

ship struck she communicated with Radio-Auckland, whence the information was broadcast to other ships, enabling arrangements to be made for the prompt despatch of the steamer "Rimu." In addition, Radio-Auckland intercepted by radio at 2 a.m. the s.s. "Ngapuhi," bound from Whangarei to Auckland, whereupon she was diverted to the assistance of the "Manaia." The passengers and crew of the ill-fated vessel were subsequently transferred to the steamers "Rimu" and "Ngapuhi," and brought on to Auckland. The "Manaia" was abandoned.

The R.M.S. "Makura," outward bound from Wellington on the 14th September, 1926, received at 8 p.m. a lamp signal from a small unknown vessel to the effect that the signalling ship was short of coal. The "Makura" (an oil-fuel ship) promptly repeated the message by radio to Radio-Wellington, which station immediately notified shipmasters and others concerned. The vessel in distress was later found to be the small fishing steamer "Awarua," which was some days overdue from Chatham Islands *en route* to Wellington. Two tugs, the "Toia" and the "Terawhiti," were despatched from Wellington in search of the distressed vessel. Later H.M.S. "Dunedin," which was carrying out gunnery practice at sea, was communicated with. The "Dunedin" also participated in the search, and ultimately found the "Awarua," which had been blown by the gale up the east coast of the North Island almost to East Cape.

Advice was received on the 15th October, 1926, that the s.s. "Omana" was ashore on Tiritiri Island, in the Hauraki Gulf. The vessel was not fitted with wireless, but the s.s. "Clansman," which carried an installation, stood by and passed messages to Radio-Auckland. The "Omana" was refloated the same day.

In addition to rendering valuable assistance in cases of ships in distress, the New Zealand radio-stations receive and broadcast to navigators messages relating to the position and nature of derelicts and other dangers to navigation, the failure of light-buoys and other signalling-apparatus to function, as well as messages of a general character intended for the guidance of mariners.

INSTALLATION OF RADIO BEACON STATION.

The installation of a radio beacon station at Cape Maria Van Diemen in the behalf of the Marine Department was completed on the 20th August, 1926. After undergoing tests the station was brought into operation on the 1st December, 1926. Any ships within range which are fitted with the requisite apparatus are able to take their bearings by means of the radio signals automatically transmitted from the beacon during conditions of low visibility. Masters of vessels desiring the beacon to operate in normal conditions may communicate with the beacon by way of the Awanui Radio-station. Since the inception of the service the beacon has operated satisfactorily. The wave-length employed is 1,000 metres. This, the first installation of its kind in the Dominion, can be regarded as a striking instance of the manner in which radio science is being applied for the protection and assistance of ships at sea.

WEATHER REPORTS FROM SHIPS AT SEA.

Arrangements have been made for the reception at New Zealand radio coast stations from ships at sea of weather-report telegrams for the Meteorological Office.

EXAMINATION FOR SHIP OPERATORS' CERTIFICATES.

Commencing in November, 1926, arrangements were made for special monthly examinations in operating to enable holders of second-class certificates in radio-telegraphy to qualify for first-class certificates.

BRITISH OFFICIAL WIRELESS MESSAGES.

The hope expressed in last year's report that reliable reception in New Zealand of the British official radio messages transmitted from the high-power station at Rugby, England, would soon be accomplished has been realized. After a number of experiments and consequent improvements in the receiving-apparatus at the Radio-Awarua station, these messages are being successfully received except during times of abnormal atmospheric conditions. Considerable interference from other European high-power stations was at first encountered, but by means of a filtering-device such interference has been overcome. The messages received are supplied by the Prime Minister's Department to the United Press Association for distribution to newspapers. As they emanate directly from the British Government, their purport may be considered as an authentic and informative summary of news of an Imperial and international character. Not the least valuable aspect of such direct touch with the Home Government will be the probable correct moulding of public opinion on subjects of Empire concern.

RECEPTION OF TRANS-ATLANTIC RADIO TELEPHONY.

Since August, 1926, tests have been made with a view to ascertaining the extent to which the trans-atlantic telephone transmissions between Rugby and New York could be heard in New Zealand. The tests clearly indicate that speech can be received when conditions are favourable, but many difficulties will have to be overcome before speech can be reliably received over such an extreme distance.