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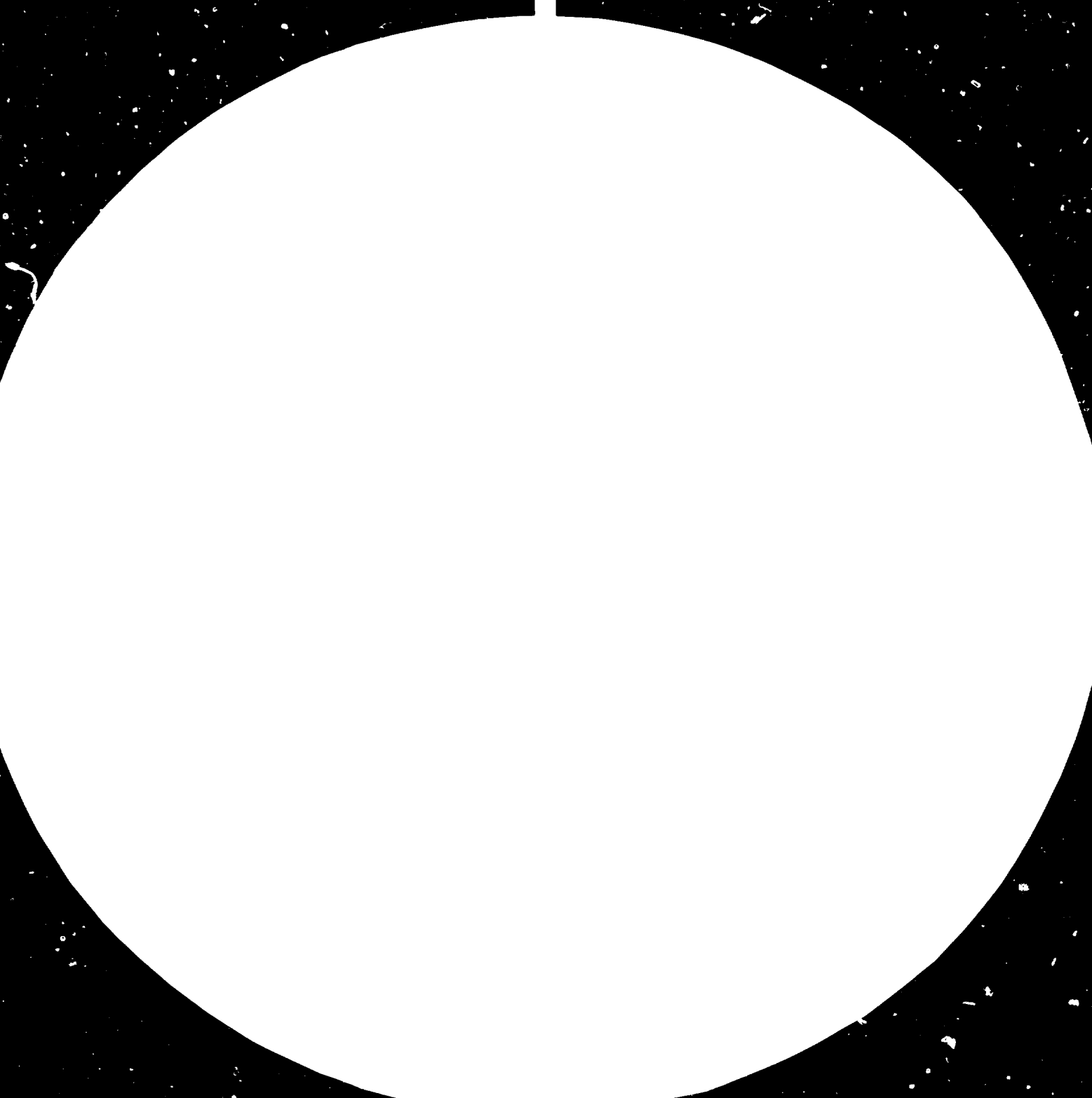
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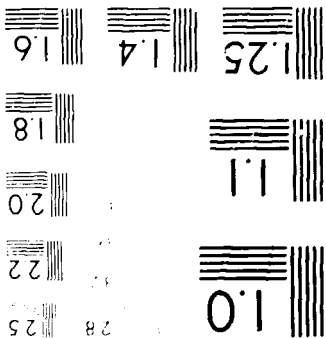
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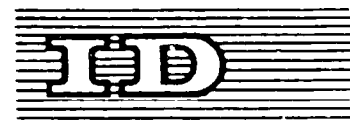


Resolution Test Chart





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Technical Course on Criteria for the Selection
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→ PRESENT SITUATION OF THE WOOD PROCESSING
INDUSTRIES IN URUGUAY *

by

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* The views expressed in this paper are those of the author and do not necessarily reflect the views of the secretariat of UNIDO. This document has been translated from an unedited original.

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Importance of sector

Domestic wood processing production occupies a middle place when compared with other industries. Three quarters of the wood processing industries are located in the capital, Montevideo, and only a quarter of them throughout the rest of the country. As a result of this the Government has been compelled to provide incentives for the location of industries in wooded areas through tax exemption for the importation of equipment and materials and for setting up industries there.

Forest resources in the country

Uruguay is one of the countries in the world with the least amount of industrially exploitable forested area. It has a certain amount of indigenous woods on the banks of rivers and streams and in mountain areas. They have little value as timber, are used only as a source of energy and cover an area of 608,559 hectares, to which can be added 70,484 hectares of palm trees. Artificial woodlands planted prior to 1976 are found throughout the country in fairly limited areas and are used as protection for livestock. In addition, there are pine groves on the east coast which were planted to control the shifting of the dunes. Only a few of them were established for industrial purposes.

