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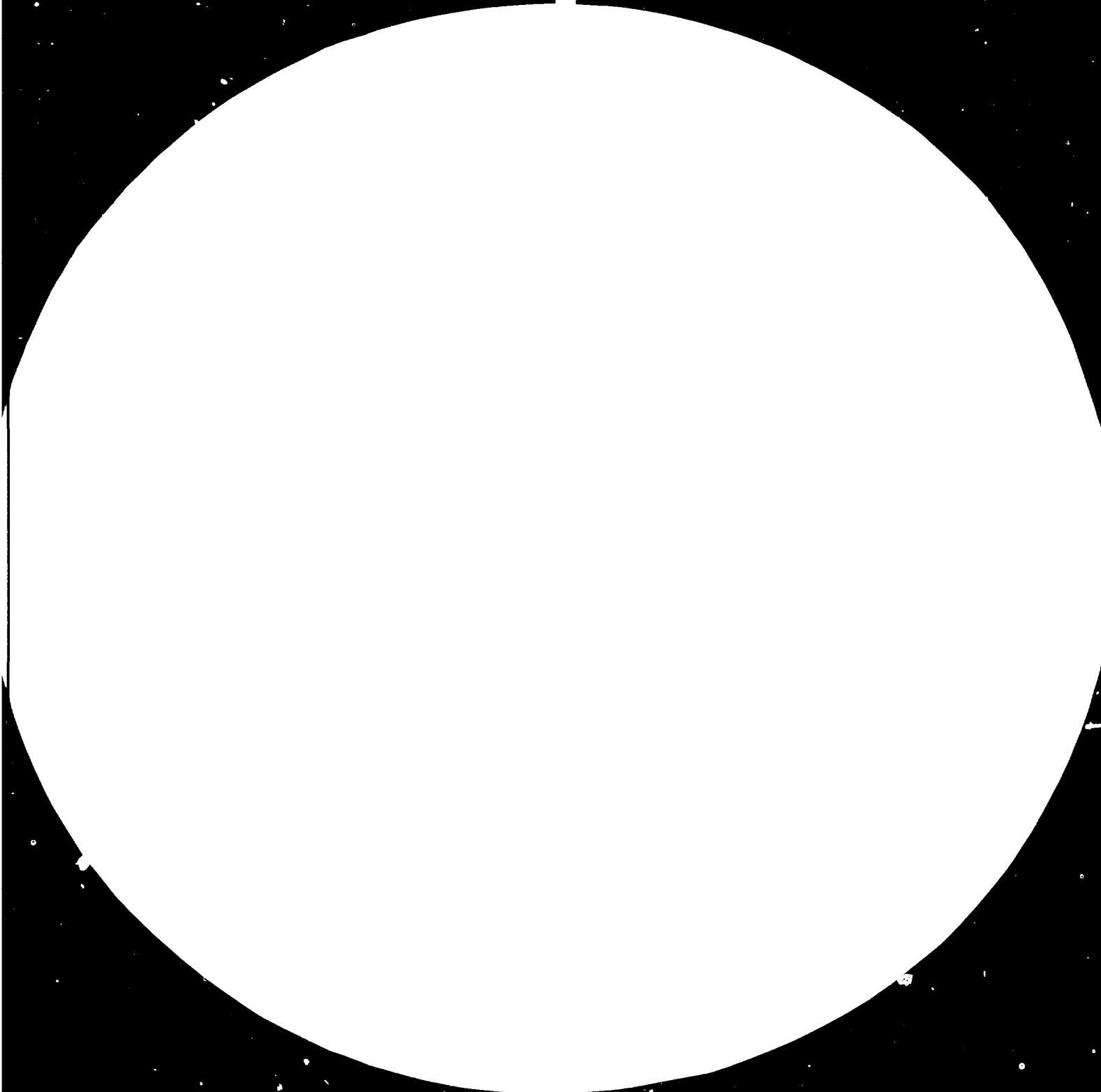
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3.2



3.6



Resolution test patterns are used to measure the resolving power of a system. The patterns consist of a series of lines of varying thickness and spacing, arranged in a grid. The resolution is measured in cycles per inch (CPI) or lines per inch (LPI).



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Technical Course on Criteria for the
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A BRIEF ACCOUNT OF THE WOOD INDUSTRY OF CHINA *

by

X. Chen and H. Zhu**

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** Assistant Research Fellows, Chinese Academy of Forestry, Beijing.

