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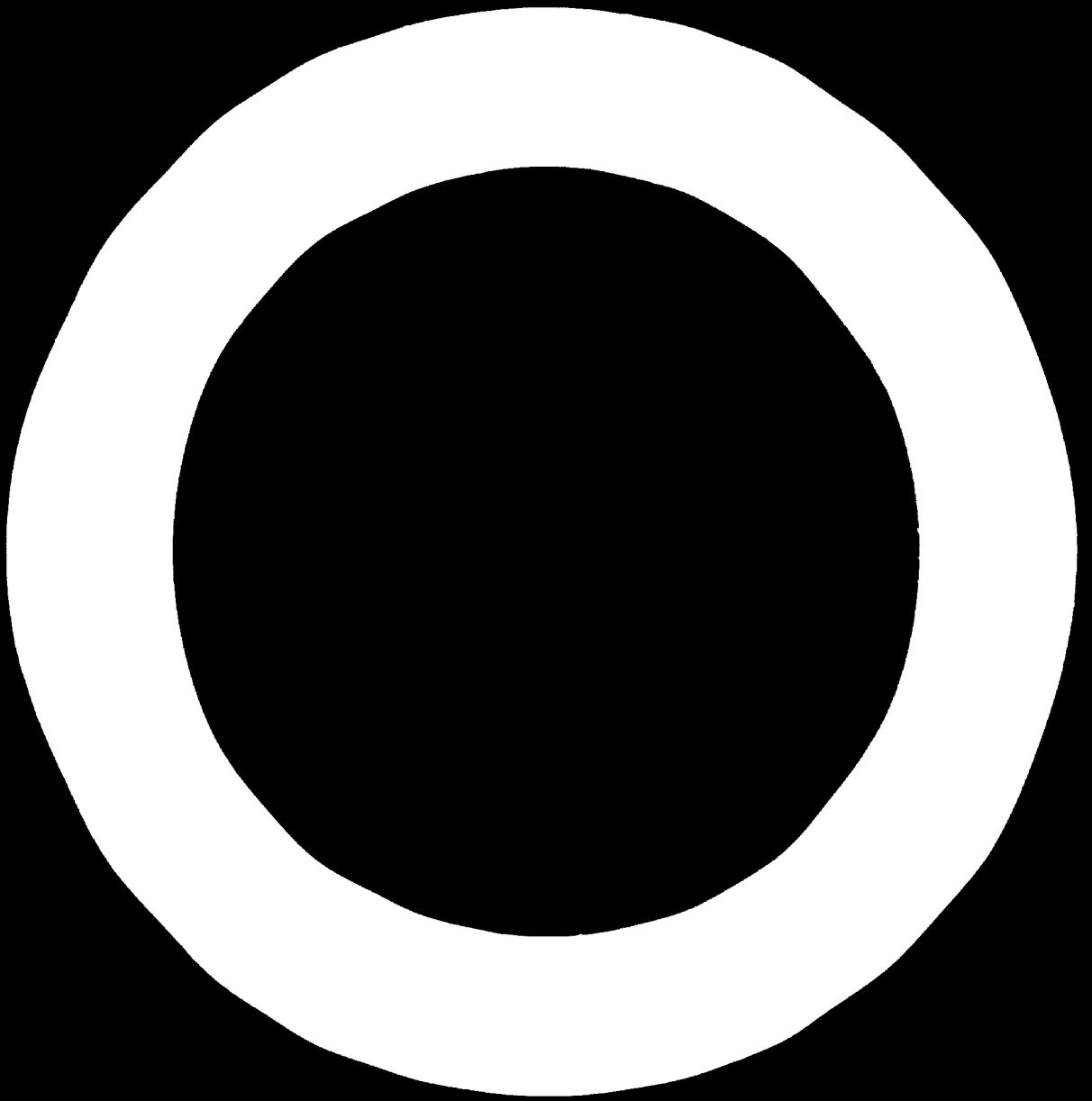
THE FURNITURE INDUSTRY IN CHILE^{1/}

by

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Chile occupies the extreme south-west side of South America, a small and narrow country with a total length of 4,330 kilometres. It begins above the Tropic of Capricorn, north of parallel 18, and ends near parallel 56, where the Pacific and Atlantic meet. In this country which runs through 38 parallels of latitude, the climate ranges from sub-tropical to polar.

Dividing Chile into 4 zones, there can be appreciated the variations in temperature and air humidity to which the furniture is submitted:

The Northern zone has a hot climate with a temperature maximum of 38°C and is desert-like, without rains.

