

REPORT ON MACHINERY.

No. 23526

Received at London Office

3 APR 1911

Date of writing Report 10 When handed in at Local Office 30th Mar 1911 Port of Hull
 No. in Survey held at Hull & Goole Date, First Survey July 5th Last Survey 25th Mar 1911
 Reg. Book. 38 Supp on the Steel Se. K. Kelda (Number of Visits 55) Gross 243 Tons Net 93
 Master Built at Goole By whom built Goole S. R. G. Ltd When built 1911
 Engines made at } By whom made } Messrs when made 1911
 Boilers made at } Hull By whom made } Earle's Co. Ltd when made 1911
 Registered Horse Power Owners J. Mann & Son Port belonging to Fleetwood
 Nom. Horse Power as per Section 28 85 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 22" 21" - 35" Length of Stroke 26" Revs. per minute 110 Dia. of Screw shaft as per rule 7.4" Material of screw shaft as fitted 7.75" I
 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 one length 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 If two liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 40"
 Dia. of Tunnel shaft as per rule 6.5" Dia. of Crank shaft journals as per rule 6.9" Dia. of Crank pin 7.125" Size of Crank webs 13 3/4" x 4 1/2" Dia. of thrust shaft under collars 7.125" Dia. of screw 9" - 3" Pitch of Screw 11" - 0" No. of Blades 4 State whether moveable No Total surface 28 sq ft
 No. of Feed pumps 2 Diameter of ditto 2 1/2" Stroke 12" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 2 1/2" Stroke 12" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 1 Sizes of Pumps 6" x 3" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room One 2", one 2 1/2", One 3 1/2" In Holds, &c. One 2 1/2" to tank, One 2 1/2" to slush Well, (Ejector from these) + (Centrifugal circulating pump for Condensers)
 No. of Bilge Injections 1 sizes 3 1/2" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size Yes 2 1/2"
 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 None
 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 Cold 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 11-3-11 of Stern Tube 11-3-11 Screw shaft and Propeller 11-3-11
 Is the Screw Shaft Tunnel watertight No Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record 5) Manufacturers of Steel Phoenix A.K. Gas. Abt. H. Vereen
 Total Heating Surface of Boilers 1560 sq ft Is Forced Draft fitted No No. and Description of Boilers 1 Cyl. H. S. Ended
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 23-12-10 No. of Certificate 1783
 Can each boiler be worked separately Area of fire grate in each boiler 36.7 sq ft No. and Description of Safety Valves to each boiler Two Spring Area of each valve 4.9 sq in Pressure to which they are adjusted 182 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 5 1/2" Mean dia. of boilers 13'-6" Length 10'-6" Material of shell plates S
 Thickness 1 3/32" Range of tensile strength 28-32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams 2.0" long. seams D.B.S.Y.R. Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 7 1/2" Lap of plates or width of butt straps 16 3/4"
 Per centages of strength of longitudinal joint rivets 85.8 Working pressure of shell by rules 180 lbs Size of manhole in shell 16" x 12"
 Size of compensating ring 7 1/2" x 1 3/32" No. and Description of Furnaces in each boiler Two plain Material S Outside diameter 45 1/2"
 Length of plain part top 65" Thickness of plates crown 49" Description of longitudinal joint Welded No. of strengthening rings 0
 Working pressure of furnace by the rules 180 lbs Combustion chamber plates: Material S Thickness: Sides 10/16" Back 11/16" Top 10/16" Bottom 10/16"
 Pitch of stays to ditto: Sides 9" x 8 1/4" Back 9 1/2" x 8" Top 9" x 8 1/4" If stays are fitted with nuts or riveted heads No Working pressure by rules 181 lbs
 Material of stays S Diameter at smallest part 1 1/4" Area supported by each stay 94 sq in Working pressure by rules 229 lbs End plates in steam space:
 Material S Thickness 1 1/8" Pitch of stays 18" x 17 1/8" How are stays secured D.N. Working pressure by rules 181 lbs Material of stays S
 Diameter at smallest part 2 1/16" Area supported by each stay 312.75 sq in Working pressure by rules 207 lbs Material of Front plates at bottom S
 Thickness 15/16" Material of Lower back plate S Thickness 7/8" Greatest pitch of stays 14" x 8" Working pressure of plate by rules 203 lbs
 Diameter of tubes 3 1/2" Pitch of tubes 5 1/2" x 4 1/8" Material of tube plates S Thickness: Front 15/16" Back 13/16" Mean pitch of stays 10"
 Pitch across wide water spaces 14" Working pressures by rules 183 lbs Girders to Chamber tops: Material S Depth and thickness of girder at centre 10 1/4" x 1 1/2" Length as per rule 36" Distance apart 9" Number and pitch of stays in each Two three 8 1/2"
 Working pressure by rules 186 lbs 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

