

NEW ZEALAND SUBMARINE CABLES.

COOK STRAIT CABLES.

With the exception of the two broken single-core telegraph cables between Oteronga Bay and White Bay to which reference was made in last year's report, the Cook Strait telephone and telegraph cables have remained in good working-condition during the year. The cable-repair steamer "Iris" has been commissioned to repair the Department's interrupted submarine cables in Cook Strait and will undertake this work shortly. The vessel is expected to arrive in Wellington from Melbourne early in April.

A high-grade telephone circuit between Wellington and Blenheim has been established over No. 5 Lyall Bay - White Bay single-core unloaded submarine-telegraph cable, and has been in operation since October. This cable is 44.65 nautical miles long, and is now utilized for the simultaneous transmission of both telephone and telegraph traffic, a quadruplex system operated as a duplex or triplex being used for the despatch of the telegraph traffic. Further particulars of the telephone system are given under the heading "Carrier current telephone systems."

As originally designed and equipped the Wellington-Seddon four-core continuously-loaded submarine cable provided for three telephone channels and four simplex hand-speed-operated telegraph channels. With the modifications recently adopted by the Department it is now practicable to operate a duplex system over each of three telegraph channels while the fourth channel is reserved for the operation of a multiplex dialling system by means of which the toll operators at Wellington and Blenheim dial direct the wanted subscribers at the distant terminal exchanges. In addition to these increased telegraph facilities, an extra telephone channel was established over this cable by the application of carrier-current methods as mentioned in last year's report.

MISCELLANEOUS.

A break in the Bluff - Stewart Island cable occurred in October, localization tests disclosing that the fault was close to the Ocean Beach (Bluff) cable hut. Repairs, which involved the laying of approximately 0.37 nautical miles of second-hand shore-end cable, were effected in November.

Approximately three miles and three-quarters of 4-pair and four miles of 8-pair submarine telephone cable were laid in the Marlborough Sounds during the year in order to provide improved telephone facilities for settlers in that locality.

For the purpose of providing facilities for connecting prospective subscribers in the Birkenhead and Northcote areas direct to the Auckland telephone exchange two 150-pair telephone cables were laid across Auckland Harbour in May. The total length of cable laid was approximately three and a half nautical miles.

RADIO-TELEGRAPH AND TELEPHONE SERVICES.

OPENING OF OVERSEAS RADIO-TELEPHONE SERVICE.

Last year in this report reference was made to the proposed institution of a radio-telephone service between New Zealand and Australia. The service was opened on 25th November, 1930, by a conversation between the Acting Prime Minister of Australia (the Hon. J. E. Fenton) and the Acting Prime Minister of New Zealand (the Hon. E. A. Ransom). The New Zealand terminal consists of a modulating unit working in conjunction with a 3-kW. short-wave continuous-wave transmitter at Wellington Radio. Directional arrays are employed both for transmission and reception. The receiving station is situated on Mount Crawford, approximately five miles from the transmitting station, and the terminal or linking equipment at the Stout Street toll centre. Communication via the overseas radio-telephone service is available from almost any centre in New Zealand to the exchanges in the eastern States of Australia. The charge for a connection between any available points in the two countries is £1 per minute with a minimum charge of £3. Tests are at present being conducted with a view to extending the service to London and other countries telephonically connected therewith; and it is anticipated that the extended service will be open to the public in the near future.

LOSS OF R.M.S. "TAHITI": ASSISTANCE RENDERED BY RADIO STATIONS.

A striking demonstration of the value of radio to ships at sea was given on the 15th August when between 3 and 4 a.m. (New Zealand time) the R.M.S. "Tahiti," bound from Wellington to San Francisco, was in urgent need of assistance. There was no response from other ships to messages broadcast by the vessel indicating the seriousness of her position, but Auckland Radio, per medium of Sydney Radio, got into touch with the s.s. "Ventura," then 500 miles from Suva, advising that vessel of the disaster, and then informing the "Tahiti" of the "Ventura's" position. In addition, a cable message was sent to Suva requesting the opening of the Suva Radio station, which was in a favourable position for directing the "Ventura." At 6 a.m. Suva Radio established communication with the "Ventura," and at 9 a.m., by arrangement, directed the latter vessel to proceed to the assistance of the "Tahiti." The s.s. "Tofua" and s.s. "Antinous" also left Suva and Rarotonga respectively to assist, but were later recalled. In the meantime Auckland Radio had been endeavouring, unsuccessfully, to raise the small steamer "Penybryn," which was bound from Papeete to