

REPORT ON MACHINERY.

No. 26380

Date of writing Report 19th June 1913. When handed in at Local Office 21.6.13 Port of Hull. Received at London Office TUE. JUN. 24. 1913.No. in Survey held at Hull. Date, First Survey Mar 5th Last Survey Jun 17 1913.

Reg. Book. 59 Ref. the Steel Deck "Shackleton".

(Number of Visits 15)

Gross 288
Tons Net 115
When built 1913.

Master Built at Selby. By whom built Boehrman & Sons.

Engines made at Hull By whom made C. D. Holmes & Co. Ltd. when made 1913.

Boilers made at Hull By whom made C. D. Holmes & Co. Ltd. when made 1913.

Registered Horse Power Owners Pickering & Halden's Steam Port belonging to Hull.

Nom. Horse Power as per Section 28 79. 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 12 3/4, 22, 36 Length of Stroke 24 Revs. per minute 7.47 as per rule 7.47 Dia. of Screw shaft 7 3/4 as fitted 7 3/4 Material of screw shaft Iron.

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.

If two liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 36.

Dia. of Tunnel shaft as per rule 6.674 as fitted 7 1/2 Dia. of Crank shaft journals as per rule 7.068 as fitted 7 1/2 Dia. of Crank pin 7 1/2 Size of Crank webs 14 x 4 7/8 Dia. of thrust shaft under collars 7 1/4 Dia. of screw 9.0 Pitch of Screw 11.0 No. of Blades 4 State whether moveable no. Total surface 29 1/2.

No. of Feed pumps 1 Diameter of ditto 2 3/8 Stroke 14 1/4 Can one be overhauled while the other is at work.

No. of Bilge pumps 1 Diameter of ditto 2 3/8 Stroke 14 1/4 Can one be overhauled while the other is at work.

No. of Donkey Engines 1 Sizes of Pumps 6 x 4 1/4 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps.

In Engine Room Two 2" One forward some aft. In Holds, &c. One 2" to Slush well, one 2" to main hold, one 2" to fore-castle. Ejector suction from all bilges with discharge on deck.

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 3 1/2 ejector.

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.

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 Hold 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 10.3.13. of Stern Tube 10.3.13. Screw shaft and Propeller 10.3.13.

Is the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from.

BOILERS, &c.—(Letter for record S.) Manufacturers of Steel Messrs. Phoenix & S. Abbott, Horden, Leeds of Horden.

Total Heating Surface of Boilers 1295 Is Forced Draft fitted no. No. and Description of Boilers One cylindrical single-ended.

Working Pressure 200 lbs. Tested by hydraulic pressure to 400 lbs. Date of test 29.5.13. No. of Certificate 1987.

Can each boiler be worked separately Area of fire grate in each boiler 46 No. and Description of Safety Valves to each boiler Two, spring Area of each valve 4.9 Pressure to which they are adjusted 203 lbs. Are they fitted with easing gear yes.

Smallest distance between boilers or uptakes and bunkers or woodwork 7 Mean dia. of boilers 13.6 Length 10.6 Material of shell plates Steel.

Thickness 1 1/16 Range of tensile strength 29 Are the shell plates welded or flanged no. Descrip. of riveting: cir. seams 10 R.R. long. seams B.S.T.R. Diameter of rivet holes in long. seams 1 3/16 Pitch of rivets 8 Lap of plates or width of butt straps 16 5/8.

Per centages of strength of longitudinal joint rivets 85.9 plate 85.9 Working pressure of shell by rules 203. Size of manhole in shell 16 x 12.

Size of compensating ring 7 x 1 3/8 No. and Description of Furnaces in each boiler 3 Plain Material Steel Outside diameter 38.

Length of plain part top 6.53 bottom 5.7 Thickness of plates crown 39 bottom 34 Description of longitudinal joint Welded. No. of strengthening rings.

Working pressure of furnace by the rules 212 lbs. Combustion chamber plates: Material S. Thickness: Sides 23/32 Back 23/32 Top 3/4 Bottom 23/32.