The Central and Southern zones up to Pto. Montt have a mild climate, although in winter it rains heavily, with medium temperatures of 3°C between July and August and 29°C between December and January.

The Austral zone has a very cold climate, with rain all year round, reaching at Punta Arenas the top annual precipitation of 2500 mm.

The annual variations in temperature and air humidity are seen as follows:

	<u>Temperature (°C)</u>		<u>Relative</u>
	<u>Min.</u>	<u>Max.</u>	<u>Air Humidity</u>
Northern zone	5°	38°	30 - 75%
Central zone	0°	29°	70%
Southern zone	0°	23°	80%
Austral zone	-15°	15°	85%

Under these atmospheric conditions furniture produced in the Southern zone of Chile which is sent to the North will be supporting the drying and deformations of the wood due to the great scarcity of adequate dryers. Furthermore, the furniture is generally used in houses without air-conditioning having an ambient medium temperature of about 20°C with a low relative air humidity.

In Chile there are about 1,932 labour units dedicated to the manufacture of furniture, employing about 13,000 persons. From this total, about 95% are only small home industries or artisan workshops (handicraftsmen).

From the total industries dedicated to the manufacture of furniture, 70% employ less than 5 persons, so that it can be said that the furniture industry is mainly an artisanal activity considering its low production and technology level.

The largest number of these industries is concentrated in the Central zone, chiefly at Santiago, having only 32 enterprises employing more than 50 persons.

As said at the beginning, the furniture industry employs about 13,000 persons, representing only about 3% of the labour force of the whole of Chile's industrial sector. Of this labour force, 21.83% are owners or members of owners' families, 6.28% are administrative employees and 71.90% are labourers. As to the professional training of the craftsmen, 70% of the labour force has not received an adequate and systematic industrial training and only gets its knowledge through apprenticeship and practice in place of work.

Chilean craftsmen are extremely competent in their own profession and assimilate easily new technologies of their profession. Only enterprises employing more than 20 persons can profitably take on a technician in furniture making.

Vocational training through industrial schools and technical universities is now deficient, creating a high labour turnover, since the apprentice who begins in artisanal places, once having acquired a medium capacity, usually follows two courses:

1. Independence, giving rise to a new work or artisanal unit (they work mainly illegally) and
2. Working in larger enterprises where economical resources are better.

The technical level of the furniture factories in general is very low, due to a high percentage of artisanal working units, which are not able to get modern equipment.

The machine shops are very old with a minimum of diversity far exceeding the general service life, in more than 50% to 60% of cases. There are three or four well-named manufacturers of woodworking machines, but their range of products are limited, manufacturing chiefly the same models of:

- Moulders
- Thickening Machines
- Circular Saws
- Band Saws
- Vertical Shaft Machines
- Planers

Due to the difficulties and the high cost of importing machines with modern technology, automation in the furniture industries has been delayed to a high degree, although at the present there is being considered the installation of a modern automatic factory for fabricating popular furniture with a modern and practical design adapted to the minimum requirement of popular homes, promoted by the Chilean Government.

The Marketing of Furniture

All the industries sell their products directly to the customer, but in the case of the small workshops the retailer is incorporated in the furniture market. Furniture export is at present not feasible, except in the case of only one furniture maker, who successfully exports to the U.S.A. However, many projects of export of furniture are being considered under the protection of the Government.

In the future, the Chilean furniture industry will be able to manufacture high class furniture following the actual policy under the supervision of the technical services of government in the nationalised industrial area to improve the small home industries and increase automation of the large factories.

Timbers

The forests of high quality wood for the furniture industry have been subjected over a long period to an irrational exploitation, which has now been stopped and a new policy of reforestation is being promoted under the Government's policy, particularly the planting of pines (*Pinus radiata*) which have a growing cycle of 20 to 25 years.

Annual timber production is about 1,650,000 m³, from which 27% are native woods and 73% pine. Nearly 60,000 m³ of timber are employed in furniture making, of which 25% is pine and the remainder native woods. The most important native timber used in the furniture industry are:

Corque	(<i>Nothofagus domkegi</i>)
Raulf	(<i>Nothofagus alpine</i>)
Eucalyptus	(<i>Eucalyptus globulus</i>)

and to a lesser degree:

