

(c) 11 kV. Lines

Karapiro-Hautapu.—Lightning caused an outage and damaged the metering-equipment at Leamington in June. A conductor broke at Leamington in August.

Ohura-Tatu.—This single-circuit line, 6.19 miles, in length, was taken over by the King-country Electric-power Board on 1st September, 1947.

(d) General

Birds nesting on the structures continue to be troublesome, but experiments have been carried out with a view to preventing their activities.

Three scrub fires under the 110 kV. lines caused flashovers and damage to conductors. On the 110 kV., 50 kV., and 11 kV. lines lightning caused flashovers which damaged poles and insulators or conductors and resulted in several outages.

Damage to insulators by rifle fire continues to occur in widely-separated parts.

4. COMMUNICATIONS

The Takapuna-Belmont and the more recently-installed Penrose-Roskill supervisory control performed satisfactorily. Noise-correction work was carried out on the Henderson-Tahekeroa section of line with good results. Radio is in use as an alternative means of communication between substations, and the two 50-watt base stations and mobile units in the field have functioned well.

A check is being made of all transposition joints on the Arapuni-Penrose telephone-line. The first six miles of the Stratford line at Arapuni were rebuilt along a new route, part of it on the Maraetai line, and the bush section of the line at Tangarakau was rebuilt prior to commencing carrier operations.

The northern section of the Napier-Woodville telephone-line was overhauled. Approximately 24 miles of the Woodville-Dannevirke section of the line were reconstructed. The galvanized wire in use was replaced by No. 6 B. and S. copperweld.

Two M108, Mark 2, transceivers were used on the Tuai-Bunnythorpe line-construction. Excellent results were reported.

A start was made to overhaul all system telephones from Napier to the south. All telephones from Napier to Woodville have been overhauled.

Carrier equipment from Khandallah to Bunnythorpe and Claudelands has been in service since June, 1947.

The telephone-line gang completed its overhaul of lines in Taranaki and started on the Bunnythorpe-Napier section. Major deviations of telephone-lines were made at Bunnythorpe to clear them from construction work in progress and to facilitate their entry into the new substation.

5. TEST DEPARTMENT

Installation tests were carried out on new equipment. This included switchgear at various substations, booster transformers, 50 kV. automatic earthing-switches, new transformer banks, a new stator-winding on No. 4 generator at Arapuni, various items of equipment for Karapiro, Tuai, and Piripaua; and the new equipment installed at Kaitawa.

Tests of new distance protection relays have been carried out, and panels for them are at present being constructed. At Palmerston North the engraving-machine continued in great demand for the production of labels, and experimental apparatus for de-aerating filtered oil was made up.

Various items of laboratory equipment have arrived from overseas, and others have been constructed which, together with an increase of staff, have greatly facilitated work at Auckland.