The latest aerial survey gives the amount of artificially wooded area as 137,552 hectares.

The new policy is directed at providing incentives through tax relief and long-term credits in order to increase afforestation areas, bringing them to 17,000 hectares annually, and it is believed that this will then increase to 20,000 hectares.

The areas concerned cover over one million hectares and include over a hundred thousand hectares of compulsory afforestation.

TIMBERS

Domestic timber

The most frequently used timber is at present the Pinus pinaster (maritime pine), which is used to a large extent for indoor frames and fully upholstered, standard quality furniture. It is also used in panelling, when it is selected with small knots, and gives a finish fairly

similar to spruce. Another variety is the eucalyptus, the most frequently used species being teriticornis, rostrata and globulus, which make up over 80 per cent of stock. It has been little appreciated because it was difficult to work (liable to collapse), as until recently no technology was employed in its preparation. Some firms are using it with good results in frames, doors and windows, and, particularly, for parquet flooring. Although it is a hard wood it does not present any sawing, gluing or sandpapering problems and is being increasingly used in the manufacture of chairs for restaurants and schools.

Other types of timber include: eastern cottonwood, Pinus radiata, Pinus elleotii and Pinus taeda. The first, which is almost extinct, is very well adapted to our soil and very useful for joinery and furniture; the second is practically extinct, and the last two have been planted very recently over a limited area. The timber is generally air dried, although some firms now have drying equipment, particularly for species which are difficult to work.

Imported timber

Timber was first imported in round logs and subsequently, when the markets changed, as sawn wood. Our early suppliers at the beginning of the nineteenth century were Europeans who sent us beech and oak and we also occasionally received pines and spruce from North America. After the Second World War our main supplier was Brazil which, like Europe, first sent round logs and later sawn timber. From 1956 to 1958, 94 per cent of coniferous wood was Brazilian pine, 5 per cent pitch-pine and 1 per cent spruce. Timber is also imported from Paraguay - Lapacho, South American softwood, cedar and South American hardwood, and sometimes Chile - Pinus insignis, Araucaria and, more sporadically, African pine. Imported timber arrives dried and sometimes preserved.

PRIMARY WOOD PROCESSING INDUSTRIES

Sawmills

There are some 773 sawmills employing a total of 3,089 employees (1978 data), of which approximately 15 have an output of over 15,000 m³

of sawn timber per year, 80 per cent of them being located in the capital and having equipment unsuitable for domestic timber as a result of the large-scale equipment required for imported round log timber. There are smaller sawmills with an annual output of 200-1,000 m³. There are also mobile sawmills which move as required from one wooded area to another. In regard to the type of equipment, the large majority have 100 cm band saws or 80-120 cm circular saws. The method of attaching the round logs to the carriages is rudimentary. Table saw discs measure 70-90 cm and circular saws 60-100 cm. In almost all sawmills there is lack of space or poor distribution of equipment. The mobile sawmills use circular saws driven by a tractor or combustion engine and produce eucalyptus stakes or beams for subsequent resawing. Sawmill operators have not standardized the process for domestic timber and neither protect nor dry it before putting it on sale. It is easily attacked by blue stain and Xylophaga, which makes sections practically unusable in furniture making.

PLYWOOD

There are 12 plywood plants which have rather old, European machinery which has been adapted according to on-the-spot requirements. Most of them have veneer peeling lathes but only three have horizontal veneer slicers. Seasoning takes place in drying machines and pressing in a continuous steam press, most of which are gas-oil fired while others are wood-burning.

Fibreboard

There are two plants, neither of which meets international standards, in which production is by batches and in moulds. The boards are made from ground wood obtained by the defibering of logs. One plant has started to cover one of the surfaces with self-adhesive decoration.

Particle board

We have two plants, neither of which meets international standards, which use the continuous Himmenhebel principle and centrifugal force to separate the particles. The equipment in use - the chipper, gluing device,

presses, sanding machines and squaring saws - has been adapted. A national enterprise which manufactures particle board has recently acquired a plant in Germany consisting totally of machinery which is used but in good condition and would meet international standards. Sawn wood, plywood and both types of particle board are practically absorbed by domestic consumption and only a small percentage is exportable.

SECONDARY WOOD PROCESSING INDUSTRIES

There are over 1,000 of these with more than 2,000 employees. They manufacture a fairly wide range of products, such as furniture, joinery products, flooring, blinds, tool handles, mouldings and other items.

In general, these enterprises have available 85 per cent of the machinery necessary to make the above products, although it is rather old but still in good condition. There is no technical development or production plan but some enterprises are trying to semi-automate the processes. This is very difficult as there is no equipment even in the form of feeders to semi-automate existing machinery or replacement machinery. There are no good representatives, although recently SCM obtained a representative with economic backing so as to be able to have machinery in permanent stock.

Parquet

There are six plants, only one of which has modern Swiss equipment and is completely automated for the manufacture of mosaic and herring-bone parquet flooring. They have drying machines which reduce humidity to 8-10 per cent. A number of these plants export eucalyptus and ash parquet in quite large amounts to Spain, Italy and Argentina.

Boxes

There are six plants manufacturing "Bruce boxes" for the export of citric fruits. In almost all cases new machinery has been obtained for this purpose. Some of them have continuous drying machines and others are in the process of assembling these. These enterprises are located in the interior of the country.

Labour

The quality of labour is relatively good. As there is no good vocational training in educational institutions each enterprise has to train its employees in specific tasks. If we look back over the figures we will see, for example, in joinery and affiliated activities that there is enormous disparity between the number of enterprises and the number of employees, which is very small. This is due to the fact that a large number of the personnel in medium and small enterprises are not registered with social security and do not appear in the censuses.