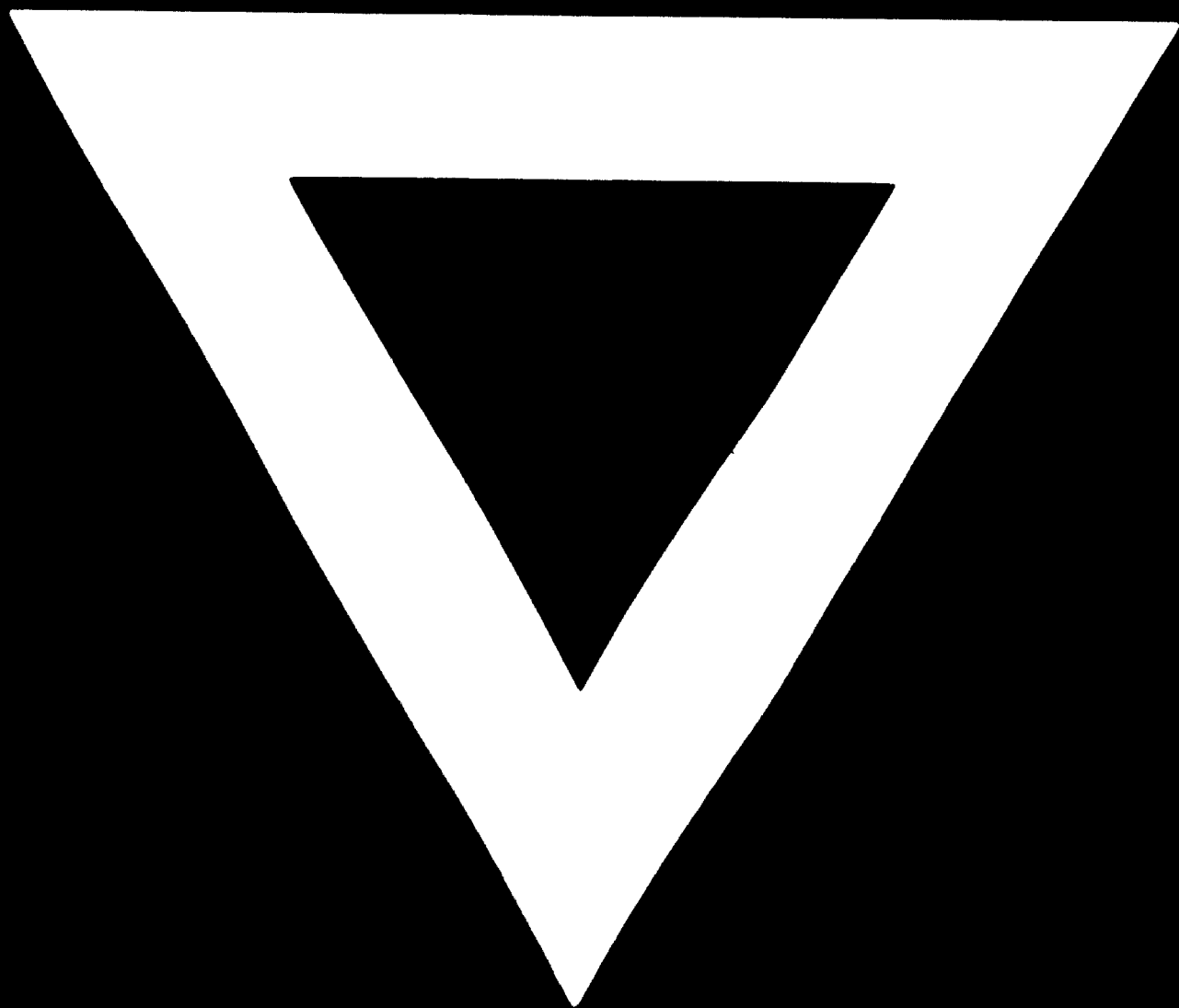
Lingue	(<i>Persea lingue</i>)
Encina	(Oak)

In the Austral zone the most exploited timber is Lenga (*Nothofagus perulifolia*). Due to the great resources of the Chilean forests, no other species of timber is imported.

The capacity of kiln drying in the country for native timbers is about 35,000 m³ (approximately 2% of total consumption), indicating a higher percentage must be air dried. The lack of adequate kiln driers thus contributes to the use of timber with a high moisture content in furniture manufacture. The country is aware of this notable lack of air drying and kiln drying and has started an intense campaign to give a definite solution to this major problem.

There are two particle board plants whose actual production reaches about 22,000 tons annually (3/4 inch thickness basis). This production is not enough to supply the needs of the furniture industry, and in a short time it is planned to start building another plant making use of all sawmill waste.

Annual production of plywood is nearly 4,700 m³ and soon two more plants will be erected. In fibre board, the production of the one plant reaches 19,000 tons per year. Meanwhile, two plants in the Southern zone produce about 1,700,000 m² of veneer, of which a great quantity is exported.



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