

NEW ZEALAND SUBMARINE CABLES.

The Pacific Cable Board's cable-steamer "Iris" was chartered in November, 1926, for the repair of two of the Cook Strait telegraph-cables, one of which (No. 3 OB), had been out of commission since July, 1924, owing to the development of a pronounced earth fault about 400 yards from the Oteronga Bay cable-hut. The second cable (No. 2 OB), became faulty early in November, 1926, in this case also owing to a pronounced earth fault. Electrical tests placed the fault approximately eight nautical miles from White Bay. There are six telegraph-cables connecting the North and South Islands, three of which are laid between White Bay and Oteronga Bay, two between White Bay and Lyall Bay, and one between Diffenbach (Queen Charlotte Sound) and Titahi Bay. The postponement of repairs to the cable that was interrupted in 1924 was rendered possible by the increased carrying-capacity of the remaining cables due to the extended use of the multiplex machine-printing telegraph system. The loss of the services of one cable does not now cause any appreciable delay on telegraph traffic, and a considerable saving in expenditure is effected by delaying the charter of the cable-repair steamer until two or more cables require attention.

While the "Iris" was taking in cable from the Department's tanks at Wellington for the repair of the two cables referred to above, a break was reported in No. 4 Lyall Bay—White Bay cable. Tests showed this break to be about fifteen nautical miles from Lyall Bay.

Unusual difficulties were met with in effecting repairs to the cables, the skill of the ship's officers and crew being taxed to the utmost. From the moment the vessel entered Cook Strait she encountered strong gales and heavy seas, which frequently forced her to seek shelter in Port Underwood. In addition strong spring tides, which were running up to five knots off Oteronga Bay, rendered the operation of grappling doubly difficult, the irons being lifted from the sea-bed by the force of the current and in several instances being carried under the ship. Much time was spent in searching for the faulty cable about eight nautical miles from White Bay. It was found that the cables in this locality had become buried under a layer of silt from the Wairau River, and dragging with grapnels, which search to a depth of 14 in. in the mud, failed to discover any trace of the faulty cable. Finally it was decided to grapple five miles farther out to sea, at which point the cable was picked up, and from there it was taken in until the fault was located.

The repairs to all three cables were completed a few days before Christmas, the ship having spent almost five weeks on the work.

Repairs to the Bluff—Stewart Island cable also were effected. These repairs involved the laying of three-quarters of a mile of cable at the Bluff end. The work was carried out with the aid of one of the boats used in the oyster trade, the repair cable being shipped from Wellington to Bluff in one of the Union Steamship Co.'s coastal steamers.

The survey of Oteronga Bay was completed in June, 1926. This work necessitated the taking of numerous soundings and the sweeping of a large area in the bay so that a safe anchorage could be found for ships that might be required to undertake repair work in this locality. The survey was carried out by Captain Whiteford, of the Marine Department.

WIRELESS SERVICES.

INTERNATIONAL RADIOTELEGRAPH CONFERENCE.

An International Radiotelegraph Conference will be held at Washington, U.S.A., during 1927. The Department will be represented by the Chief Telegraph Engineer, Mr. A. Gibbs, M.I.E.E. The last conference was held in London in 1912. In view of the great advance in the science during the last fifteen years, the need for international agreement and regulations upon the many aspects of radiotelegraphy and radio-telephony has become increasingly evident. Broadcasting by radio-telephony, radio-beacons, and radio-goniometric stations are some of the related aspects of the science that will no doubt be made subjects of international pronouncements. Apart from the object of co-ordinating regulations adopted by individual countries, it is likely that much useful information will be obtained from an intimate knowledge of the experience gained and the conditions pertaining in other countries. In particular, it is expected that international regulations will be framed regarding the wave-lengths to be allotted to the various radio-electric services.

NEW ZEALAND COAST STATIONS: EQUIPMENT, OPERATION, ETC.

AUCKLAND.

Valve Transmitter and Receiver.—In addition to a valve transmitter which was provided for the purpose of eliminating interference by morse to broadcast listeners, a new receiver has been installed at Radio-Auckland. As this station is situated in the centre of the city, considerable interference from tramways, electric motors, &c., is encountered. This, together with the incidence of broadcasting in Auckland, necessitates special attention being paid to the receiving-apparatus. The present receiver is designed to eliminate as far as possible interference of this nature.

AWARUA.

Short-wave working.—A modern short-wave receiver has been installed at this station. The experimental low-power short-wave transmitter has also been rewired on modern lines, and has been the means of effecting a marked saving in power-consumption. By means of this set traffic has been exchanged with the R.M.S. "Makura" throughout the vessel's voyages between New Zealand and San Francisco.