

REPORT ON MACHINERY.

3402

Workmanship. Are the butts of plating planed or otherwise fitted? Hammered. Do the edges of the carvel work and of the butts lay close together throughout their length without requiring any making good of deficiencies? Yes.

Masts, Bowsprit, Yards, &c., are all in good condition, and sufficient in size and length. If of Iron or Steel give Scantlings of Plating, Angle Irons, &c., and further explain by a sketch showing how the lower Masts and Bowsprit are constructed, showing the number of Plates and Angle Irons, mode of riveting, quality of Materials, and if engaged with Maker's name.

Table with columns: NUMBER & LETTER FOR EQUIPMENT, SAILS, Chain, Fore Sails, Fore Top Sails, Fore Topmast Stay Sails, Main Sails, Main Top Sails, and Anchors. Includes details on cable types and anchor specifications.

Standing and Running Rigging wire & hemp sufficient in size and good in quality. She has eight life boats and three other boats. The Windlass is Hexfield's Patent Capstan Good, and Rudder Capstan Good. Pumps Good.

General Remarks (State quality of workmanship, &c.) This vessel the approved tracing of Midship & with the approved tracings which accord arrangement, section through double ports, and Mast & Yard plan; in accordance as above, and the Rules generally in steel - have been adhered to.

How are the surfaces preserved from oxidation? Inside Cement and paint, Outside Paint. I am of opinion this Vessel should be Classed 100A 1 Steel Spar deck, Main & Spar decks Steel.

Signature: James Turpin, Surveyor to Lloyd's Register of British and Foreign Shipping. Date: FRIDAY 21 FEB 1888. Character assigned: 100A 1 Steel Spar deck.

No. 3402. Port of Belfast. Date, first Survey 23rd Nov 1887. Last Survey 17th Feb 1888. Reg. Book. In Sup. for the Steel Screw Steamer 'Oceana'. Master S.K. Hector. Built at Belfast. By whom built Harland & Wolff. Engines made at Belfast. Boilers made at Belfast. Registered Horse Power 1000. Owners Peninsular & Oriental S.N. Co. Ltd. Port belonging to Belfast.

Engines, &c. - Description of Engines Triple Expansion Three Cylinders & Three Cranks. Diameter of Cylinders 20 1/2, 63 1/2, 102. Length of Stroke 72. No. of Rev. per minute 65. Point of Cut off, High Pressure 53 1/2. Low Pressure 43 1/2.

Where do they pump from? Bath from sea & bilge from all bilges. No. of Donkey Engines Seven. Size of Pumps 9"-8"-7 1/2"-6" three 4 1/2" dia. Where do they pump from all bilges, Ballast tanks, sea, hotwell, exhaust tank, fresh water tanks, boilers & condensers.

Are all the bilge suction pipes fitted with roses? Yes. Are the roses always accessible? Yes. Are the sluices on Engine room bulkheads always accessible? Yes.

Are all connections with the sea direct on the skin of the ship? Yes. Are they Valves or Cocks? Valves & Cocks. Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates? Yes.

Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times? Yes. Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges? Yes.

Are the screw shaft tunnel watertight? Yes. and fitted with a sluice door? Yes. worked from Main Deck. No. of Boilers 4. Description Cylindrical Multitubular. Other Steel or Iron? Steel.

Working Pressure 150 lbs. Tested by hydraulic pressure to 300 lbs. Dates of test 21st Oct. & 10th Nov. 1887. Description of superheating apparatus or steam chest None fitted.

REPORT ON MACHINERY

DONKEY BOILER- Description Cylindrical Multitubular: See Separate Form
Made at by whom made when made where fixed
Working pressure tested by hydraulic pressure to No. of Certificate fire grate area description of safety valves

SPARE GEAR. State the articles supplied: - 2 Screw propeller blades (Phos. Bronze), 1 length of crank shaft (Pickers steel); 1 propeller shaft; 1 HP + MP piston complete; 1 HP piston valve, 1 MP slide valve & loose face; 1 LP slide valve; 3 slide valve spindles; 1 set of brasses, bolts & nuts for both ends of Connect. rod; 1 set of Springs for M. & L.P. pistons; 2 main bearing bolts; 3 sets of bolts; 24 fine ring bolts, 1 air pump bucket, head & foot

General Remarks (State quality of workmanship, opinions as to class, &c.)

The Boilers and all parts of the Machinery of this vessel have been constructed and fitted in accordance with the plans approved of by the Committee, the Secretary's letters dated 22nd Sept. & 21st & 29th December 1886, the Rules or equivalent thereto for the Special Survey on New Machinery and to the Satisfaction of the undersigned.

