

SIGNAL AND ELECTRICAL BRANCH.

The main activities of the Signal and Electrical Branch during the year were as follow :—

Papakura-Horotiu Duplication.—Additional signalling-apparatus, including a new interlocking-machine, was brought into use at Papakura. Alterations to the signalling-equipment were also effected at Paerata following the extension of the duplication works southwards from that station.

Waihi-Taneatua Automatic Signalling.—Frame levers have been installed at the majority of the stations between Waihi and Tauranga, and the work of installing control wires and relay shelters has been put in hand.

New Plymouth Yard rearrangement.—The installation of power-interlocking apparatus in connection with the yard rearrangement at New Plymouth is proceeding. Frame-levers and switchlocks are being installed at sidings between New Plymouth and Breakwater for the block working of this section, which, when complete, will be controlled from New Plymouth.

Wellington-Paekakariki Centralized Traffic Control.—This installation is now complete and provides for the control from Wellington of all signals and points between Tawa Flat and Paekakariki.

Lower Hutt.—The work of installing power interlocking, superseding the mechanical interlocking previously in use, has been completed.

Napier-Gisborne Automatic Signalling.—Work on this installation has been continued throughout the year.

Christchurch New Station and Yard.—New structures for supporting the overhead traction system have been installed between Linwood and Christchurch, while works associated with the provision of a subway at Falsgrave Street have been completed. Alterations to the signalling at East End and at Linwood are in hand as part of the first stage for using the new car-yard and making room for the overhead bridge at Waltham Road. An additional floodlight has also been installed in Christchurch Yard.

Middleton.—The signal-box at Middleton has been closed and two ground frames provided for shunting purposes.

Frame-levers.—Frame-levers and facing-points locks have been installed at six stations in addition to those being equipped for automatic signalling.

General.—Apart from the activities specifically referred to above much work of a general character has been carried out during the year. At numerous stations alterations and additions have been carried out to the existing signalling and interlocking apparatus; motor points have been installed at four stations; additional track circuits have been provided; and a number of stations and sidings have been equipped with tablet locks.

Automatic crossing-loops were installed at Burnham and Norwood during the year. Rangitikei Bridge was closed as a fixed-signal station, and fixed signals with key locking were installed at Wairoa, Parera, Kokonga, Oturua, and Lauder.

The total number of signalling installations in use throughout the system is as follows :—

	M.	ch.	Number.
Miles of single-line automatic signalling	288	22	..
Miles of double-line automatic signalling	120	12	..
Automatic crossing-loops .. ..	..	..	46
Automatic switch-locked sidings .. ..	..	..	46
Power interlockings .. ..	..	..	45
Mechanical interlockings .. ..	..	..	112
Interlocked tramway crossings .. ..	..	..	7
Fixed signals and Woods' locked stations .. ..	..	..	288
Tablet-locked sidings .. ..	..	..	278

Tablet Working.—Plimmerton, Paremata, Porirua, Rolleston, and Burnham were closed as tablet stations, and Selwyn was closed as a switch-out tablet station. Tablet working on the Porirua-Plimmerton and Rolleston-Dunsandel sections was superseded by automatic signalling.

The present position in regard to tablet working is as follows :—

	Miles.	Number.
Total mileage equipped with tablet instruments	1,562	..
Number of tablet instruments in use .. ..	..	881
Number of tablet stations .. ..	..	353
Number of tablet exchangers .. ..	..	309

Telegraph and Telephone Facilities.—During the year 45 miles of pole-line was rebuilt, 41 miles of pole-line with iron conductors was replaced with copper conductors, and 749 miles of copper wire was erected in new sections. The sections rebuilt were Auckland-Westfield; Waihi-Athenree; Christchurch-Addington; Rangiora-Waipara, and Wingatui-Salisbury.

New telephone circuits were run between Auckland and Otahuhu via Orakei; Waihi-Tauranga; Feilding-Palmerston North; Napier-Hastings; Christchurch-Dunedin; and Rangiora-Waipara. In addition, a train-control circuit was brought into service between Auckland and Helensville as part of the intended Auckland-Whangarei system.

Improvements to the automatic-telephone exchange were made at Wanganui and to the manual exchanges at Woodville and Palmerston North. A teleprinter service was brought into use between Wellington and Wanganui.

New manual exchanges were installed at Tauranga and New Plymouth, and the exchange equipment previously in use at Dunedin was transferred and installed at Greymouth.

Oamaru was equipped with a twenty-five-line automatic-telephone exchange, and preparations are in hand for new automatic exchanges at Christchurch, Timaru, and Hutt Workshops.