

(b) Substations

Stoke.—Apart from the running required for generation purposes regular trial runs of the Diesel machines were made. A partial overhaul of No. 1 machine was made and a list was prepared of all spares required to put both machines in good order. An indent order based on this information has now been placed.

A broken lift rod in an O.C.B. at Stoke caused a twelve-minute interruption to the Marlborough Electric-power Board in March.

No major troubles occurred at any of the substations, and the normal routine was all that was necessary for their operation and maintenance.

(c) Transmission and other Lines

66 kV. Lines.—An interruption of supply to all Power Boards and to the Golden Bay Cement Works occurred on 2nd March when a phase of the 66 kV. line fell to earth due to a cross-arm on pole 22 at Upper Takaka burning through. A spark from a scrub fire had apparently lodged on the cross-arm. All relays operated correctly and the conductor was undamaged. No other faults occurred on this line, but during various prearranged shut-downs arcing horns were fitted at the substations and general maintenance work carried out.

11 kV. Lines.—On 27th January, a severe wind on top of the Cobb Ridge caused phases of the power-house-dam line to contact owing to a loose binder tearing away. In February this line was checked for further signs of trouble and several renewals were made. The renewals were twelve insulators with loose pins. The porcelains are in good order, but the steel pins were loose in the lead heads.

Telephone-lines.—A good deal of trouble was experienced during the year, a large number of faults, due to varying causes, being reported. These were gradually eliminated, and the service at the latter end of the year was improved. A certain amount of trouble due to plantation and scrub fires occurred during the dry summer.

(d) Testing

During the year routine tests of protective relays have been carried out. Revenue-metering equipment has been tested and installed for various departmental consumers. New equipment has been tested and checked before being placed in service. Faults have been located and repairs carried out where necessary. The installation and wiring of the test benches and equipment in the Nelson test-room has been completed.

3. CONSTRUCTION

(a) Power-stations

Cobb.—Two additional voltage regulators were installed. Each generator now has its own regulator. A new 6·6/11 kV. 500 kVA. transformer was put into service, replacing the temporary 200 kVA. transformer which had been supplying the dam and the asbestos works. In August a 11¼ kV. 15 kVA. transformer was connected in to supply the cookhouse and huts at No. 2 camp, where several casual day-workers were accommodated. A battery-charger and panel were erected in the power-house and put into operation in June.

Lightning-arresters were installed at the 66 kV. terminal, and also at the three terminals of the 11 kV. powerhouse-dam-asbestos works line.

To prevent ice-formation at the penstock intake, screen-heating was installed and operated during the winter on thermostatic control.