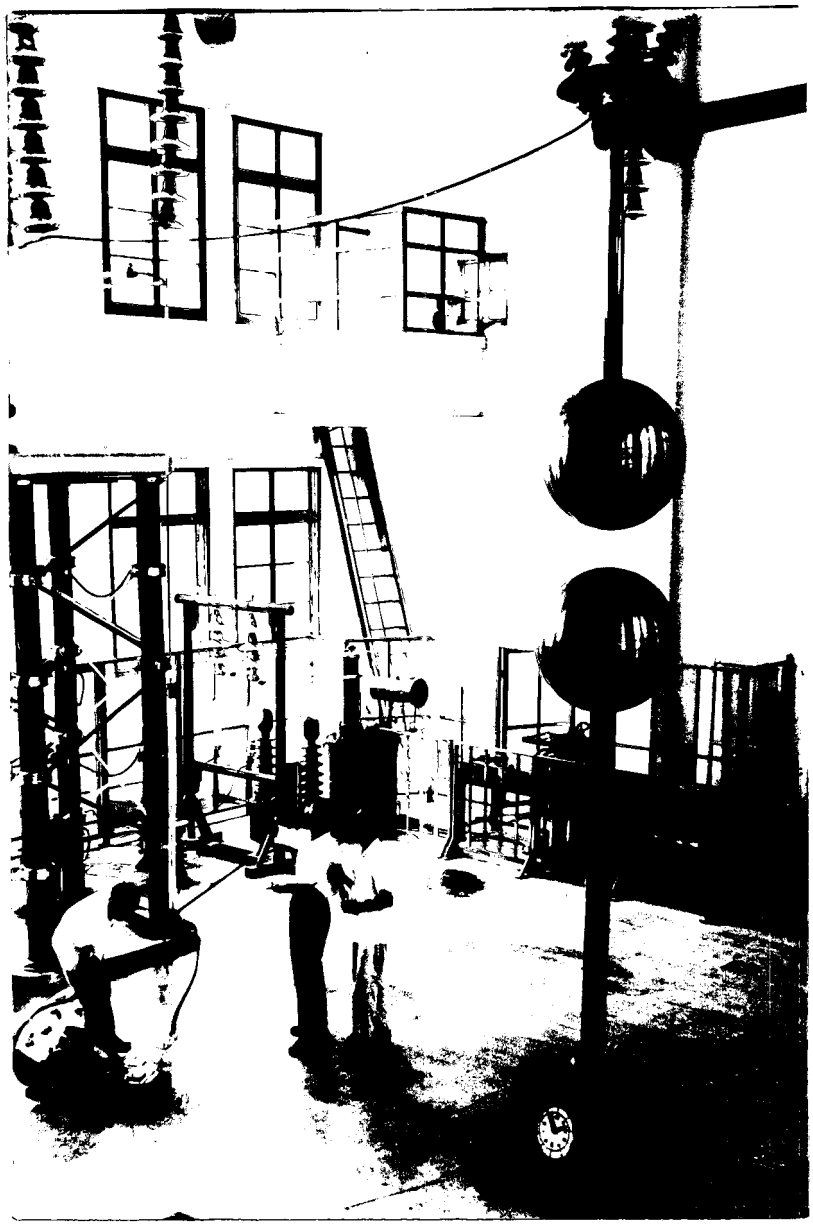
Wm. Hanes

not.