The forest resources of China are rather few and their distribution is not even. The existing forests cover one hundred and twenty two million hectares which covers 12.7 per cent of total land area. The growing stock totals nine thousand and five hundred million cubic metres. In average, each person possesses 0.13 hectares of forest areas and ten cubic metres of growing stock which are much lower than the world average.

The state actively develops forest logging for wood production. The annual wood output within the state plan rose from five million cubic metres at the beginning of the founding of the People's Republic of China in 1950 to more than forty million cubic metres at present.

With the development of the socialist construction in our country, there is an increasing demand for wood and the supply cannot meet the demand, so active reforestation to increase the growing stock on the one hand while rational felling and utilization are conducted on the other.

In addition, more than five hundred thousand cubic metres of wood are imported from south east Asia, and other regions.

The state owned forest regions in the north east and the south west in our country are the major wood productive bases where 163 forestry enterprises are located.

For many years, China has been developing wood-based panels industry with integrated utilization of forest resource as the key point. In the past twenty years, we have energetically developed the production of fibreboard (annual output four hundred thousand tons), plywood (annual output two hundred and seventy thousand cubic metres). The lower development of particle board reproduction resulted in an annual output of only fourty thousand cubic metres. In future, apart

from the continuous development of fibreboard and plywood production and a rapid development of particle board production, an increase of varieties of products and an enlargement of applications are foreseen. This will necessitate a replacement and improvement of the existing equipment and an increase of the output of adhesives.

There are 81 forest products processing enterprises (excluding the small-sized enterprises).

The major equipment needed for a fibreboard plant producing 5,000 tons annually are the following:

Preparation of materials: drum chipper or disc chipper.

Defibrination: two defibrators and one refiner.

Mat forming: one fourdrinier board forming machine.

Hot pressing: one 3' x 7', 15-opening hot press with productive line having an automatic loader and unloader and an automatic return.

China has rich tree species among which the following woods are suitable for furniture and joinery: elm, ash, birch, maple, camphor, oak, zelkova, walnut, paulownia, teak, Chacrospondias axillaris, etc.

Wood drying: Before 1950, woods were dried mainly by air seasoning and some simple artificial drying. Later on, with the development of wood processing industry, wood drying has also developed significantly. Many factories have built dry kilns, but most of them are small and medium-sized. At present, the drying capacity is only 15-20 per cent of the total sawnwood output. Most of the drying kilns are steam-heated forced draught kilns.

Before 1950, soy-bean glue, blood glue and bone glue were basically used in our wood industry. During the 1950's we began to develop synthetic resin. Now, urea-formaldehyde resins represent 65 to 70 per cent of the adhesive used, phenol-formaldehyde resins, a further 15 per cent, while melamine resins make up 10 per cent.

More than three million m² of melamine resin impregnated decorative paper laminated sheets are produced annually. Printed overlays and direct printing for the surface of wood-based panels are also being developed.

The major wood processing machines made in our country are: various kinds of band saws, circular saws, planers, lathes, moulders, mortisers and drilling machines, etc.

Equipment for plywood, fiberboard and particle board can be made by ourselves, but their efficiency has to be improved so that they may compare with that made in advanced countries.

Since the founding of the People's Republic of China, we have imported some of the wood processing machines and wood-based panel equipment from foreign countries such as Japan, Finland, Sweden, Czechoslovakia, Poland, the Federal Republic of Germany, the Democratic Republic of Germany, Switzerland, etc.

In order to strengthen in the field of forestry scientific research we have established the Chinese Academy of Forestry which is under the direction of the Ministry of Forestry. There are 35 research institutes of forestry at provincial level and 114 at prefecture level. Both of these categories of research institutes have 7,671 staff members and workers including 2,639 scientific and technical personnel. There is a Research Institute of Wood Industry under the Chinese Academy of Forestry.

There are 11 colleges of forestry and some departments of forestry in 16 colleges of agriculture in China from which 2,500-3,000 students will be graduated annually. There are 25 forestry technical professional schools which will train about 3,000 graduates each year.

Although the wood industry has made certain progress in China, it still cannot meet the needs of the national reconstruction and the peoples livelihood. Therefore, it is necessary for us to learn advanced experiences from developed countries and to introduce modern techniques as well as equipments to promote successfully and rapidly our wood industry.

