

These papers were subsequently distributed throughout the printing trade in New Zealand, the general consensus of opinion being that they were very satisfactory, although users of the bank and bond papers indicated the desirability of improving their colour.

- (f) *Mechanical Pulping Tests by Australian Newsprint Mills Pty., Ltd., at Boyer, Tasmania.*—After preliminary grinding tests, a twenty-four-hour continuous trial was successfully concluded. Horse-power consumption was normal for pine pulp-wood, and although a yield of only 84 per cent. was obtained, the conclusion is that this figure could be effectively increased both by improved grinding processes and by a suitable conservation system in the paper-mill. The strength of the pulp was exceptionally high.
- (g) *Newsprint-manufacturing Tests by Australian Newsprint Mills Pty., Ltd., at Boyer, Tasmania.*—From the ground-wood mill the mechanical pulp was taken in slush form and mixed with the semi-bleached sulphate pulp produced by Australian Paper Manufacturers, Ltd., at Maryvale (Victoria), and manufactured during a continuous twenty-four-hour trial into 77 tons of standard newsprint (32 lb. basis weight). Due to the excellent strength of both ground wood and semi-bleached pulp it was possible, even during the short period of the trial, to attain a machine speed of 1,070 ft. per minute with only 15 per cent. of the chemical pulp, and a still higher speed would have been attainable had more suitable screening equipment been available. The only adverse characteristics of the newsprint produced were low smoothness and low opacity, but from subsequent investigations at the Southland Paper-mills in Lufkin, Texas, it is concluded that their success in correcting these deficiencies with pine newsprint will be readily duplicated with insignis-pine newsprint.

The finished newsprint was subsequently used by a number of New Zealand and Australian newspapers with favourable comment on its strength and general performance. These tests confirmed the necessity for developing a better finish, but otherwise were satisfactory.

CHAPTER XI.—MISCELLANEOUS

92. *Legislation.*—The Forests Act, 1921–22, was amended during the year as follows :—

- (a) Statutes Amendment Act, 1947 : Sections 17, 18, 19, 20, and 21 are to be read together and deemed part of the Forests Act, 1921–22. Section 17 is a machinery clause. Section 18 amends section 10 of the principal Act and makes additional provisions regarding appointments of honorary forest rangers. Section 19 provides for the appointment of part-time honorary forest officers. Section 20 provides power for the making of regulations with a view to the prohibition of the importation of any tree-seed, timber, or timber product that may introduce into New Zealand any insect, fungus, bacterium, or virus that might be injurious to any tree, timber, or other forest product. Section 21 amends sections 7, 9, and 11 of the principal Act.
- (b) Forest and Rural Fires Act, 1947, is an Act to make better provisions with respect to the prevention and suppression of forest and rural fires. It repeals all the provisions of other Acts relating to forest fire districts and other fire districts in rural areas. In particular it repeals section 27 of the Forests Act, 1921–22, sections 5 and 6 of the Forest Amendment Act, 1925, and section 28 of the Statutes Amendment Act, 1940 (an amendment of the Land Act, 1924), and makes other miscellaneous amendments.