

content of about 200 per cent. and decreases only very slightly towards the bark. The moisture content by the Dean and Stark water-estimation spirit method has indicated that moisture-content determination by oven-drying method may, in the case of resinous heartwood, lead to significant errors.

Laboratory investigations were made on the condition of timber dried by the pyroligneous method.

A study of the effects of painting and priming on the equilibrium moisture content of various woods—*e.g.*, sap and heart rimu, sap and heart matai, totara, tawa, silver beech, and insignis pine—under different conditions of exposure—*e.g.*, outdoor exposed, outdoor under cover, and in a non-centrally-heated room—has been in progress for nearly twelve months. So far the study has shown that for samples outdoor under cover and outdoor exposed in Wellington the equilibrium moisture contents for heart and sap rimu, painted and unpainted, are as follows:—

Material: Rimu.	Moisture Content Per Cent. Based on Oven-dry Weight.	
	Winter Period: July to October, Inclusive.	Summer Period: January to April, Inclusive.
Outdoor under cover—		
Unpainted sap	20.5	17.0
Unpainted heart	11.5	10.5
Painted sap	18.25	16.5
Painted heart	9.5	9.0
Outdoor exposed—		
Unpainted sap	23.0	15.0
Unpainted heart	13.5	10.5
Painted sap	18.5	15.5
Painted heart	12.25	11.0

The transitions from winter-to-summer and summer-to-winter equilibrium moisture contents are quite marked and on each occasion occupy a period of two months—*viz.*, May–June and November–December. The study has also shown that the effectiveness of a priming coat as a sealer on exposed rimu boards diminishes very rapidly and it is relatively ineffective after six weeks' continuous exposure.

86. *The Drying of Timber.*—Protracted discussions by the Standards Institute Committee have delayed the issue of the "Code of Practice for the Kiln Drying of Timber." The amended specification has now been recommended for publication. In specifying moisture contents for the various products it has been necessary to set down the figures most nearly approaching the average equilibrium moisture contents in the main centres of population. Current studies reported above are giving a more complete picture of the manner in which the several major building timbers, separately for heart and sap wood where necessary, vary from the generalized graph of wood moisture content as affected by relative humidity and temperature.

Attention has been drawn to the need for the specification of moisture contents in (a) technical notes compiled for the guidance of instructors who are preparing students for School Certificate Examinations, (b) a lecture to a representative gathering of engineers and architects, (c) lectures forming part of a timber technology course, (d) Standards Institute specifications governing finished products, and (e) an article published in *Building Progress*. The last-mentioned article, "Kiln Drying Notes for the Guidance of Kiln Operators," covers everyday aspects of kiln operation and recommended schedules.

In several instances assistance has been given to kiln operators, especially in the provision of drying schedules. Two kilns were operated for a short period, principally for drying tawa loads. One kiln charge of 1 in. red beech was kiln-dried, but degrade