

Coromandel Wharf.—General repairs to this structure have been carried out by the county, and a detailed survey of the harbour was made by the Department to determine the best location for the proposed new wharf.

Port Jackson.—The removal of the reef near Port Jackson has been satisfactorily completed.

Whangamata Wharf.—This wharf was erected during the year. It consists of a hardwood superstructure with turpentine piles.

French Pass.—Repairs were effected to the wharf, and portion of the overhanging cliff adjacent to the lighthouse was removed, it having been damaged by the earthquake.

Motueka Harbour.—A comprehensive survey has been made of the harbour and neighbouring coast-line to keep in touch with the remarkable changes occurring there.

LIGHTHOUSES.

Cape Egmont.—The original light, which was one of the older type of fixed incandescent oil-burning lights, has been replaced by one comprising an up-to-date revolving lens with a fixed incandescent acetylene-burner and sun-valve. The whole apparatus, both lighting and revolving, is operated by the pressure of the gas, and is automatically turned on and off at sunset and sunrise by means of a sun-valve, which is operated by the difference between daylight and darkness. This light is now the most up-to-date installation in this country, and represents the most advanced type of automatic installation so far devised.

Godley Head Lighthouse.—Plans are being prepared for the conversion of this light from a fixed to a flashing light, and it is hoped to complete it during the ensuing year.

Tory Channel Leading-lights.—These leading-lights have now been converted from fixed low-powered oil-burning lights to automatic flashing acetylene-burners. It was necessary to adopt quick-flashing characteristics for both back and forward lights in order to give the same facility for keeping direction as with a pair of fixed lights, but without the disadvantages of the latter.

West Head Light, Tory Channel.—This light, which consists of a 300 mm. lens lantern with a 25-litre acetylene open-flame flashing burner, all mounted on a steel pedestal, is wholly automatic, and was erected during the period. Its function is to mark the entrance to Tory Channel, and enable shipping to readily pick up the leading-lights, which are only visible through the narrow arc of the entrance, and thus difficult to pick up in thick weather or if a vessel is approaching on a course widely different from the line of the leading-light.

Jack's Point.—This light, which was originally a watched oil-burning light of the third order, has been converted to automatic operation by the provision of an automatic flashing apparatus. In addition to this, a new 800 mm. lens has also been installed.

Kahurangi Point Lighthouse.—This lighthouse was severely damaged in the earthquake of June, 1929. Two of the cast-iron segments of the tower were cracked and the lens was completely shattered. The keeper's house was overwhelmed by a landslide. A temporary light was put into operation as soon as possible, and a new lens has been ordered and should be delivered shortly. New cast-iron sections for the tower to take the place of those damaged have also been manufactured and delivered.

Moeraki Lighthouse.—Plans of a new automatic flashing apparatus in place of the existing watched oil-burning apparatus are being prepared.

Portland Island Lighthouse.—A small wireless apparatus, of the type used in the launch lifeboat in overseas ships, has been procured for this station to enable communication to be established with the mainland in case of sickness. It is questionable whether such an apparatus will be effective, and the installation must therefore be looked upon as experimental. If it is not effective other arrangements will require to be made.

Banks Peninsula.—The existing light does not safeguard ships coming from the north from the peninsula. A new light will be erected somewhere in the locality of East Head, in a position, if such can be obtained, where it will be seen from north and south. If such a position cannot be obtained, then the existing light will remain for the guidance of vessels from the south.

Provision is also being made for a small light on Kapiti Island, and for increasing the range of visibility of Jackson's Head light.

The diaphone fog-signal apparatus for Taiaroa Head, similar to that at Pencarrow and Godley Heads, has arrived, and a commencement will shortly be made with the installation.

The transfer of the lighthouse and fog-signal from Pencarrow Head to Baring Head was deferred pending a trial of the new light at Cape Egmont. This has proved entirely satisfactory, and the light for Baring Head will be of the same type. It is hoped to proceed with this work, which is of considerable magnitude, in the near future.

NEW LIGHTHOUSE TENDER.

The new lighthouse steamer to replace the "Tutanekai" is now on her way to New Zealand, and should arrive in Wellington about the 12th of October. The vessel will be an oil-burner convertible to coal-burning. She will be fitted with an automatic recording depth-finder, which should prove of considerable value in locating shoal patches and other underwater dangers to navigation. The plans and specifications of the ship were prepared by Mr. G. E. Breeze, Chief Surveyor of Ships.