

S.s. "Pateena."—The two main boilers of this vessel received a thorough overhaul. Both were turned round to have the defective portions of shell-plating underneath dealt with. After the repairs were completed a satisfactory hydraulic test of both boilers was made. Several new plates in bunkers were renewed, and some plates were sheathed where thin. A number of new rivets were put into the hull of the vessel, the main cables and the steering-gear thoroughly overhauled, and the propeller-shaft withdrawn for survey.

S.s. "Pupuke."—This new wooden vessel was built in Auckland for the new ferry service at Lake Takapuna. The principal dimensions of the vessel are 95 ft. by 28 ft. by 8 ft.; tonnage, gross 137.93, register 68.23. The machinery is of the compound type, with cylinders of 13 in. and 26 in. diameter, and a stroke of 18 in. This vessel can carry 738 passengers in Auckland Harbour.

S.s. "Kuruhaui" (auxiliary).—This vessel's hull had a very complete overhaul, all the ballast and cement being removed for purposes of examination. Several of the frames were renewed, all the hull-planking refastened, the lining inside renewed, keelson refastened, new rudder-gudgeons provided, and a new oil-engine and shafting fitted into vessel.

P.s. "Westland."—The main boiler of this vessel was found to be so bad that it had to be lifted out of the vessel to be repaired. After the necessary repairs to the boiler were effected, it was subjected to a hydraulic test, and found satisfactory. The frames of this ship, fore and aft, were renewed where necessary, the rudder repaired, the sponsons refastened, the plating of bunkers and paddle-boxes repaired and renewed where necessary, and the main and auxiliary steam-pipes tested throughout by hydraulic pressure.

S.s. "Aupouri."—At the last survey this vessel had a considerable overhaul, consisting of extensive repairs to hull and in the engine-room and stokehold compartment, which necessitated the lifting-up of the main engines about 4 ft. to get at the work under the engine-beds. Two keel-plates and two bilge-plates were taken out, straightened, and put back; four broken floor-plates 18 ft. by $\frac{3}{8}$ in., and three 12 ft. by $\frac{3}{8}$ in., were cut out, and new floor-plates fitted, and one new floor-plate 7 ft. by 18 in. by $\frac{1}{2}$ in. in the forward end of engine-room renewed. All the hull-plating under engines was taken out, straightened, and replaced, all the reverse frames in stokehold and engine spaces renewed, a new strengthening girder riveted to top of floors from front of boiler to after bulkhead in engine-room, and a great number of rivets in other parts of vessel renewed.

S.s. "Awaroa."—This vessel had her hull stiffened up by four new hardwood keelsons (extra) fitted from forehold under boiler to stokehold. The dimensions of these were 26 ft. by 12 in. by 7 in. Two of the old keelsons were faced with hardwood doubling-pieces 14 ft. by 7 in. by 9 in. These keelsons were fastened through every frame with Muntz-metal bolts and nuts. Several repairs were also effected to the main boiler, some machinery defects attended to in the engine-room, and the propeller-shaft drawn for survey.

S.s. "Breeze."—This is a new vessel, and has undergone her first survey in New Zealand this year. She is of steel, and of the following dimensions: 165.4 ft. by 28.2 ft. by 11.5 ft., of 552.51 gross tons burden, and 286.18-tons register. She was built in Holland. The machinery is of the triple-expansion type, has cylinders 13 in., 21 in., and 34 in. in diameter, a stroke of 2 ft., and indicates 468-horse power. This vessel is owned by the Canterbury Steamship Company, Christchurch.

SURVEYS OF SHIPS FOR SEAWORTHINESS.

Fifty-two special surveys for seaworthiness were made during the year, and the supervision of the repairs necessary was carried out to completion in each case by the Surveyor of Ships making the survey. The repairs in some cases covered a period of several weeks. The accidents that necessitated the surveys happened to both steamers and sailing-vessels, and took place all round the coasts of New Zealand, one or two being on the high seas.

The causes for these surveys include the stranding of vessels, collision with another vessel, collision with wharves, fires, defects in fastenings in wooden hulls, defective rudders, crank-shaft fractures, loss of propeller-blades, leakage to hull caused through stress of weather, circulating-pipe fractures, main steam-pipe fractures, piston-rod breaking, partial stripping of the blades of a rotor of a turbine engine, &c.

Return No. 17 gives a full description of each seaworthiness survey made.

GOVERNMENT STEAMERS.

The Government steamers surveyed this year comprise the *s.s. "Amokura," s.s. "Antrim," s.s. "Ben Lomond,"* Defence launches "A" and "W," *s.s. "Hinemoa," s.s. "Janie Seddon," s.s. "Mountaineer,"* o.e.v. "*Reremoana," s.s. "Tawera,"* o.e.v. "*Tewhaka,"* and *s.s. "Tutanekai"*—a total of 12.

Training-ship "Amokura."—This vessel had a fairly extensive overhaul to her machinery, including the withdrawal of the pistons of each cylinder of her main engines, the fitting of new neck-brasses and the turning-up of all three piston-rods for these cylinders, a complete overhaul to the slide-valves and valve gearing and to the starting-engine, new baffle-plates for all furnaces of main boilers, new sludge-doors for boilers, smoke-box door refitted, propeller-shaft sighted and propeller taken off, overhaul of hawse-pipes, repairs to rudder, and several other minor repairs. The work was carried out by a Wellington firm, and after completion a trial trip was made in the harbour, and the machinery ran to the entire satisfaction of the Surveyor of Ships, who had supervised the repairs throughout.

S.s. "Ben Lomond."—This vessel runs on Lake Wakatipu. At the last survey the fore deck was sheathed with 2 in. planking, and repairs to the stays of the main boiler and to the smoke-box, and also to the outer-shell seams of the boiler, were made; the water-gauge mountings were renewed; the stern tube was drawn, bored out, and new propeller-shaft fitted, and the thrust-bearing was overhauled.