

Waikino.—A 50 kV. O.C.B. bushing failed in May, an 11 kV. C.T. was damaged by lightning in June, three 11 kV. wall bushings were shattered by a flashover in August, and a rat caused a flashover on the 11 kV. bus in January.

Waiotahi.—The original two-unit post-insulators on the 50 kV. structure were replaced by single-unit insulators.

Wairoa.—The old substation was completely dismantled, and four M.V. 50 kV. transformer units were despatched to Auckland.

(c) General

Owing to several complaints of low voltage in the northern districts, boosters were installed at Kaitaia and Kaikohe, and an induction-regulator at Maungatapere.

3. TRANSMISSION AND DISTRIBUTION

(a) 110 kV. Lines

Arapuni-Penrose.—Line 1 was fouled in June by a telephone-line which was being dismantled, and was damaged by lightning in October and February. Owing to the pumice banks of Karapiro Lake collapsing near the towers, two new towers were erected farther back from the lake.

Hamilton-Waihou.—A tree growing under the line caused outages on 5th and 7th May.

Woodville-Greytown.—Heavy rains causing flood conditions necessitated extra patrols.

Tower-earth tests on the Mount Bruce section were taken.

Woodville-Bunnythorpe (Pohangina River).—Tower-earth resistances were taken. The insulators on the east circuit were cleaned.

Woodville-Napier (East and West).—The overhaul of the west line was continued by the maintenance group stationed at Woodville.

Special attention during flood conditions was given to two poles on the Dannevirke-Woodville section of the line. These poles were ultimately piled.

Bunnythorpe-Mangahao.—Erosion in the bed of the Manawatu River exposed the poles supporting one structure and made necessary the addition of more bracing.

Bunnythorpe-Ongarue.—Because a deep slip on a papa spur exposed tower-foundations, a new tower with its grillage extended into the papa had to be built.

(b) 50 kV. Lines

Henderson-Kaitaia.—High winds in the north were responsible for faults due to telephone-wires contacting transmission-lines. At several stations new protective relays were installed by the test department in order to increase the reliability of supply.

Waikino-Aongatete.—Outages were caused by one end of an earthing-strap coming adrift from a pole in June, and by the failure of an insulator in March.

Hamilton-Karapiro.—Outages were caused by lightning in June, and by a haystacker in December.

Horahora-Karapiro.—This line has been dismantled.

Edgumbe-Te Puke.—Outages were caused by lightning in April, and by a piece of bark from a gum-tree in June.

Tuai-Gisborne.—The overhaul and refitting of this line was proceeded with. Hooks were replaced by clevises at light points of support on the west line to Ruakituri.

The by-passed section of line at Waerenga-o-kuri was dismantled.

Tuai-Wairoa.—The section of the line to the old substation was disconnected and dismantled.

Pole-testing was completed, and defective poles were replaced.