

- (c) *Kraft-paper-making Tests by Australia Paper Manufacturers, Ltd., at Its Fairfield (Melbourne) Paper-mill.*—As one of the largest, and certainly the most exacting, usage of kraft paper is for the manufacture of multi-wall bags, advantage was taken of the extensive experience of this firm of papermakers in endeavouring to produce a high grade of wrapping-paper to meet such a specification. The tests established the fact that, while less power is consumed in beating the pulp preparatory to papermaking and that the beaten pulp handles with ease on the paper machine, the resultant product, although developing a higher bursting and tensile strength than that made from wholly imported long fibred pulp, it is appreciably lower in tearing strength. Nevertheless, the firm reported that over-all the paper should be satisfactory for the manufacture of multi-wall bags, comparing favourably with that at present being produced in Australia. Its tear was not quite up to specification, but sufficiently approximate to conclude that with more experience and suitable control of manufacturing operations a satisfactory grade of paper could be produced.
- (d) *Multi-wall-bag-making Tests by Bates (Australasia) Pty., Ltd., Using Kraft Paper Manufactured from New Zealand Insignis-pine Pulp.*—Almost one hundred thousand 94 lb. cement-bags were produced. They were of five-ply construction (two 52 lb. and three 39 lb. plies; substance, 480 sheets 24 in. by 36 in.). Tubing strength was up to standard, but sewing strength only 83 per cent. of standard. Filled bags withstood an average of 48 end drops each 12 in. high, as compared with a standard of 66, but the company reported that they would be capable of giving reasonably good performance in service, and a small service test by one of the New Zealand cement companies has indicated that they are at least as good as, if not better than, the Australian-manufactured bags normally available in New Zealand. The results of further tests are awaited with interest. It has been concluded that by improvements both in the quality of kraft pulp and paper and in the technique of bag-manufacture results closely approximating to the standard are within a reasonable degree of attainment.
- (e) *Manufacture of Writings and Printings by Associated Pulp and Paper Mills, Ltd., at Burnie, Tasmania.*—Thirty tons of fully bleached sulphate pulp from the Maryvale Mill of Australian Paper Manufacturers, Ltd., was converted into satisfactory sheets of white bond, white bank, cream-wave writing, and machine-finished printing-papers using, in the case of bond and bank, 100 per cent. New Zealand pulp, and in the other papers approximately 50 per cent. of New Zealand pulp with 50 per cent. of soda-cooked eucalyptus pulp.

The strength developed in the finished sheets was greater than that of a eucalypt sheet of the same substance, particularly so in the case of folding endurance. In every case the caliper of the finished sheet was lower than that of the equivalent eucalypt sheet, presumably because the stuff carried water better, thus enabling the paper machine presses to do more efficient work in compacting the sheet. As a result of this compacting of the sheet the porosities and densities obtained were high. Beatibility of the New Zealand fibre was found to be comparable with that of imported bleached sulphite pulp. The brightness of the pulp and finished sheets was low, but could readily be raised by efficient bleaching. In the opinion of the paper machine crew, the stuff was easier to handle on the paper machine than is the normal eucalypt furnish.