

SOCIALIST CHINA IN PROGRESS



Large Electron Microscope Magnifies 400,000 Times

WORKERS and revolutionary technicians of the Shanghai Electronics and Optics Research Institute successfully trial-produced a large Chinese-style electron microscope with a magnification of 400,000 times. Their success is to be found in their carrying out our great leader Chairman Mao's teaching "China ought to make a greater contribution to humanity."

Designed and produced by Chinese personnel, this large electron microscope is made entirely of domestic materials. Tested, it has proved to be of good quality. Advanced techniques were used in the adjustment of the axis aligning of the image-forming system, in the removal of diffusion at the image point and in vacuum control.

The electron microscope is a precision instrument combining modern science and technology in radio electronics, electron optics, high electric voltage, high vacuum and precision mechanical processing. It is an effective tool in scientific research in metallurgy, biology, chemistry and physics, and helps production units observe and analyse the structure of matter.

The institute began studying and trial-producing electron microscopes in 1958. Guided by Chairman Mao's thinking on "self-reliance" and "hard struggle," the workers and revolutionary technicians repeatedly fought against the interference resulting from the renegade, hidden traitor and scab Liu Shao-chi's counter-revolutionary revisionist line in scientific research and overcame the lack of technical personnel and difficulties because of poor equipment. After studying, they trial-produced an electron microscope with a magnification of 200,000 times and a large electron microscope. They

trial-produced the large electron microscope magnifying 400,000 times during the Great Proletarian Cultural Revolution. As a result, China's electron microscope technology has taken a big step forward in catching up with and surpassing advanced world levels.

Cement Boat Industry Develops Rapidly

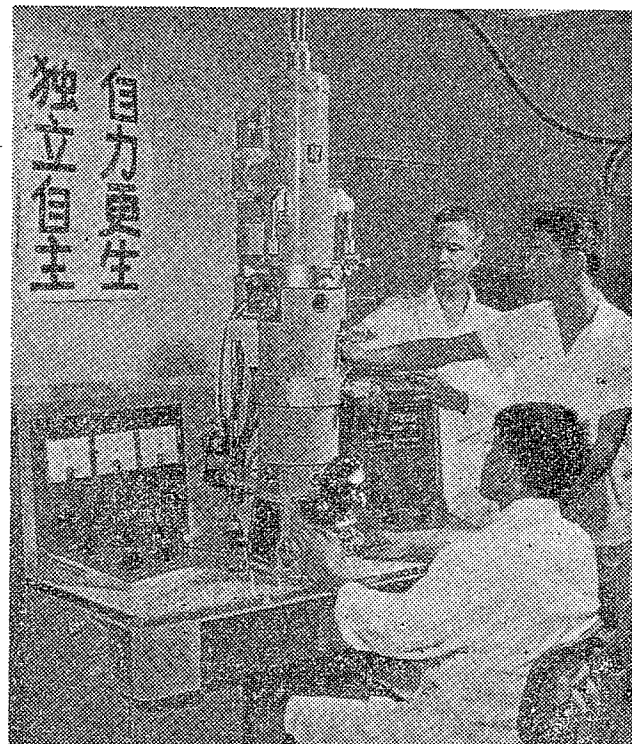
USING cement in boat-building first came about in China in 1958, the year of the big leap forward. These cement boats are fire-proof, erosion-resistant, durable and easy to maintain and repair. Simple to make, their production cost is low. In addition, large quantities of rolled steel, wood, tung oil and other materials can be conserved.

When the first cement boats were trial-built in 1958, the renegade, hidden traitor and scab Liu Shao-chi and his agents tried in every way to strangle this new-born thing. They nattered, "Cement boats are nothing but stone troughs. They crack as they are struck and sink immediately after they are put in the water." Yet the boat builders kept on producing the cement boats and repeatedly engaging in practice. They organized propaganda teams to go round rural areas to give on-the-spot demonstrations and to talk about the superiority of these boats. As a result, the boats began to be made and used in Kiangsu and Hunan Provinces and in Shanghai.

Wider-scale use of cement boats has taken place since the Great Proletarian Cultural Revolution and national output has gone up 2.7-fold. There are now some 200 kinds of cement boats. Many advanced techniques and new technological processes were created and applied and quality has been greatly improved.

In turning out these boats, the builders work according to our great leader Chairman Mao's teaching "The masses have boundless creative power. They can organize themselves and concentrate on places and branches of work where they can give full play to their energy; they can concentrate on production in breadth and depth." They criticized Liu Shao-chi's counter-revolutionary revisionist line, always relied on their own efforts, launched a mass movement in building cement boats and made the cement boat industry advance rapidly along Chairman Mao's revolutionary line.

Development of this industry promotes the work of industry aiding agriculture and the development of both industrial and farm production. As of now, there already are 21 prov-



Members of the Shanghai Electronics and Optics Research Institute adjusting the 400,000-x large electron microscope

inces, municipalities and autonomous regions making and using these boats on a wide scale.

Urban Middle Schools Set Up Rural Bases for Learning Farming

IN south China, branch schools serving as bases for learning farming have been set up by every one of Kwangchow's 79 middle schools. This has been done according to Chairman Mao's teaching: "While their [the students'] main task is to study, they should also learn other things, that is to say, they should not only learn book knowledge, they should also learn industrial production, agricultural production and military affairs. They also should criticize and repudiate the bourgeoisie." Teachers and students are rotated in going to these bases on the city's outskirts. Studying and taking part in physical labour, they combine teaching, scientific research and productive labour. As a result, they are tempered and their knowledge is widened.

