

(c) Lines : General

On 110, 66, and 33 kV. lines a total of 65,900 insulators were tested by buzz-stick, and the 321 units found defective were replaced.

(d) Distribution

Southland.—A busy year has been experienced on distribution-lines, despite a shortage of materials and labour. Nearly 50 miles of 11 kV. extensions were constructed to connect new consumers.

The work of changing over Gore Borough from 3·3 to 11 kV. using concrete poles is nearing completion. The rerouting and rebuilding of South Invercargill reticulation and changing from 3·3 to 11 kV. is still under construction.

For most of the year all the available distribution gangs were engaged on line-extensions. The reticulation of Haldane and Tussock Creek settlements were completed, and the Happy Valley reticulation construction commenced; subsidies for these lines have been granted by the Rural Electrical Reticulation Council. Shortage of labour and materials prevents many prospective consumers from being supplied with power.

(e) Consumers, Southland Retail Supply

Of the 10,947,889 units sold directly by the Department for industrial purposes, freezing-works used 41·678 per cent., coal-mines 22·594 per cent., minor industries 17·960 per cent., lime-works 14·510 per cent., and saw-mills 3·255 per cent.

In the last five years, despite unavoidable restrictions and shortages of essential appliances and materials, the number of units used by the Department's retail domestic consumers increased by 59 per cent.

The year's increase in consumers supplied directly by the Department in Southland was 467, bringing the total up to 13,908 in the retail area of supply, in which there are now 10,661 electric motors in use, 3,000 electric ranges, and 2,071 electric water-heating installations. About 75 per cent. of the new consumers were in country areas. Some 860 electric motors were connected for the first time.

4. COMMUNICATIONS

Three mobile radio units have been installed in faults-trucks. Temporary base stations were installed and radio tests were carried out.

5. TEST DEPARTMENT

Relays were installed and commissioning tests carried out in connection with new installations.

Switchgear, relay, metering, and voltage regulating panels were designed, made up, and installed at Kaitangata to control the 625 kVA. turbo-alternator belonging to the Kaitangata Coal Co., and commissioning tests carried out on the alternator and equipment.

A method of testing employing current up to 25,000 amperes was developed and applied to air-break switches of 600 amperes rating for 11, 110, and 220 kV. circuits.

Following the disastrous fire which destroyed a large business block in Christchurch, a report was made on the electric supply. This report involved considerable testing and investigating, and the lengthy attendance, evidence, and cross-examination of the Testing Engineer at the Royal Commission of Inquiry.