

REPORT ON MACHINERY.

No. 3212

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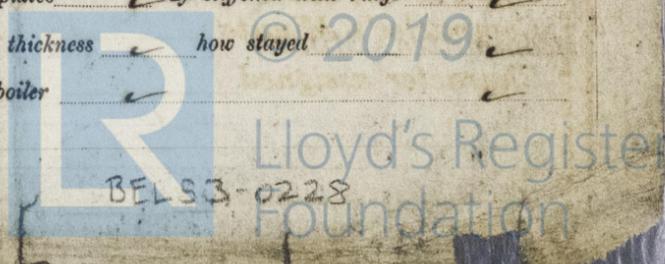
No. in Survey held at Belfast Date, first Survey 10th April 1883 Last Survey 20th April 1886
 Reg. Book. (Number of Visits 33)
57 in length the Steel Screw Steamer "Saint Fillans" Harland & Wolff N^o 186 Tons 2007.87 net
 Master E. D. Fitz Gerald Built at Belfast By whom built Harland & Wolff When built 1886
 Engines made at Belfast By whom made Harland & Wolff when made 1886
 Boilers made at Belfast By whom made Harland & Wolff when made 1886
 Registered Horse Power 320 Owners Ranuncius Selmour & Co Port belonging to Liverpool

ENGINES, &c.—

Description of Engines Triple Expansion Three Cranks.
 Diameter of Cylinders 24 1/2 37 26 1/4 Length of Stroke 4'8" No. of Rev. per minute _____ Point of Cut off, High Pressure _____ Low Pressure _____
 Diameter of Screw shaft 3 1/4 Diam. of Tunnel shaft 2 1/4 Diam. of Crank shaft journals 1 3/4 Diam. of Crank pin 1 3/4 size of Crank webs 9" x 15"
9 1/2" x 16" after crank
 Diameter of screw 16"-4" Pitch of screw 18'-0" No. of blades four state whether moveable no total surface 71.59 feet.
 No. of Feed pumps Two diameter of ditto 3 1/2" Stroke 28" Can one be overhauled while the other is at work yes
 No. of Bilge pumps Two diameter of ditto 4" Stroke 28" Can one be overhauled while the other is at work yes
 Where do they pump from N^o 1, 2, 3 & 4 holds & from machinery spaces.
 No. of Donkey Engines Three Size of Pumps Ballast 10" 100 lb. acting 10" stroke Where do they pump from Sea, main Boilers,
hotwell, ballast tanks & bilges.
 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
 No. of bilge injections One and sizes 5" Are they connected to condenser, or to circulating pump to circulating pump.
 How are the pumps worked by levers from after engine. A centrifugal pump for circulating.
 Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks both valves & cocks
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates yes Are the discharge pipes above or below the deep water line above
except centrifugal.
 Are they each fitted with a discharge valve always accessible on the plating of the vessel yes Are the blow off' cocks fitted with a spigot and brass covering plate yes
 What pipes are carried through the bunkers bilge suction How are they protected boxed in with wood.
 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, by master cocks & return
valves.
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock before launching 13-2-86
 Is the screw shaft tunnel watertight yes and fitted with a sluice door yes worked from upper deck.

