NOTES

TIMBER MECHANICS CONFERENCE

At the recent British Empire Forestry Conference in London, it was decided that a meeting of Timber Mechanics specialists should be arranged to endeavour to reach agreement on methods of testing. The meeting was arranged to take place at Ottawa, and afterwards at Madison Forest Products Laboratory, Wisconsin, with United States representatives joining in all discussions. This arrangement greatly enhanced the value of the discussions as the British countries have, in the main, followed the American Society for Testing Materials procedure and benefitted greatly from the great mass of work done at Madison. Britain, Australia, South Africa, Malaya and New Zealand were each represented by one delegate; two came from British Colombia and five from Madison to join the Ottawa group headed by T. A. McElhanney who organized the conference. Subsequently at Madison many members of the Timber Mechanics staff there contributed to the discussions and demonstrations.

The four weeks assigned to the meeting proved to be barely sufficient to cover adequately the range of subjects on the agenda. It is unfortunate that a majority of European countries should have developed their own test system—the Monnin system—using 2 centimetre square section test specimens as compared with the 2 inch square section used for A.S.T.M. standard tests. A FAO conference held one or two months earlier had endeavoured to find a basis for correlation of the two systems and it is hoped that the series of parallel tests in progress will show that test data obtained by the two systems will permit comparisons. Some British countries and U.S.A. have already found it necessary to do accessory work on specimen sizes below those specified in A.S.T.M. where available material for test will not yield the standard 2 inch squares. In New Zealand we have need for tests of such material, for instance between knot whorls in some exotic forest material and in indigenous species of small size but high potential value for special applications, or in other species which show considerable variation in timber properties due to latitudinal or altitudinal range.

Test procedure according to the revised A.S.T.M. methods was very critically examined, but relatively few changes are proposed for small clear specimens, apart from recognizing the need for controlling the temperature of the material at time of test. The variation of strength (static properties) with temperature has been shown by Australian tests to be very significant. It was agreed that some latitude must be allowed in selection of material provided that the data established are truly representative of the timber sawn from average logs. To obtain enough material for the matched green and air dry tests it may be necessary to use the whole commercial bole of ten trees,

where those trees are of small size, to obtain a "site" average; a "species" average must in turn represent all major "sites." It is natural that more thought is being given to accelerated methods of test to cope with the large amount of material now considered necessary to establish correct values.

A considerable amount of time was devoted to structural tests and the resultant stress grades, to testing of plywood, insulating board, and "sandwich" materials, and to laminated construction. In all these fields there is an increasing number of applications calling for strength data. For the re-assembled products methods of test are in the developmental stages; Madison is again able to give the British countries the benefit of its initial studies. Stress grades are a very vexed question, owing to the amount of material which has to be tested to cover the strength variations imposed by defects in all their multiple forms in a range of timber sizes. Those grades too call for changed sawing methods and a high degree of skill in grading.

J. S. REID.

REGENERATION IN INDIGENOUS MONTANE FOREST AFTER FIRE

A fire in silver beech forest on the Marchant Ridge (southern end of the Tararua Range) in January, 1938, completely destroyed the forest at an altitude from 3,400 feet down to about 2,800 feet. Re-population of the burnt area 11 years later is surprising slow, for there are abundant winds to carry seed from the living forest. Mosses and ferns are the principal ground cover, except close to the edges of the burn where young silver beech (*Nothofagus menziesii*) trees are numerous. Towards the centre of the burn a few isolated silver beech, kamahi (*Weinmannia racemosa*) and *Olearia lacunosa* seedlings (presumably from wind-carried seed) were seen, but *Coprosma*, *Fuchsia* and broadleaf (*Griselinia littoralis*) from bird-carried seeds are much more numerous. Incidentally a few small broadleaf trees survived the fire; towards the lower fringe of the burn one or two silver beech retained living branches some 6 to 10 feet above ground. It is possible that both instances of survival were due to their being between the crown and ground fires.

J. S. REID.

REGENERATION IN INDIGENOUS FOREST AFTER BLOWDOWN.

The very severe storm which devastated some areas of forest in the Tararua Ranges 13 years ago has been commented upon in the Journal.* A lesser storm 2 years ago brought a further small amount of blowdown in the devastated areas.

In the montane beech forest association (about 3,000 feet) on the Field Track ridge from Otaki Forks to the southern Tararua tops,

*"An Exceptional Gale" and "The Recovery of an Indigenous Forest after Windthrow," both by A. P. Thomson, *N.Z. Journal of Forestry*, Vol. 4, No. 1, 1936. —Ed.