

a new small bracket was riveted on to the end of the keel for carrying the bottom pintle of the rudder. The rudder was taken out for examination of the head in the trunk, and two new iron hinge-bands were riveted on to the rudder-post for the rudder-pintles. Two new frames, reverse frames, and floor-plates were put in bottom of hold. Two new angle-irons were riveted to the ends of the under deck-frames on the port and starboard sides of hatch, and new deck-planks were fitted round the hatch and also over the boiler. The main boiler was thoroughly examined, and, owing to wasting on the outside of the boiler-bottom, the working-pressure was reduced 10 lb. The tail-shaft was drawn for examination, and the engines received a general overhaul.

S.s. "Albatross."—In order to reduce the vibration of this vessel, several girder and T plates have been fitted in the fore and after holds. Two new planks have been fitted in the keel at fore and after ends. The main steam-pipes were annealed and tested by hydraulic pressure, and both tail-shafts were drawn for examination. Two new deckhouses with open ends have been erected on the top deck as shelter for passengers, and the top deck amidships has been sheathed with 6 in. by 1 in. planking.

Dredge "Canterbury."—This dredge was built in Renfrew, Scotland, and steamed out to Lyttelton, at which port she is engaged in dredging. She is of the patent twin-screw trailing suction cutter hopper type of dredge, and has suction and self-discharging pumps capable of raising and discharging 2,000 tons of material per hour. The leading dimensions of the vessel are: Gross tonnage, 1,113; register tonnage, 521; length, 204.2 ft.; breadth, 38.15 ft.; depth, 16.8 ft. There are four sets of compound engines. Two sets have cylinders each 13 in. and 26 in. diameter by 15 in. stroke, and are arranged to work on one line of shafting when the vessel is moving from place to place, but when the vessel is dredging they are disconnected, one set of engines propelling the dredge and one set driving the pumps. Steam is supplied at a working-pressure of 130 lb. per square inch by two marine multitubular boilers 13 ft. diameter and 10 ft. long.

S.s. "Chelmsford."—A new rudder-trunk and both bands for the rudder have been fitted. A new floor has been put in ladies' cabin. Six 6 in. by 3 in. channel iron frames have been put across hold and extended up about 5 ft. on each side of keelson, and spaced 4 ft. to 4 ft. 6 in., and bolted to sister keelsons. The boilers, machinery, and equipments were carefully surveyed. The whole length of the main steam-pipe was disconnected and tested by hydraulic pressure.

P.s. "Clyde."—The different compartments of the hull of this paddle steamer received repairs as follows: No. 1 compartment—Several of the floors and the bulkhead were repaired, and two floors were cut out and straightened. No. 2—Gusset-plates were fitted on two floors to the frames. No. 3—Seven floors were cut out, straightened, and riveted; diagonal and upright bracings were refastened. No. 4—Seven floors were cut out and straightened, a steel plate 10 ft. by 10 in. by $\frac{3}{16}$ in. was fitted on bottom under derrick. No. 5—Bulkhead was repaired and the defective rivets were renewed. Engine-room—A patch was put on the bottom, and defective floors and the bracings were re-riveted. All the repaired floors were strengthened with $\frac{1}{4}$ in. steel plates and 2 in. angle reverse bars. 180 ft. of 7 in. by 3 in. ironbark belting was fitted between 2 in. angles. A steel shoe 2 ft. 5 in. by $\frac{3}{8}$ in. was fitted on the keel near the rudder.

S.s. "Corinna."—Extensive repairs were made to this vessel's main boilers, and a new donkey-boiler was placed on board. The principal repairs to the main boiler, which had to be turned round for the purpose, were: Two large doubling patches fitted on the bottom of the shell, and two patches fitted on the bottom of the boiler-fronts and welded to old parts; four compensating-rings fitted at bottom doors over the welded parts; two patches fitted on the front ends of the centre furnaces at bottom; a new bottom fitted in centre of combustion-chambers; three corner patches fitted at saddles of centre furnaces; all the cracks on the landings welded, and eight leaky rivets renewed. The main and auxiliary engines had a general overhaul, and the main pipes were tested by hydraulic pressure. The donkey-boiler, which is of the vertical cross-tube type and is 5 ft. 6 in. diameter and 11 ft. 4 in. high, was made in New Zealand from steel plates of approved brand. The plan and specification of the boiler was submitted to the Department, and when some additional strength to the staying was made to the firebox and shell crowns it was approved for the required working-pressure. A Surveyor of Ships supervised the construction of the boiler and witnessed the test by hydraulic pressure to double the working steam-pressure.

O.E.V. "Dawn."—This vessel was placed on a slip, and a new bottom put in the hull. All worm-eaten planks were replaced by new ones, and new ceilings were fitted to hold. The engines were taken out of the vessel, and before being replaced they were thoroughly overhauled.

S.s. "Earnslaw."—This steel twin-screw steamer was built by a Dunedin engineering firm for the New Zealand Government. She is engaged carrying passengers and cargo on Lake Wakatipu. She has a promenade deck running the full length of hull, and accommodation is provided for 1,072 passengers and about 40 tons of cargo. The plans of the hull and boilers were submitted to the Department before their construction was commenced, and after some alterations had been made were finally approved. The vessel's hull and boilers have scantlings of the highest standard. The principal dimensions of the vessel are: Length, 160 ft.; beam, 24 ft.; depth, 9 ft. There are two sets of triple-expansion jet condensing-engines with cylinders 12 $\frac{1}{2}$ in., 20 $\frac{1}{2}$ in., and 34 in. diameter by 18 in. stroke, indicating about 500 horse-power for each engine. Two locomotive type of boilers have been installed to work at a pressure of 180 lb. per square inch. Superheater and forced draught are fitted to the boilers. The barrel of each boiler is 6 ft. diameter and 7 ft. 8 in. long, and the heating-surface of each boiler is 1,420 square feet. On the trial trip the vessel attained a maximum speed of 16.36 knots. This vessel was first erected in Dunedin, and re-erected at Kingston before being launched there. The propelling machinery and all other machinery details were made in Dunedin. The vessel during the whole period of construction was closely supervised by an Inspector of Machinery, in his capacity as a Surveyor of Ships.