Most of the branch schools can now accommodate 400 students and teachers. Some can take 800. These schools work the land reclaimed by the teachers and students who put up school buildings by utilizing local materials. Many of the schools harvested rice, peanuts and other farm products six months after being established. Some have also developed side-line production.

Poor and lower-middle peasants in the vicinity often go to the schools to conduct scientific experiments with teachers and students. Quite a number of veteran peasants now serve as part-time teachers.

Primary importance is attached to the training of successors to the revolutionary cause of the proletariat in line with Chairman Mao's great teaching. Poor and lower-middle peasants are often asked to talk about their family and village history and of the struggle between the two lines in the locality. In being re-educated by the poor and lower-middle peasants, the teachers and students join them in class struggle, studying and applying Mao Tsetung Thought in a living way, criticizing

the bourgeoisie and making social investigations.

Each branch's plan for teaching, scientific research and production is unified with that of the school it belongs to in the city. Adhering to the principle that the students' "main task is to study," the branch schools combine study with practice. For example, mathematics and physics are studied in relation to what is being done — erecting buildings, making bricks, digging fish ponds, sinking wells, installing electric lighting, etc. Also, the study of basic agricultural knowledge is combined with field work.

Edited through the combined efforts of teachers, students and poor and lower-middle peasants in practice, the new teaching material is welcomed by the teachers and students because it is easily understood and applied.

Cover the Country With Trees

GUIDED by our great leader Chairman Mao's great principle "Be prepared against war, be prepared against natural disasters, and do everything for the people," the revolutionary masses in Heilungkiang and Liaoning Provinces have made big achievements in their vigorous activities for afforestation.

Seizing the right time in spring and autumn, the Heilungkiang people concentrated their efforts on reforestation. Initial statistics show that this year the province has reforested 5,310,000 *mu*, an area exceeding 18 per cent that of the previous peak year, 1969. It has over-shot its 1970 annual plan by 17 per cent. On the basis of overfulfilling the annual plan for reforestation in the spring, the people there launched another afforestation upsurge in the autumn.

The people of Liaoning have also had great success in autumn afforestation work. By early November, the province had overfulfilled the 1970 afforestation plan by 500,000 *mu*.

Rich Tea Harvest

CHINA'S major tea-growing areas, Chekiang and Fukien Provinces,

have reported another rich tea harvest this year.

Following 1970's rich spring and summer tea harvests, Chekiang Province had a good autumn yield. Total tea production in the province was 10 per cent higher than in 1969, a year of bumper harvests.

Fukien Province has also reaped a rich tea harvest this year. Total output rose 20 per cent above last year's. While succeeding in producing tea, commune members and cadres actively developed grain production. Hence, many communes and brigades had good harvests of both.

Big Hairtail Catches in East China Sea

FISHERMEN along the east China coast, in Chekiang, Fukien and Kiangsu Provinces and Shanghai, have gone all out in fishing during the current hairtail season. Catches up to now have been 53.8 per cent bigger than in the corresponding period last year. Chekiang Province hauls reached 1,000,000 *dan* (100 *jin* equals 1 *dan*), nearly double the amount caught in the same period last year.

Full preparations were made for this winter's large-scale hairtail catches in the East China Sea which started early. Before going to sea, the communes and brigades in the fishing areas were fully prepared politically, ideologically, organizationally and materially. They put to sea nearly a month earlier than usual. The number of fishermen on the sea was 20 per cent more than last year. There also was an increase in the number of different kinds of fishing boats used.

Working with revolutionary enthusiasm, the fishermen overcame unfavourable conditions, such as warm weather and high water temperature, conducive to scattered fish schools. They caught the hairtail in time and made big hauls.

First of China's Biggest All- Corrugated Plate Type Oxygen Generator

THE first of China's biggest all-corrugated plate type oxygen gene-

(Continued on p. 28.)

(Continued from p. 26.)

rator has been successfully produced by the Hangchow Oxygen Generator Manufacturing Plant.

Compared with the same type of machine outside China, this oxygen generator has many advantages such as its small size, light weight, high efficiency, easy operation and wide-scope use. Its successful manufacture fully testifies that our oxygen generator industry has attained a new level.

Super-Heavy Type Vertical Turning Lathe

THE first super-heavy type vertical turning lathe designed and built by Chinese personnel was successfully produced by the Wuhan Heavy Machine Tool Plant recently.

Some technicians held that one year would be needed to design such a lathe because of its rather complex structure. In the course of manufacturing it, the plant's workers, revolutionary cadres and revolutionary technicians swept aside all fetishes and superstitions, emancipated their minds and gave full play to the revolutionary spirit of daring to think and act. As a result, they completed all tasks, from designing to manufacturing, in only seven months.

China's First Combined Type Magnetic Separating and Filtering Machine

SHATTERING the theory that "the type of products is fixed" and vigorously going into technical innovations, workers, revolutionary cadres and revolutionary technicians of the Shenyang Mining Machinery

Plant have successfully trial-produced China's first combined type magnetic separating and filtering machine. Tests have proved the results it gives to be good.

Production of this machine has created conditions for developing the ore-dressing industry with greater, faster, better and more economical results. By doing magnetic separating and filtering simultaneously, the machine simplifies the technological processes and shortens the production process in ore dressing, thereby more than doubling efficiency. The machine also helps reduce the area occupied by the ore-dressing plant and the height of plant buildings.

Correction: In No. 51, Mongolia mentioned in the right-hand column on p.14 should be included in the section of Asian countries on p. 13.