X

971015

ILLEGIB



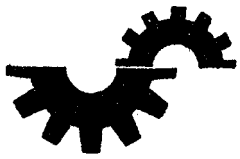
ILLEGIB

ILLEGIB

Next 5 Page(s) In Document Exempt

ILLEGIB

ILLEGIB



PHOTOS AND FEATURES ON CHINESE INDUSTRY

ILLEGIB

ILLEGIB

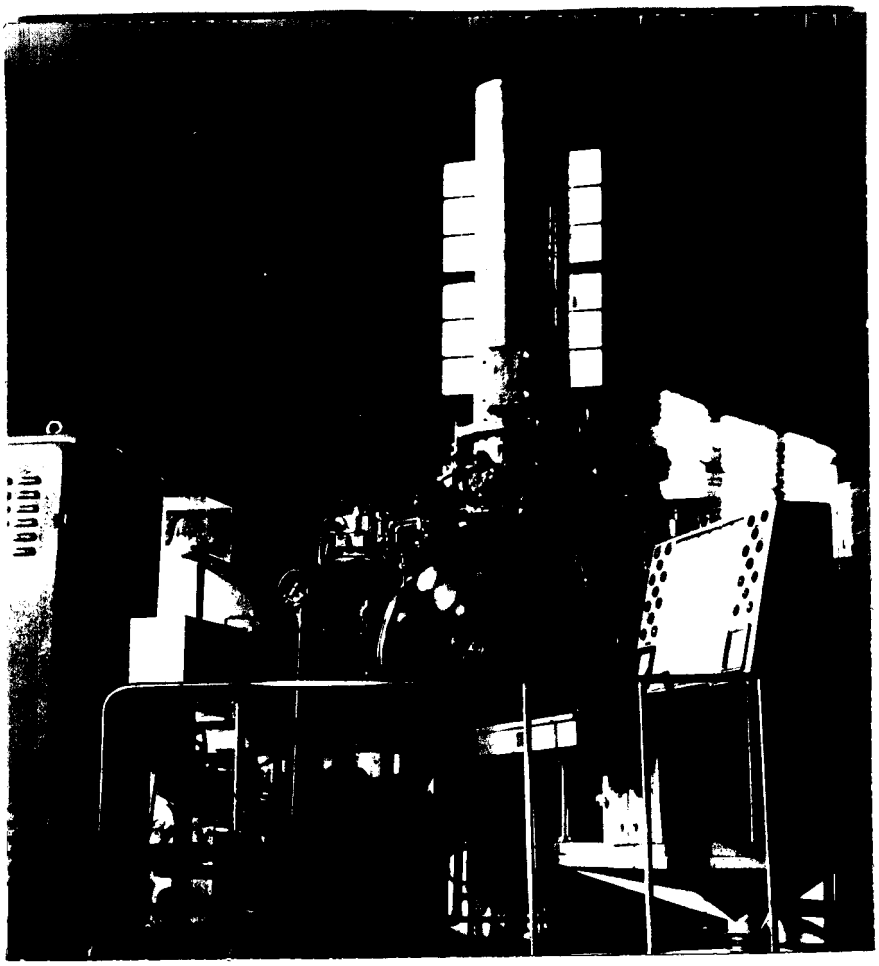
ILLEGIB

ILLEGIB

ASIA NEWS SERVICE

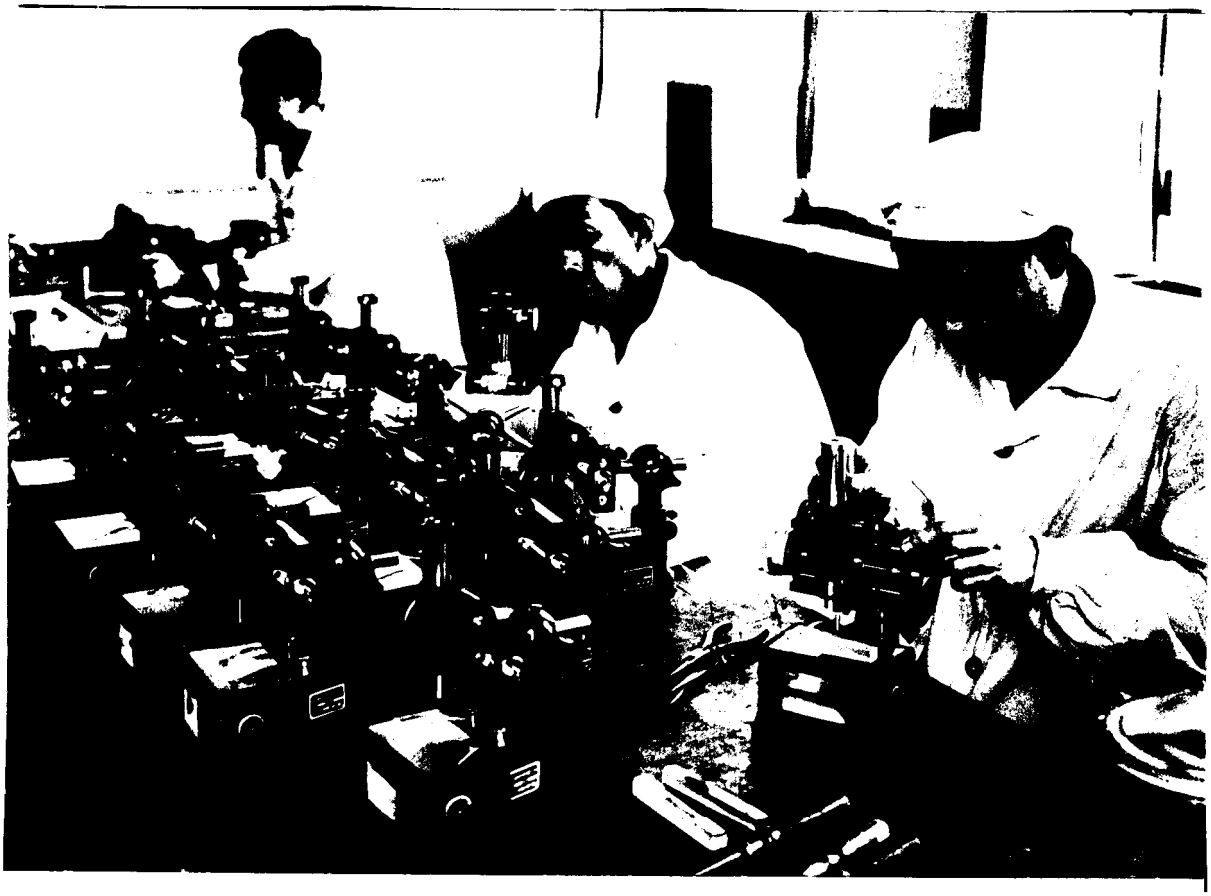
Next 5 Page(s) In Document Exempt

25X1 CHINA [redacted] CHIN-CHOU 41 07 N 121 08 E
Vacuum-type electron bombardment furnace manuf. by Chin-chou Elect.
25X1 Furnace Plt. 1966 [redacted]
Confidential (25) CIA 1120164



ILLEGIB

25X1 CHINA [redacted] CHIN-CHOU 41 07 N 121 08 E
Microscopes, used to inspect high precision measuring instruments, manuf.
by Chin-chou Optical Mach. Plt. 1966. [redacted] 25X1
Confidential (4,25) CIA 1120165



25X1 CHINA [redacted] CHIN-CHOU 41 07 N 121 08 E
Radio sets to be sent to farming villages, being tested at Hsin-sheng
Prec. Instrument Plt. 1966. [redacted]
