

REPORT ON MACHINERY.

No. 20.504

Received at London Office THUR. 10 SEP 1908

Date of writing Report Sept 1. 1908 When handed in at Local Office Sept 3. 1908 Port of Hull
 No. in Survey held at Hull Date, First Survey Mar 28th Last Survey Aug 27th 1908.
 Reg. Book. 1 Supp. on the 1st Haven - VARONIL (Number of Visits 47) Gross 253
 Master Selby Built at Selby By whom built Cochrane & Sons Tons Net 98
 Engines made at Hull By whom made C. D. Holmes & Co. When built 1908.
 Boilers made at S By whom made S when made S.
 Registered Horse Power 69. Owners Atlas Steam Fishing Co. Ltd. Port belonging to Grimsby
 Nom. Horse Power as per Section 28 69. Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted No.

ENGINES, &c.—Description of Engines Two-cylinder Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 12½ x 22 x 35 Length of Stroke 21 Revs. per minute 110 Dia. of Screw shaft 7½ as per rule 7½ Material of screw shaft Steel
 Is 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 in 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 31
 Dia. of Tunnel shaft 6½ as per rule 6½ Dia. of Crank shaft journals 6½ as per rule 6½ Dia. of Crank pin 6½ Size of Crank webs 14 x 18 Dia. of thrust shaft under collars 7 Dia. of screw 8-7½ Pitch of Screw 11½ (Main) No. of Blades 4 State whether moveable No. Total surface 28 ft.
 No. of Feed pumps 1 Diameter of ditto 2½ Stroke 21 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 1 Diameter of ditto 2½ Stroke 21 Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 1 Sizes of Pumps 2½ x 5 No. and size of Suctions connected to both Bilge and Donkey pumps 2-2 (Fore & Aft)
 In Engine Room 2-2 (Fore & Aft) In Holds, &c. 2-2 (Fore & Aft)
2" Green suction to all holds with an engine on deck.
 No. of Bilge Injections 1 sizes 3" Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size 2½ 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 air 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 9.6.08. of Stern Tube 9.6.08. Screw shaft and Propeller 9.6.08.
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Yes

BOILERS, &c.—(Letter for record 3) Manufacturers of Steel James Watson & Co. Glasgow
 Total Heating Surface of Boilers 1120 ft. Is Forced Draft fitted No. No. and Description of Boilers 1 S.E. 9000 lbs.
 Working Pressure 180 lb. Tested by hydraulic pressure to 360. Date of test 14-8-08 No. of Certificate 1664.
 Can each boiler be worked separately Yes Area of fire grate in each boiler 33.2 ft. No. and Description of Safety Valves to each boiler 2 Spring loaded. Area of each valve 3.97. Pressure to which they are adjusted 185. Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 7 Mean dia. of boilers 13'0" Length 10'0" Material of shell plates Steel
 Thickness 1½ Range of tensile strength 18-32 Are the shell plates welded or flanged No. Descrip. of riveting: cir. seams 8/16
 long. seams 20/16 Diameter of rivet holes in long. seams 1½ Pitch of rivets 7½ Lap of plates or width of butt straps 17½
 Per centages of strength of longitudinal joint 88.2 Working pressure of shell by rules 188. Size of manhole in shell 16 x 12
 Size of compensating ring 7 x 1½ No. and Description of Furnaces in each boiler 2 Holmes. Material Steel. Outside diameter 43"
 Length of plain part top 14 Thickness of plates bottom 1½ Description of longitudinal joint welded No. of strengthening rings —
 Working pressure of furnace by the rules 198. Combustion chamber plates: Material Steel Thickness: Sides 3½ Back 4 Top 3½ Bottom 3½
 Pitch of stays to ditto: Sides 9 x 9 Back 9½ x 8½ Top 8½ x 8½ If stays are fitted with nuts or riveted heads Yes Working pressure by rules 220. End plates in steam space: Material of stays Steel. Diameter at smallest part 1.65 Area supported by each stay 9 x 9 Working pressure by rules 185. Material of stays Steel.
 Material Steel. Thickness 1½ Pitch of stays 17½ x 7½ How are stays secured Welded Working pressure by rules 215 Material of Front plates at bottom Steel.
 Diameter at smallest part 6.32 Area supported by each stay 306 Working pressure by rules 215 Material of Front plates at bottom Steel.
 Thickness 3½ Material of Lower back plate Steel. Thickness 1½ Greatest pitch of stays 14½ x 8½ Working pressure of plate by rules 212
 Diameter of tubes 3½ Pitch of tubes 4½ x 5 Material of tube plates Steel. Thickness: Front 3½ Back 7 Mean pitch of stays 9½ x 10
 Pitch across wide water spaces 15 Working pressures by rules 279. Girders to Chamber tops: Material Steel. Depth and thickness of girder at centre 9 x 1½ Length as per rule 223 Distance apart 8½ Number and pitch of stays in each 30 8½
 Working pressure by rules 229 Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked separately
 Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness
 If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed
 Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

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

The foregoing is a correct description,

Charles D. Stomberg
Manufacturer.

Dates of Survey while building: During progress of work in shops—1908:—Mar 28.30. Apr 6.8.10.13.16.24.28. May 1.2.6.9.11.12.16.19.21.23.26.30. Jun 3.6.9.19.
During erection on board vessel—Jun 27.29. July 2.4.7.11.13.17.18.23.25.30. Aug 1.7.8.13.14.20.21.22.25.27.
Total No. of visits 47

Is the approved plan of main boiler forwarded herewith RPL 20378

Dates of Examination of principal parts—Cylinders 27.08. Slides 23.7.08. Covers 7.7.08. Pistons 17.7.08. Rods 27.6.08.
Connecting rods 27.6.08. Crank shaft 29.8.08. Thrust shaft 26.5.08. Tunnel shafts ✓ Screw shaft 26.5.08. Propeller 30.5.08.
Stern tube 30.5.08. Steam pipes tested 20.8.08. Engine and boiler seatings 9.6.08. Engines holding down bolts 21.8.08.
Completion of pumping arrangements 27.8.08. Boilers fixed 21.8.08. Engines tried under steam 22.8.08.
Main boiler safety valves adjusted 22.8.08. Thickness of adjusting washers F 3/4 A 5/16
Material of Crank shaft Steel. Identification Mark on Do. 428.5.N.C. 13.8.08. Material of Thrust shaft Steel. Identification Mark on Do. 428.5.N.C. 13.8.08.
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts Steel Identification Marks on Do. 428.5.N.C. 26.5.08.
Material of Steam Pipes Solid drawn copper Test pressure 360 lbs.

General Remarks

(State quality of workmanship, opinions as to class, &c. The machinery & boiler of this vessel have been constructed under Special Survey, are of good material & workmanship, & have been fitted & secured on board in accordance with the Rules. They are now in good working condition & eligible in my opinion to have record of L.M.C. 8-08 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 8.08.

JWR 10/9/08
ARR 10.9.08

The amount of Entry Fee .. £ 1 : 0 : 0
Special .. £ 10 : 7 : 9
Donkey Boiler Fee .. £ : :
Travelling Expenses (if any) £ : 8 : 2

When applied for,

When received,

Committee's Minute

Assigned

TUES. 15 SEP 1908

+ L.M.C. 8.08

John W. Gwynne
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

CHIMNEY CERTIFICATE
WRITTEN.



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