

REPORT ON MACHINERY.

No. 20.567

Received at London Office THUR. 1 OCT 1908

of writing Report Sept 26 1908 When handed in at Local Office 29.9.1908 Port of Hull
 in Survey held at Hull Date, First Survey Apr. 16th Last Survey Sept. 21st 1908
 g. Book. Supp on the SHAKESPEARE (Number of Visits 37)
 Master Hull Built at Hull By whom built Carr & Co. Tons { Gross 272
 Net 79
 When built 1908
 Engines made at Hull By whom made Amos & Smith when made 5
 Milers made at 5 By whom made 5 when made 5
 Registered Horse Power 46 Owners Hellyer, Shan & King & Co. Port belonging to Hull
 m. Horse Power as per Section 28 46 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

GINES, &c.—Description of Engines Inward triple expansion No. of Cylinders 3 No. of Cranks 3
 a. of Cylinders 10-16 1/2-28 Length of Stroke 24 Revs. per minute 96 Dia. of Screw shaft 6 1/2 as per rule 6 1/2 Material of Iron
 as fitted 7 1/2 screw shaft
 the screw shaft fitted with a continuous liner the whole length of the stern tube Yes Is the after end of the liner made water tight
 the propeller boss Yes If the liner is in more than one length are the joints burned Yes If the liner does not fit tightly at the part
 between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive Yes If two
 liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 32
 Dia. of Tunnel shaft 5 1/2 as per rule 5 1/2 Dia. of Crank shaft journals 6 1/2 as per rule 6 1/2 Dia. of Crank pin 6 1/2 Size of Crank webs 24 x 14 Dia. of thrust shaft under
 bars 6 1/2 Dia. of screw 10-0 Pitch of Screw 9-1 1/2 (mean) No. of Blades 4 State whether moveable No Total surface 24.8
 No. of Feed pumps 1 Diameter of ditto 2 1/2 Stroke 11 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 1 Diameter of ditto 2 1/2 Stroke 11 Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 2 Sizes of Pumps 6 x 3 x 6, 5 x 5 x 5 No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room 2-2 (4 x 4 ft) In Holds, &c. 2-2 (Baltic tank main hold)
2-2 (Green suction to all bilges with an charge in deck)
 No. of Bilge Injections 1 sizes 2 1/2 Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size 2-2 (Green)
 Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine room 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 Both
 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
 What pipes are carried through the bunkers Hot suction How are they protected Wood casing
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
 Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes
 Dates of examination of completion of fitting of Sea Connections 27.7.08 of Stern Tube 27.7.08 Screw shaft and Propeller 27.7.08
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Yes

OILERS, &c.—(Letter for record S) Manufacturers of Steel Phoenix & Co., Horae, West Yorkshire
 Total Heating Surface of Boilers 7500 Is Forced Draft fitted No No. and Description of Boilers 1. S.E. Multitubular
 Working Pressure 200 lb Tested by hydraulic pressure to 400 lb Date of test 1.9.08 No. of Certificate 1670
 Can each boiler be worked separately Yes Area of fire grate in each boiler 25.5 No. and Description of Safety Valves to
 each boiler 2 Spring loaded Area of each valve 3 1/4 Pressure to which they are adjusted 205 lb Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 5 Mean dia. of boilers 10-7 Length 9-3 1/2 Material of shell plates Steel
 Thickness 3 1/2 Range of tensile strength 28-32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Stitch
 long. seams Stitch Diameter of rivet holes in long. seams 1 1/8 Pitch of rivets 7-6 Lap of plates or width of butt straps 16 1/2
 Per centages of strength of longitudinal joint rivets 100 Working pressure of shell by rules 201 Size of manhole in shell 16 x 12
 plate 85.2
 Size of compensating ring 10 x 4 x 3 1/2 No. and Description of Furnaces in each boiler 2 plain Material Steel Outside diameter 2 1/2 x 3 1/2
 Length of plain part top 62.6 Thickness of plates crown 1 1/2 Description of longitudinal joint Welded No. of strengthening rings 1
 bottom 62.6 bottom 1 1/2
 Working pressure of furnace by the rules 228 Combustion chamber plates / Material Steel Thickness: Sides 3 1/2 Back 4 1/2 Top 4 1/2 Bottom 3 1/2
 Pitch of stays to ditto: Sides 8 1/2 x 8 1/2 Back 8 1/2 x 8 Top 7 1/2 x 8 1/2 If stays are fitted with nuts or riveted heads Yes Working pressure by rules 239
 Material of stays Steel Diameter at smallest part 1 1/2 x 2-0 Area supported by each stay 74.2 Working pressure by rules 249 End plates in steam space:
 Material Steel Thickness 1 1/2 Pitch of stays 22 1/2 x 13 1/2 How are stays secured Stitch Working pressure by rules 246 Material of stays Steel
 Diameter at smallest part 4-1 Area supported by each stay 169 Working pressure by rules 250 Material of Front plates at bottom Steel
 Thickness 1 1/2 Material of Lower back plate Steel Thickness 1 1/2 Greatest pitch of stays 14 x 8 Working pressure of plate by rules 234
 Diameter of tubes 3 1/2 Pitch of tubes 4 1/2 x 4 1/2 Material of tube plates Steel Thickness: Front 1 1/2 Back 7 Mean pitch of stays 9 1/2 x 8 1/2
 Pitch across wide water spaces 13 1/2 Working pressures by rules 203 Girders to Chamber tops: Material Iron Depth and
 thickness of girder at centre 8 1/2 x 1 1/2 Length as per rule 30 7/8 Distance apart 7 3/8 Number and pitch of stays in each 20 8 1/2
 Working pressure by rules 232 Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked
 separately Yes Diameter 10 Length 10 Thickness of shell plates 1 1/2 Material Steel Description of longitudinal joint Welded Diam. of rivet
 holes 1 1/2 Pitch of rivets 7 Working pressure of shell by rules 203 Diameter of flue 10 Material of flue plates Steel Thickness 1 1/2
 If stiffened with rings Yes Distance between rings 10 Working pressure by rules 203 End plates: Thickness 1 1/2 How stayed Stitch
 Working pressure of end plates 232 Area of safety valves to superheater 10 Are they fitted with easing gear Yes