BOILERS, &c.—

Number of Boilers Two Description Fired from both Ends. Whether Steel or Iron Steel
 Working Pressure 160 lbs Tested by hydraulic pressure to 320 lbs Date of test 18th February 1886.
 Description of superheating apparatus or steam chest none fitted.
 Can each boiler be worked separately yes Can the superheater be shut off and the boiler worked separately ✓
 No. of square feet of fire grate surface in each boiler 85 Description of safety valves Cockburns 1st No. to each boiler Two 3 1/4" dia
 Area of each valve 8.3 Are they fitted with easing gear yes No. of safety valves to superheater ✓ area of each valve ✓
 Are they fitted with easing gear ✓ Smallest distance between boilers and bunkers or woodwork 14" Diameter of boilers 12'-3"
 Length of boilers 17'-3" description of riveting of shell long. seams d/b butt shape, 2/8 pitch circum. seams lap, 2/8 pitch Thickness of shell plates 1/8"
 Diameter of rivet holes 1/4" whether punched or drilled drilled pitch of rivets 7.33 2 3/4 7.0 Lap of plating butt shape 2 1/2" lap
 Per centage of strength of longitudinal joint 82.94 working pressure of shell by rules 165 lbs size of manholes in shell 12" x 15"
 Size of compensating rings Square plate 24" x 27" x 1 1/4" No. of Furnaces in each boiler Six
 Outside diameter 36" length, top 6'-9" bottom 6'-9" thickness of plates 1 1/32" description of joint Corrugated if rings are fitted ✓
 Greatest length between rings ✓ working pressure of furnace by the rules 180 lbs combustion chamber plating, thickness, sides 7/16" back ✓ top 7/16"
 Pitch of stays to ditto, sides 7 1/4" x 7" back 7 1/2" x 7" If stays are fitted with nuts or riveted heads nuts working pressure of plating by
 rules 161.8 lbs Diameter of stays at smallest part 1 1/4" (Steel) working pressure of ditto by rules 181.3 lbs end plates in steam space, thickness 7/8"
 Pitch of stays to ditto 15" x 14" how stays are secured d/b nut & washers 1 3/4" dia x 7/8" thick working pressure by rules 139.4 lbs diameter of stays at
 smallest part 3" Iron working pressure by rules 202 lbs Front plates at bottom, thickness 1 3/16" Back plates, thickness ✓
 Greatest pitch of stays about 12" working pressure by rules 187.7 lbs Diameter of tubes 3 1/4" pitch of tubes 4 1/16" x 4 1/2" thickness of tube
 plates, front 7/8" back 2 1/32" how stayed Stay Tube pitch of stays 9 1/8" x 9" width of water spaces 1 1/4" bet tubes
9 2 Solid Stays
 Diameter of Superheater or Steam chest ✓ length ✓ thickness of plates ✓ description of longitudinal joint ✓ diam. of rivet holes ✓
 Pitch of rivets ✓ working pressure of shell by rules ✓ diameter of flue ✓ thickness of plates ✓ If stiffened with rings ✓
 Distance between rings ✓ working pressure by rules ✓ end plates of superheater, or steam chest; thickness ✓ how stayed ✓
 Superheater or steam chest; how connected to boiler ✓



DONKEY BOILER— Description In particulars of this boiler see sheet attached herewith.

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
No. of safety valves area of each if fitted with easing gear if steam from main boilers can enter the donkey boiler
diameter of donkey boiler length description of riveting
Thickness of shell plates diameter of rivet holes whether punched or drilled pitch of rivets lap of plating
percentage of strength of joint thickness of crown plates stayed by
Diameter of furnace, top bottom length of furnace thickness of plates description of joint
Thickness of furnace crown plates stayed by working pressure of shell by rules
Working pressure of furnace by rules diameter of uptake thickness of plates thickness of water tubes

SPARE GEAR. State the articles supplied:— a two bladed propeller One air pump rod, a set of main slide valve spindles, a set of connecting rod bolts, two holding down bolts, 1/2 set of air pump valves, 1/2 set of furnace bars, 25 boiler tubes, a quantity of assorted bolts & nuts and iron of various sizes. 4 Ramsbottom piston rings for high & intermediate cyls 4 for each cyl.
The foregoing is a correct description,
H. Lang Manufacturer.

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

At the undemoted stage in the progress of the work upon the engines and boilers of this vessel, the survey of the machinery was transferred to Mr Maxton. — Cylinders and Bed-plate cast-liner for M.C. lined all shafts in shop and crank thrust, Propeller and two lengths of tunnel shaping, tapered shells of main boilers built. Tube plates flanged and drilled & comb. Chamber plates flanged, Donkey Boiler nearly completed.

The material & workmanship is good & satisfactory so far as the same has been surveyed by me. D. Ritchie.

The machinery of this vessel has been built in accordance with the photograph approved by the Committee and likewise in accordance with or equal to Rules for Special Survey (New Machinery, the material and workmanship throughout are good and satisfactory, the boilers have been tested under hydraulic and the machinery under steam pressures; giving entire satisfaction and in my opinion eligible for the notification L.M.C. entered in the Society's Register Book with a date attached.

It is submitted that this vessel is eligible for L.M.C. recorded
JM 25/5/86

Large blue handwritten signature or initials, possibly 'J.M.C.' or similar.

The amount of Entry Fee .. £ 3 : 0 : 0 received by me,
Special .. £ 36 : 0 : 0
Donkey Boiler Fee .. £ .. : .. :
Certificate (if required) .. £ .. : .. : 20-4-1886
To be sent as per margin.
(Travelling Expenses, if any, £ 4-19-0)

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

Committee's Minute TUESDAY 25 MAY 1886