Pitch of stays to ditto: Sides 10 x 8 Back 10 x 8 1/2 Top 11 x 8 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 212 lbs.

Material of stays Steel Area at smallest part 2.4 Area supported by each stay 101.06 Working pressure by rules 213. End plates in steam space:

Material Steel Thickness 1 3/16 Pitch of stays 18 x 18 How are stays secured D.R. Ws Working pressure by rules 206. Material of stays Steel.

Diameter at smallest part 6.33 Area supported by each stay 324 Working pressure by rules 203 Material of Front plates at bottom Steel.

Thickness 15/16 Material of Lower back plate Steel Thickness 29/32 Greatest pitch of stays 14 1/2 x 8 1/4 Working pressure of plate by rules 204 lbs.

Diameter of tubes 3 1/2 Pitch of tubes 5 1/2 x 5 Material of tube plates Steel Thickness: Front 15/16 Back 7/8 Mean pitch of stays 10 1/2.

Pitch across wide water spaces 14 1/2 x 46 lbs. Working pressures by rules 315. Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 10 3/4 x 1 3/4 Length as per rule 2-11 3/8 Distance apart 11 Number and pitch of stays in each 3-8.

Working pressure by rules 203 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.

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Lloyd's Register

N 64-0037

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	Plates
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 top & bottom end connecting rod bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one set each feed & bilge pump valves, iron of various sizes, a quantity of assorted bolts & nuts etc.*

The foregoing is a correct description,
P. pro CHARLES D. HOLMES & CO. LTD.
 Manufacturer.

Arthur James DIRECTOR
 Dates of Survey while building: During progress of work in shops - 1913. Mar 5. 7. 10. Apr 11. 16. 25. 28 May 7. 9. 23. 29. Jun 12. 13.
 During erection on board vessel - Jan 14. 17
 Total No. of visits 15

Is the approved plan of main boiler forwarded herewith *Ref 26336*
S.S. "Scott"

Dates of Examination of principal parts—Cylinders 13. 6. 13. Slides 13. 6. 13. Covers 13. 6. 13. Pistons 13. 6. 13. Rods 13. 6. 13.
 Connecting rods 13. 6. 13. Crank shaft 9. 5. 13. Thrust shaft 23. 5. 13. Tunnel shafts ✓ Screw shaft 9. 5. 13. Propeller 10. 3. 13.
 Stern tube 10. 3. 13. Steam pipes tested 12. 6. 13. Engine and boiler seatings 12. 6. 13. Engines holding down bolts 12. 6. 13.
 Completion of pumping arrangements 12. 6. 13. Boilers fixed 14. 6. 13. Engines tried under steam 14. 6. 13.
 Main boiler safety valves adjusted 14. 6. 13. Thickness of adjusting washers *FV 1/2 AV 3/8" bar.*
 Material of Crank shaft *Iron* Identification Mark on Do. *1059 F.C.M.* Material of Thrust shaft *Steel* Identification Mark on Do. *1059 J.C.M.*
 Material of Tunnel shafts ✓ Identification Marks on Do. *Iron* Material of Screw shafts *Iron* Identification Marks on Do. *1059 J.C.M.*
 Material of Steam Pipes *Solid drawn Copper* Test pressure *400 lbs.*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The engines & boiler of this vessel have been constructed under special survey in accordance with rules. The materials & workmanship are found to be good. The Boiler was tested by hydraulic pressure, and with the Engines secured on board & tested under steam they are now in good order & safe-working condition, and respectfully submitted as being eligible in my opinion to be classed with the notation of +LMC 6.13. in the Register Book.*

It is submitted that
 this vessel is eligible for
 THE RECORD. + LMC 6.13.

JWD
24/6/13 *ARR*

The amount of Entry Fee .. £ 1 : : When applied for, 23. 6. 13.
 Special .. £ 11 : 17 : :
 Donkey Boiler Fee .. £ : : :
 Travelling Expenses (if any) £ : 4 : :
 When received, 30/8/13

J. E. Mackintosh
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute FRI. JUN. 27. 1913

Assigned *+ LMC 6.13*

MACHINERY CERTIFICATE
 WRITTEN.



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