

Plans for experiments with two-way radio communication, particularly with fault trucks, are in hand.

5. TEST DEPARTMENT

Equipment for paralleling with Kanieri Electric, Ltd., and for two-way metering was installed at Arahura and paralleling was satisfactorily instituted.

A new 11,000/400 v. substation with two re-routed existing 11 kV. cables and an 11 kV. incoming O.C.B. was put into service at Sunnyside after tests were carried out.

Routine tests were conducted on rubber gloves, insulators, relays, revenue meters, oil circuit-breakers, master electric clocks, &c.

Heat runs were conducted on switchgear, clamps, cables, &c. Tests at 220 kV. upon line and busbar clamps were made under the supervision of Head Office Engineers.

6. PLANT AND VEHICLES

Plant.—Three tractors are in use and a further 4 are on order. The present tractors are all over five years old, but are in reasonable mechanical condition.

Good use was made of the available machines and tools in the workshops repairing equipment and making up essentials such as CT boxes, LT links, transformer fuses, screw anchor rods, earth guards, &c. At Addington a snow-plough truck attachment was built.

Vehicles.—All but a few vehicles are in a well-worn condition and some will require early replacement. As in the North Island, the demand for vehicles is so urgent that release for essential repairs only is possible.

Of the 157 vehicles, only 3 are less than five years old, 95 are from five to ten years, 56 from ten to fifteen years, and 3 are over fifteen years old.

The maintenance of the present transport system will depend on the early arrival in the new year of the 34 vehicles on order.

C. CONSTRUCTION

1. POWER-STATIONS

Coleridge.—Much work has been carried out in connection with the construction of the new outdoor steelwork, and one section, including No. 1 unit and its transformer bank and all accessories, has been placed in commission. Coleridge-Otira A line was connected up to the new structure on 16th March, and B line a week later.

Arnold.—Replacement gates are being constructed for No. 2 machine. A new water-supply system was installed to replace the rain-water supply previously in use.

Dobson.—The installation of a second bank of transformers is well in hand. Concrete for the transformer and O.C.B. pads have been poured. The poles and overhead bus work has been finished and both air-break and isolating switches have been installed. Excavation has been made for the traverser track and a drain put in.

Two new cottages were completed by the contractor, and single men's quarters are being built.

Tekapo.—Overcoming technical difficulties and penetrating beyond the end of the test drive that had made tunnelling so difficult, progress was maintained on both headings of the tunnel at a fairly satisfactory rate. Progress has been made on other works, but it has been retarded by the transfer of plant for urgent work at Pukaki.

Pukaki.—Work on the dam and sluiceways is virtually complete and contracts have been entered into for the reinforced-concrete structure and for the gates and operating machinery.

2. SUBSTATIONS

Methven.—Preparations for the erection of a new substation are well advanced. Equipment dismantled at Sockburn has been delivered and construction has commenced.

Addington.—Installation of an O.C.B. and air-break and isolating switches for the new fourth line—linking Addington with Hororata—is proceeding. This additional line will increase the carrying-capacity of the existing three lines.