

REPORT ON MACHINERY.

No. 2979 (Received in London Office 20th AUGUST, 1883)
 No. in Survey held at Belfast Date, first Survey March 13/83 Last Survey August 14 1883
 Reg. Book. on the S.S. "Saint Kevin" 14 visits. Tons 454.55
 Master Christopher O'Neil Built at Belfast When built 1883
 Engines made at Belfast By whom made M. McNamee, Lewis & Co. when made 1883
 Boilers made at " By whom made " when made 1883
 Registered Horse Power 75 Owners Thos. Heenan & Co. Port belonging to Dublin

Engines Compound, Inverted, Surface Condensing.
 of Cylinders 22 Length of Stroke 30 No. of Rev. per minute 80 Point of Cut off, High Pressure 1/2 S Low Pressure 1/2 S
 of Screw shaft 7 1/2 Diameter of Tunnel shaft 7 1/8 Diameter of Crank shaft journals 7 1/2 Diameter of Crank pin 7 1/2 size of Crank webs 8 1/2 x 5 1/4
 of screw 10-6 Pitch of screw 15-0 No. of blades 4 state whether moveable yes total surface about 32 sq ft
 No. of Feed pumps Two diameter of ditto 3 1/4 Stroke 16 1/2 Can one be overhauled while the other is at work yes
 No. of Bilge pumps Two diameter of ditto 3 1/4 Stroke 16 1/2 Can one be overhauled while the other is at work yes
 Where do they pump from all compartments
 No. of Donkey Engines Two Size of Pumps Feed 3" dia x 6" stroke Where do they pump from Feed Donkey from Sea and
Bilges, Ballast-Donkey from Ballast Tanks.
 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 no
 No. of bilge injections One and sizes 5" dia Are they connected to condenser, or to circulating pump circulating pump
 How are the pumps worked by levers from piston rod crossheads of both engines.
 Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks valves and 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
 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
 That pipes are carried through the bunkers none How are they protected —
 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
 Then were stern tube, propeller, screw shaft, and all connections examined in dry dock new vessel
 the screw shaft tunnel watertight yes and fitted with a sluice door yes worked from top platform.

BOILERS, &c.—
 Number of Boilers One Description Cylindrical, double-tubular
 Working Pressure 83-lb Tested by hydraulic pressure to 170 lbs Date of test 26-6-83
 Description of superheating apparatus or steam chest none
 Can each boiler be worked separately yes Can the superheater be shut off and the boiler worked separately none
 Area of square feet of fire grate surface in each boiler 49.5 Description of safety valves Spring
 to each boiler Two area of each valve 12.56 sq in Are they fitted with easing gear yes
 of safety valves to superheater — area of each valve — are they fitted with easing gear —
 Smallest distance between boilers and bunkers or woodwork 7'
 Diameter of boilers 13-0 Length of boilers 9-10 1/2 description of riveting of shell long. seams DRB 3/4" DR Circum. seams lob. single riveted
 Thickness of shell plates 3/4 (Stub) diameter of rivet holes 7/8 whether punched or drilled drilled pitch of rivets 3"
 of plating Bullhead 12" wide per centage of strength of longitudinal joint 70 working pressure of shell by rules 84 lbs
 of manholes in shell 12 x 16 size of compensating rings 6 x 3/4
 of Furnaces in each boiler Three outside diameter 34" length, top 6-6" bottom 9-0"
 thickness of plates 1/2 description of joint DR Bullhead SR Riv. if rings are fitted Timon greatest length between rings 6-6"
 Working pressure of furnace by the rules 100 lbs bottom head.
 of combustion chamber plating, thickness, sides 1/2 back 1/2 top 1/2
 of stays to ditto — sides 8 x 7 1/2 back 9 1/8 x 9 top 9 x 8
 Stays are fitted with nuts or riveted heads nuts working pressure of plating by rules 92 lbs
 Diameter of stays at smallest part 1/4 and 1/8 working pressure of ditto by rules 89 lb
 of plates in steam space, thickness 3/4 pitch of stays to ditto 16 x 16 how stays are secured DR Bullhead 92
 Working pressure by rules 90 lbs diameter of stays at smallest part 2 1/4 working pressure by rules 90 lbs
 of plates at bottom, thickness 9/16 Back plates, thickness 9/16 greatest pitch of stays about 11 1/2" working pressure by rules 83-lb.



Workmanship

Diameter of tubes $3\frac{1}{2}$ pitch of tubes $4\frac{1}{2}$ thickness of tube plates, front $\frac{5}{8}$ back $\frac{5}{8}$
 How stayed *Stay Tubes* pitch of stays $13\frac{1}{2} \times 13\frac{1}{2}$ width of water spaces 1
 Diameter of Superheater or Steam chest *Line fitted* length \dots
 Thickness of plates \dots description of longitudinal joint \dots diameter of rivet holes \dots pitch of rivets \dots
 Working pressure of shell by rules \dots Diameter of flue \dots thickness of plates \dots
 If stiffened with rings \dots distance between rings \dots Working pressure by rules \dots
 End plates of superheater, or steam chest; thickness \dots How stayed \dots
 Superheater or steam chest; how connected to boiler \dots

DONKEY BOILER— Description *Cylindrical vertical, with Firebox.*
 Made at *Belfast* By whom made *Mac Swaine, Lewis & Co. when made* *Tested, 26-6-83.*
 Where fixed *Stitchell* working pressure *60 lb* Tested by hydraulic pressure to *120 lb* No. of Certificate *40*
 Fire grate area *12 sq feet* Description of safety valves *Spring* No. of safety valves *One* area of each *8.3 sq*
 If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *No*
 Diameter of donkey boiler *4.6* length *9.6* description of riveting *lap, double riveted*
 thickness of shell plates $\frac{7}{8}$ (Steel) diameter of rivet holes $\frac{13}{16}$ whether punched or drilled *drilled*
 pitch of rivets $3\frac{1}{2}$ lap of plating $4\frac{1}{8}$ per centage of strength of joint *67*
 thickness of crown plates $\frac{7}{16}$ stayed by $7\frac{1}{2}$ *Camber, Stayed by uprights.*
 Diameter of furnace, top $4\frac{1}{2}$ bottom $4\frac{1}{2}$ length of furnace $5-0$
 thickness of plates $\frac{3}{8}$ description of joint *lap, single riveted.*
 thickness of furnace crown plates $\frac{3}{8}$ stayed *as Shell Crown*
 Working pressure of shell by rules *93 lb* working pressure of furnace by rules *57 lb*
 diameter of uptake $3\frac{1}{2}$ thickness of plates $\frac{3}{8}$ thickness of water tubes $\frac{3}{8}$

The foregoing is a correct description,
Mac Swaine Lewis & Co. L^{td} Manufacturer.S

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

Material and workmanship good and satisfactory.
The Machinery and Boilers of this Vessel are in good order and
safe working condition and, in my opinion, eligible to have the second
Class "A" assigned.

It is submitted that this vessel is eligible to have the multiplexion + 2m 8.83 recorded.

The amount of Entry Fee £ 1 : : : received by me,
 Special £ 11 : 5 : :
 Certificate (if required) .. £ *Gratis* : *17.7.18.83*
 To be sent as per margin.

(Travelling Expenses, if any, £ 7-7-0) TUESDAY 21 AUGUST 1883
 Committee's Minute 18
F. Spil

Duncan Ritchie
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