VERTICAL DONKEY BOILER— Manufacturers of Steel

No. Description
 Made at By whom made When made Where fixed
 Working pressure tested by hydraulic pressure to Date of test No. of Certificate Fire grate area Description of Safety
 Valves No. of Safety Valves Area of each Pressure to which they are adjusted Date of adjustment
 If fitted with easing gear If steam from main boilers can enter the donkey boiler Dia. of donkey boiler Length
 Material of shell plates Thickness Range of tensile strength Descrip. of riveting long. seams
 Dia. of rivet holes Whether punched or drilled Pitch of rivets Lap of plating Per centage of strength of joint Rivets
 Working pressure of shell by rules Thickness of shell crown plates Radius of do. No. of stays to do. Dia. of stays
 Diameter of furnace Top Bottom Length of furnace Thickness of furnace plates Description of joint
 Working pressure of furnace by rules Thickness of furnace crown plates Stayed by
 Diameter of uptake Thickness of uptake plates Thickness of water tubes Dates of survey

SPARE GEAR. State the articles supplied:—

Two top, two bottom and connecting rods
 & main bearing bolts, one set of coupling bolts & nuts, one set of feed
 & high pump valves, one set of air & circulating pump valves, one main
 & one donkey feed check valve, assorted bolts & nuts etc.

The foregoing is a correct description,

FOR AMOS & SMITH

Manufacturer.

Dates During progress of work in shops—
 of Survey while building During erection on board vessel—
 Total No. of visits

1908:—April 16. 22. 28. May 2. 6. 9. 16. 19. 23. 26. 30. June 2. 6. 13. 19. 27. July 2. 4. 11. 13. 18. 21. 24. 27. 30. Aug. 1. 7. 12. 20. 22. 29. 31.
 Sep. 1. 3. 9. 11. 14. 21.
 37.

Is the approved plan of main boiler forwarded herewith *Ref. N° 20,331*

Dates of Examination of principal parts—Cylinders 20.8.08. Slides 21.8.08. Covers 30.7.08. Pistons 21.8.08. Rods 28.4.08

Connecting rods 13.7.08 Crank shaft 2.7.08. Thrust shaft 6.6.08. Tunnel shafts — Screw shaft 27.6.08 Propeller 11.7.08

Stern tube 11.7.08 Steam pipes tested 9.9.08 Engine and boiler seatings 27.7.08 Engines holding down bolts 11.9.08

Completion of pumping arrangements 21.9.08. Boilers fixed 11.9.08. Engines tried under steam 14.9.08

Main boiler safety valves adjusted 14.9.08 Thickness of adjusting washers 73 55

Material of Crank shaft Steel Identification Mark on Do. 24.7.08 Material of Thrust shaft Steel Identification Mark on Do. 11.7.08

Material of Tunnel shafts Identification Marks on Do. — Material of Screw shafts Iron Identification Marks on Do. 11.7.08

Material of Steam Pipes Solid drawn copper Test pressure 400 lbs.

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

The machinery & boiler of this vessel have been examined under Special Survey, are of good material & workmanship & have been found to be in accordance with the Rules. They are now in good working condition & eligible in my opinion to have record of T. L. M. C. 9.08 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. T. L. M. C. 9.08.

DRK

1-10-08

The amount of Entry Fee .. £ 1 : 0 : 0
 Special .. £ 2 : 0 : 0
 Donkey Boiler Fee .. £ — : — : —
 Travelling Expenses (if any) £ — : — : —
 When applied for, 30/9/1908
 When received, 30/10/1908

John. L. Guymer
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

FRI. 2 OCT 1908

Assigned

+ L.M.C. 9.08

MACHINERY CERTIFICATE
 WRITTEN



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 Foundation