If not, state whether, and when, one will be sent

Capacity. ons. as it 0 ft.

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 _____ Radius of do. _____ Stayed by _____

Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:— *Two each top and bottom end connecting rod bolts and nuts, two main bearing bolts and nuts, one set connecting rod bolts and nuts, one set air, feed and bilge pump & check valves, a quantity of assorted bolts & nuts.*

FOR EARLE'S
SHIPBUILDING & ENGINEERING CO. LIMITED.
The foregoing is a correct description,
F. J. Salethorpe Manufacturer.
SECRETARY.

Dates of Survey while building { During progress of work in shops -- } 1910:— July 5, 12, 21, Aug. 8, 13, 17, 22, 25, 29, 31, Sep. 6, 13, 15, 16, 19, 21, 27, Oct. 5, 6, 13, 17, 24, 26, 27, 28 Nov 1911
{ During erection on board vessel --- } Nov 2, 5, 10, 15, 17, 19, 22, 23, 25, 29, Dec 5, 6, 8, 13, 14, 19, 23, Feb. 20, Mar 7, 8, 11, 10, 13, 14, 15, 17, 23, 24, 25
Total No. of visits 55

Is the approved plan of main boiler forwarded herewith *No it was with Hull R. 23502*
" " " donkey " " " *S/S Record*

Dates of Examination of principal parts—Cylinders 10.11.10 Slides 27.10.10 Covers 27.10.10 Pistons 26.10.10 Rods 15.9.10
Connecting rods 13.9.10 Crank shaft 5.11.10 Thrust shaft 27.9.10 Tunnel shafts _____ Screw shaft 27.9.10 Propeller 17.10.10
Stern tube 24.10.10 Steam pipes tested 15.3.11 Engine and boiler seatings 8.3.11 Engines holding down bolts 17.3.11
Completion of pumping arrangements 24.3.11 Boilers fixed 17.3.11 Engines tried under steam 24.3.11
Main boiler safety valves adjusted 23.3.11 Thickness of adjusting washers *3/8" Star 1/6" port*

Material of Crank shaft *S* Identification Mark on Do. *618 J.B.* Material of Thrust shaft *S* Identification Mark on Do. *678 J.H. 9*
Material of Tunnel shafts _____ Identification Marks on Do. _____ Material of Screw shafts *I.* Identification Marks on Do. *6585 J.H.*
Material of Steam Pipes *Solid drawn Copper* Test pressure *400 lbs per sq inch*

General Remarks (State quality of workmanship, opinions as to class, &c. *The engines and boiler of this vessel have been constructed under special survey in accordance with the Rules, the materials and workmanship are good. The boiler tested by hydraulic pressure, and with the engines secured on board and tested under steam, they are now in good order and safe working condition & respectfully submitted as being eligible in my opinion to be classed with the notation of *L.M.C. 3.11* in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 3.11.

J.W.D. 4/4/11

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

The amount of Entry Fee .. £ 1 : . : When applied for, 30/3/1911
Special .. £ 12 15 : :
Donkey Boiler Fee .. £ : :
Travelling Expenses (if any) £ : 9 : 6 : 18.5. 1911

Committee's Minute
Assigned
TUE. 4 APR 1911
+ L.M.C. 3.11

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