

NEW ZEALAND LEATHER AND SHOE RESEARCH ASSOCIATION (INC.)

Acting-Director : Mr. F. G. CAUGHLEY

After twenty-one years of activity as a section of the Department of Scientific and Industrial Research, this research association has now (with Cabinet approval) become incorporated under the Incorporated Societies Act, 1908, and is now under the control of a Management Committee representative of the tanning, footwear, and frozen-meat industries and the Department. This development led to increased investigations on problems connected with leather, footwear, hides, skins, tanning-materials, &c.

Fellmongering of Sheep-skins.—An investigation was carried out on the liming of sheep and lamb skins as processed in New Zealand freezing-works. A method of chemically controlling the lime liquors was drawn up and has been used in several works, leading to economies in the use of material and improvement in the pelts. The effects of processing have been followed by microscopic examination of the fibre structure of the pelts.

Leather-manufacture.—A laboratory tanning trial for sole leather, carried out to compare the efficiency of the leather qualities produced by the three unblended tanning-materials of mimosa, myrtan, and myrabolans, indicated that the differences in efficiency (the amount of material that is ultimately taken up by a given amount of hide) show greater contrasts than the qualities of the leather produced by these three materials.

Routine tests on raw materials and finished leathers have been carried out regularly.

Shoe-manufacturers' Problems.—The number of shoe problems submitted to the laboratory during the year was 133 (previous year, 111). The majority of these were from manufacturers on customers' complaints. Perspiration damage during summer months and overheating of wet soles during winter months, and damages in wear from active chemical substances, were responsible for more than three-quarters of the complaints. Quality of material, its selection for a given purpose, or the activity of the wearer were involved in most other complaints. Other problems investigated included the quality of leather-finishes, leather qualities, adhesives, and other accessories in shoe-manufacture.

General.—Contact was made with members by periodical visits to factories, and exchange of publications was carried on with similar research associations overseas.

THE NEW ZEALAND POTTERY AND CERAMIC RESEARCH ASSOCIATION (INC.)

Director : Mr. W. Vose

Owing to the lack of facilities during the early part of the year there was some restriction of activity, but since the completion of the laboratory and the installation of equipment progress in research has been made. The early lack of laboratory facilities, however, permitted frequent consultations with industrialists and visits to works and clay deposits. Sources of information have been established in North America and in United Kingdom.

Research Work.—The raw materials project revealed a wide range of raw materials which by fractionation will give similar plastic and non-plastic kaolins (china clay) to those used in Europe and America. Felspathic rock was indicated in a few localities; this, by mineral dressing, would give a suitable felspar supply for white New Zealand porcelain or earthenware.

Information upon New Zealand clays was fully indexed, and the selection of clay sources for china clay were made. The possibility of New Zealand ball clays was considered, but there is no prospect yet of good ones. The best are of relatively poor quality and it is considered that a wider use of plastic kaolin would ease this difficulty.