

REPORT ON MACHINERY.

No. 20967

MAR 1909

Date of writing Report 24th Feb 1909 When handed in at Local Office 24th Feb 1909 Port of Hull
 No. in Survey held at Hull & Selby Date, First Survey Nov 28/08 Last Survey 18th Feb 1909
 Reg. Book. 16 on the Steel S. K. Diplomat (Number of Visits 18)
 Master Selby Built at Selby By whom built Messrs Lochrane Sons When built 1909
 Engines made at Hull By whom made Messrs when made 1909
 Boilers made at Hull By whom made Earle's & Co Ltd when made 1909
 Registered Horse Power 47 Owners J. G. Spink Port belonging to Hull
 Nom. Horse Power as per Section 28 47 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Compound No. of Cylinders 2 No. of Cranks 2
 Dia. of Cylinders 14" ~ 29" Length of Stroke 21" Revs. per minute 142 Dia. of Screw shaft 6.8" Material of Iron
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube No 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 No 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 — If two
 liners are fitted, is the shaft lapped or protected between the liners — Length of stern bush 30 1/2"
 Dia. of Tunnel shaft 6.3" Dia. of Crank shaft journals 6.3" Dia. of Crank pin 6.2" Size of Crank webs 12 1/2" x 4 1/2" Dia. of thrust shaft under
 collars 6 1/2" Dia. of screw 7' - 6" Pitch of Screw 9' - 6" No. of Blades 4 State whether moveable No Total surface 22 sq
 No. of Feed pumps 1 Diameter of ditto 2 1/2" Stroke 10" Can one be overhauled while the other is at work —
 No. of Bilge pumps 1 Diameter of ditto 2 1/2" Stroke 10" Can one be overhauled while the other is at work —
 No. of Donkey Engines 1 Sizes of Pumps 5" x 2 1/2" - 5" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Two 2" two 3" In Holds, &c. One each 2" to each, the fore
peak tank, fore hold, and after hold.
 No. of Bilge Injections 1 sizes 3" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size Yes 3"
 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 0
 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 awash
 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 hold suction How are they protected Iron 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 3.2.09 of Stern Tube 3.2.09 Screw shaft and Propeller 3.2.09
 Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door — worked from —

BOILERS, &c.—(Letter for record 8) Manufacturers of Steel Steel 67 of Scotland
 Total Heating Surface of Boilers 875 sq Is Forced Draft fitted No No. and Description of Boilers One cyl. Multi
 Working Pressure 140 lbs Tested by hydraulic pressure to 280 lbs Date of test 22.1.09 No. of Certificate 1686
 Can each boiler be worked separately — Area of fire grate in each boiler 30 sq No. and Description of Safety Valves to
 each boiler Two Spring Area of each valve 3.97 sq Pressure to which they are adjusted 145 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 24" Mean dia. of boilers 10' - 9" Length 9' - 8" Material of shell plates Steel
 Thickness 25/32" Range of tensile strength 29.32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams L. D.
 long. seams O. B. S. D. C. Diameter of rivet holes in long. seams 1" Pitch of rivets 5 5/8" Lap of plates or width of butt straps 11 1/4"
 Per centages of strength of longitudinal joint 79.7 Working pressure of shell by rules 142 lbs Size of manhole in shell 28" - 32" - 35"
 Size of compensating ring 28" x 33" x 25/32" No. and Description of Furnaces in each boiler Two plain Material Steel Outside diameter 39"
 Length of plain part 6' - 5" Thickness of plates 5/8" Description of longitudinal joint Welded No. of strengthening rings 0
 Working pressure of furnace by the rules 154 lbs Combustion chamber plates: Material Steel Thickness: Sides 19/32" Back 19/32" Top 9/16" Bottom 19/32"
 Pitch of stays to ditto: Sides 8" x 10" Back 9" x 9" Top 9" x 8" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 150 lbs
 Material of stays Steel Diameter at smallest part 1 3/8" Area supported by each stay 81 sq Working pressure by rules 146 lbs End plates in steam space:
 Material Steel Thickness 1/8" Pitch of stays 16" x 15" How are stays secured O. N. Working pressure by rules 142 lbs Material of stays Steel
 Diameter at smallest part 2 1/16" Area supported by each stay 240 sq Working pressure by rules 144 lbs Material of Front plates at bottom Steel
 Thickness 13/16" Material of Lower back plate Steel Thickness 3/4" Greatest pitch of stays 14" x 9" Working pressure of plate by rules 140 lbs
 Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" x 4 3/4" Material of tube plates Steel Thickness: Front 13/16" Back 3/4" Mean pitch of stays 11 1/2"
 Pitch across wide water spaces 14" Working pressures by rules 146 lbs Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 6 3/4" x 1 1/2" Length as per rule 2' - 5 3/32" Distance apart 8" Number and pitch of stays in each Two - 9"
 Working pressure by rules 154 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 —

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 each top and bottom end connecting rod bolts, and nuts, two main bearing bolts and nuts, one set coupling bolts and nuts, one set each air circulating feed and bilge pump valves, a quantity of assorted bolts nuts etc

The foregoing is a correct description,

F. J. Falkthorp Manufacturer.

SECRETARY 1908: Nov 28, Dec 16, 17, 22, 23. 1909: Jan 8, 11, 19, 22, 30, Feb 1.
 Dates of Survey while building: During progress of work in shops - Feb 3, 9, 10, 11, 13, 15, 18
 During erection on board vessel - 18
 Total No. of visits 18

Is the approved plan of main boiler forwarded herewith Yes
 " " " donkey " " " "

Dates of Examination of principal parts—Cylinders 11.1.09 Slides 22.1.09 Covers 8.1.09 Pistons 22.1.09 Rods 11.1.09
 Connecting rods 11.1.09 Crank shaft 11.1.09 Thrust shaft 30.1.09 Tunnel shafts 30.1.09 Screw shaft 30.1.09 Propeller 30.1.09
 Stern tube 30.1.09 Steam pipes tested 9.2.09 Engine and boiler seatings 1.2.09 Engines holding down bolts 11.2.09
 Completion of pumping arrangements 18.2.09 Boilers fixed 11.2.09 Engines tried under steam 11.2.09
 Main boiler safety valves adjusted 11.2.09 Thickness of adjusting washers 3/32" - 9/32"

Material of Crank shaft Iron Identification Mark on Do. 2196 ATG Material of Thrust shaft Iron Identification Mark on Do. 156 GAH
 Material of Tunnel shafts Iron Identification Marks on Do. 156 GAH Material of Screw shafts Iron Identification Marks on Do. 156 GAH
 Material of Steam Pipes Solid drawn copper Test pressure 280 lbs per sq. inch

General Remarks (State quality of workmanship, opinions as to class, &c. The engines and boilers of this vessel have been constructed under special survey in accordance with the Society's Rules, and approved boiler plan, the materials and workmanship are sound and good, the boiler tested by hydraulic pressure found satisfactory, and with the engines secured on board tested under steam, they are now in good order and safe working condition, and respectfully submitted as being eligible in my opinion to be classed with the notation of L.M.C 2.09 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD.

+ LMC 2.09

J.R.K.

4.3.09

#50.

4/3/09.

The amount of Entry Fee	£ 1	When applied for,
Special	£ 8	2/3/1909
Donkey Boiler Fee	£	When received,
Travelling Expenses (if any)	£ 8	27/4/09

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

Committee's Minute

FRI. 5 MAR 1909

Assigned

MACHINERY CERTIFICATE WRITTEN

+ Lmb 2.09



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