

The ASSISTANT CHIEF INSPECTOR OF MACHINERY and the ASSISTANT CHIEF SURVEYOR OF SHIPS to  
the SECRETARY OF THE MARINE AND INSPECTION OF MACHINERY DEPARTMENT.

SIR,—

Head Office, Customs Building, Wellington, 17th July, 1922.

I have the honour to submit herewith the annual report of the operations of the Inspectors of Machinery and Surveyors of Ships during the twelve months which ended on the 31st March, 1922.

Considering the general depression in trade, one would have expected a decrease in the number of inspections. The number of surveys of ships are much the same as those of the previous year, but there has been a marked increase in the numbers of land boilers and machinery inspected. The increase in the number of old boilers is 5 per cent., and in new boilers and in machinery about 15 per cent.

Amendments have been made to the regulations governing the shipment and landing of petroleum. For all vessels required to carry petroleum a license must be obtained. Before it is issued a special inspection of the spaces in which the petroleum is to be carried is made, bulkheads in holds are tested where a license is necessary, and attention is drawn to any matters not in accordance with the regulations or affecting the safety of the ship.

Regulations regarding the use of coal-hooks came into force on the 1st March, 1922. No hook may now be used in hoisting and/or loading coal unless it is of a pattern approved by the Minister of Marine, and until it has been passed by a Surveyor appointed by the Marine and Inspection of Machinery Department. The regulations specify the quality of the material of which the hooks shall be made, and also what tests are required before the hooks are passed. During the year under review approval has been granted to hooks of three different patterns.

The Board of Trade have issued a revised circular, No. 16/33, giving a comprehensive statement of the recommendations and requirements of the Board as to the means of dealing with fires occurring on board ship. The Board of Trade state that the whole question of the proper provision of fire-extinction appliances was considered by the Marine Shipping Advisory Committee in 1915. In so far as these recommendations apply to foreign-going passenger-steamers, they will in substance be made compulsory when the Marine Shipping (Convention) Act, 1914, comes into force. In the meantime the Board desires to urge upon all owners the extreme desirability of equipping their vessel in accordance with these recommendations. Losses by fire at sea even in normal years are very considerable, and the adoption of the most efficient means of preventing and extinguishing fires is a real economy. They also urge that great care and watchfulness be exercised in the loading, stowage, and discharging of cargo, as many fires are attributed to smoking and carelessness on the part of men working cargo. Certain kinds of cargo are liable to take fire spontaneously, and should not be stowed where they will be exposed to heat. Information is given in the circular respecting the means recommended for extinguishing fires for steamships and sailing-ships in general, and specific requirements for various classes of ships are also given.

#### SURVEY OF SHIPS FOR SEAWORTHINESS.

One hundred and seven surveys for seaworthiness were made during the year.

Several vessels were damaged in collisions and stranded, some in heavy weather, and several developed hull, engine, or boiler defects. The "Port Caroline" was delayed for some time through the turbine-shaft bending as the vessel was leaving Napier on the 1st June last, and a new rotor shaft had to be made.

The "Atua" struck a reef in the Toguru Passage, Suva, Fiji, and was considerably damaged. A number of frames, reversed frames, and hull-plates were renewed in the dock at Auckland.

#### SURVEY OF GOVERNMENT VESSELS.

Seventeen Government vessels were surveyed during the year. Their names are as follows:—Steamships—"Ben Lomond," "Earnslaw," "Hauraki," "Hinemoa," "Janie Seddon," "Lady Roberts," "Tutanekai"; oil-engine vessels—"Huia," "Iriani," "Kohurangi," "Manurere," "Maroro," "Patiti," "P.W.D.," "Sybil," "Tarawera"; paddle-steamer—"Mountaineer."

#### ADDITIONAL STEAMERS AND AUXILIARY-POWERED VESSELS SURVEYED FOR THE FIRST TIME.

The number of vessels surveyed for the first time during the year is fifty-four. Included in this number are a number of sea-going steamers.

#### SURVEY OF SAILING-VESSELS.

The number of sailing-vessels that have been surveyed this year is fifty. Many of them have been extensively repaired.

#### THE SURVEY OF STEAMSHIPS AND AUXILIARY-POWERED VESSELS.

The number of steamships and auxiliary-powered vessels surveyed this year is 736. The construction of two vessels, the hulls of which were built in the Dominion, was completed. These vessels are the s.s. "Makora," owned by the Devonport Steam Ferry Company, Auckland, and the auxiliary scow "Otimai."

The s.s. "Makora" is a composite vessel, her registered dimensions being—length, 130.8 ft. : breadth, 31 ft. ; depth, 11.1 ft. Her gross and net tonnage are 290 tons and 194 tons respectively. The propelling-machinery consists of a set of triple-expansion engines, with cylinders 13 in., 20½ in.,