Confidential (4,23) CIA 1120166 25X

Next 7 Page(s) In Document Exempt

25X1 CHINA [redacted] AN-SHAN IRON & STEEL PLT #1 41 08 N 122 59 E
Industrial television installed at the chuck rolling mill. Prior to 1966
25X1 [redacted]
Official use only (12,23) CIA 1149048

ILLEGIB

ILLEGIB

ILLEGIB

25X1

CHINA [redacted] TIEN CHING RADIO PLT 712 39 09 N 117 02 E
Television being mass-produced. Prior to 1966. [redacted] 25X
Official Use Only (23) CIA 1149047

ILLEGIB

ILLEGIB

ILLEGIB

25X1 CHINA [redacted] SHANG-HAI RDO EQP PLT #3 31 14 N 121 28 E
Inspection of the "Mei-to model 28A 8 transistor radio." Prior to 1966.
25X1 [redacted] Official Use Only (23,25) CIA 1149046

ILLEGIB

ILLEGIB

ILLEGIB

25X1 CHINA [redacted] SHANG-HAI 31 14 N 121 28 E

Radios & phonographs for sale at a retail store. Prior to 1966. [redacted] 25X1

25X1 [redacted] Official Use Only (23,25) CIA 1149045

ILLEGIB

ILLEGIB

ILLEGIB