The Steel used in the construction has been tested in accordance with the Rules.

The shafting when finished was found free from defects. The materials used and the workmanship throughout are good & satisfactory.

The Boilers were tested by hydraulic pressure and the Machinery under steam pressure, when the Safety valves were adjusted to 750 lbs on main & 100 lbs per sq. inch on Auxiliary Boilers. The Boilers tried for accumulation pressure rising about 4 1/2 %.

The Machinery in my opinion is eligible for the notification of L.M.C 2-88 and I would respectfully recommend that the same be assigned & recorded in the Society's Register Book.

It is submitted that this vessel is eligible to have L.M.C 2-88 recorded.

The amount of Entry Fee £ 3 : 3 : 0 received by me, Special £ 40 : 0 : 0 Donkey Boiler Fee £ Certificate (if required) £ 18.2.1888 Committee's Minute FRIDAY 21 FEB 1888 + L.M.C 2/88

James Claxton Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

REPORT ON MACHINERY. 3402

Port of Belfast
No. 3402
No. in Survey held at Belfast
Date, first Survey
Last Survey 18
Auxiliary Boiler S.S. Oceana
Built at Belfast. By whom built Harland & Wolff. When built 1887/8.
Registered Horse Power Owners Peninsular & Oriental S.S. Co. Port belonging to

Engines, &c. - description of Engines
Diameter of Cylinders Length of Stroke No. of Rev. per minute Point of Cut off, High Pressure Low Pressure
Diameter of Screw shaft Diam. of Tunnel shaft Diam. of Crank shaft journals Diam. of Crank pin size of Crank webs
Pitch of screw No. of blades state whether moveable total surface
Diameter of Feed pumps diameter of ditto Stroke Can one be overhauled while the other is at work
Diameter of Bilge pumps diameter of ditto Stroke Can one be overhauled while the other is at work
Where do they pump from

Lloyd's Register of British & Foreign Shipping.

PARTICULARS FOR RECORD OF MATERIAL OF BOILERS.
Port Belfast Date 18th Feb 1888
No. of Report 3402
Ship's Name "Oceana" No. in Reg. Bk. 9 in Sup.

Material of Shell Plates Steel
Do. Stays (Longitudinal Iron, Screw Iron)
Do. End Plates Steel
Do. Furnaces Steel (a)
Do. Combustion Chamber Plating Steel
Do. Other Parts Siderstays, Tubes & Manhole doors of Iron.

Working Pressure 100 lbs Tested by hydraulic pressure to 200 lbs
Whether Steel or Iron Steel
Date of test 10th November, 1887.

Description of superheating apparatus or steam chest None fitted
Can the superheater be shut off and the boiler worked separately
Description of safety valves See Lockburn's No. to each boiler Two

Area of each valve 8.3 Are they fitted with easing gear Yes No. of safety valves to superheater 17 area of each valve
Smallest distance between boilers and bunkers or woodwork 18" Diameter of boilers 12'-6"

Length of boilers 10'-0" description of riveting of shell long. seams Bolt straps bolt Riv circum. seams Bolt strapped Thickness of shell plates 25" 32"
Diameter of rivet holes 18" whether punched or drilled Drilled pitch of rivets 4.5 Lap of plating 12" Butt straps

Percentage of strength of longitudinal joint 75 plate 78 rivets working pressure of shell by rules 103 lbs size of manholes in shell 8" 12" x 16"
No. of Furnaces in each boiler Three

Side diameter 35 length, top 7-0 bottom 9-6 thickness of plates 96 description of joint Butt with SR. bolt S.S. if rings are fitted one Steel
Working pressure of furnace by the rules 100 combustion chamber plating, thickness, sides 2 back 2 top 2
Diameter of stays at smallest part 1 3/8" working pressure of ditto by rules 115 end plates in steam space, thickness 1"
Diameter of stays at largest part 1 7/8" x 17" how stays are secured Nutted working pressure by rules 113 lbs diameter of stays at smallest part 2 5/8" x 1 3/8" working pressure by rules 135 lbs Front plates at bottom, thickness 3/4" Back plates, thickness 3/4"
Diameter of tubes 3 1/2" - 8" P.W.C. pitch of tubes 4 1/4" x 4 1/4" thickness of tube 1/4"
How stayed Stay tubes Riveted working pressure of stays 13 1/2 x 9 1/2 width of water spaces 6" between boxes 705 bet. tube nests. diam. of rivet holes

Working pressure of shell by rules diameter of flue thickness of plates If stiffened with rings
Superheater or steam chest; how connected to boiler

James Claxton Engineer Surveyor to Lloyd's Register of British & Foreign Shipping