

REPORT ON MACHINERY.

No. 19630

WED. 4 DEC 1907

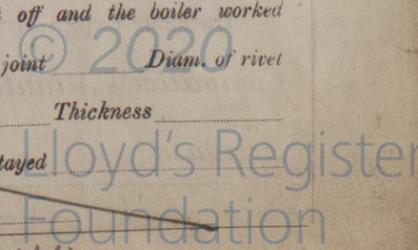
Port of Hull

Received at London Office 19

No. in Survey held at Hull Date, first Survey June 22nd Last Survey 13th Nov 1907
 Reg. Book. 54 on the Steel S. S. Botanic (Number of Visits 26)
 Master Hull Built at Hull By whom built Messrs Charles Colville Gross 312 Tons
 Engines made at Hull By whom made Charles Colville when made 1907 Net 128
 Boilers made at Hull By whom made Charles Colville when made 1907 When built 1907
 Registered Horse Power 89 Owners City Steam Fishing Co. Ltd. Port belonging to Hull
 Nom. Horse Power as per Section 28 88-79 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 13" - 22" - 37" Length of Stroke 27" Revs. per minute 105 Dia. of Screw shaft as per rule 7.8" B 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 length 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 1/2"
 Dia. of Thrust shaft as per rule 7.09 Dia. of Crank shaft journals as per rule 7.33 Dia. of Crank pin 7 3/4" Size of Crank webs 14 1/2" x 4 3/8" Dia. of thrust shaft under collars 7 3/4" Dia. of screw 9" - 6" Pitch of Screw 11" - 9" No. of Blades 4 State whether moveable No Total surface 29 sq ft
 No. of Feed pumps 2 Diameter of ditto 2 1/2" Stroke 14" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 2 1/2" Stroke 14" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines Two Sizes of Pumps one 5" centrifugal one 6" x 3" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room One 2" and one 3" In Holds, &c. One each 2" to aft slush well to forward slush well, to below fish room, to aft Comp., ejector suction from all parts
 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 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 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 9.11.07 of Stern Tube 9.11.07 Screw shaft and Propeller 9.11.07
 Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door ✓ worked from ✓

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Messrs Beardmore & Messrs Colville
 Total Heating Surface of Boilers 1463 sq ft Is Forced Draft fitted No No. and Description of Boilers One cyl. Multi
 Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 26.10.07 No. of Certificate 1607
 Can each boiler be worked separately Yes Area of fire grate in each boiler 41 sq ft No. and Description of Safety Valves to each boiler Two Spring Area of each valve 4.9 sq ft Pressure to which they are adjusted 205 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 7 1/2" Mean dia. of boilers 13" - 6" Length 10' - 3' Material of shell plates Steel
 Thickness 1 3/16" Range of tensile strength 24 - 32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams L. D. long. seams D. B. S. J. C. Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 7/8" Lap of plates or width of butt straps 18 1/2"
 Per centages of strength of longitudinal joint rivets 88.44 Working pressure of shell by rules 200 lbs Size of manhole in shell 16" x 12" plate 85.6
 Size of compensating ring 40" x 30" x 1 1/2" No. and Description of Furnaces in each boiler 3 plain Material Steel Outside diameter 3' - 2"
 Length of plain part top 6' - 5" Thickness of plates crown 4.9 Description of longitudinal joint Welded No. of strengthening rings 0 bottom 6.4
 Working pressure of furnace by the rules 202 lbs Combustion chamber plates: Material Steel Thickness: Sides 3 3/32" Back 2 3/32" Top 5" Bottom 3 3/32"
 Pitch of stays to ditto: Sides 9 1/2" x 8" Back 10" x 8 1/2" Top 8 1/2" x 7 1/2" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 207 lbs
 Material of stays Steel Diameter at smallest part 1 3/4" Area supported by each stay 102 sq ft Working pressure by rules 211 lbs End plates in steam space: Material Steel Thickness 1 3/16" Pitch of stays 18" x 17" How are stays secured D. Nuts Working pressure by rules 206 lbs Material of stays Steel
 Diameter at smallest part 2 3/16" Area supported by each stay 306 sq ft Working pressure by rules 211 lbs Material of Front plates at bottom Steel Thickness 3 1/32" Material of Lower back plate Steel Thickness 1 5/16" Greatest pitch of stays 13" + 3/4" abeyant Working pressure of plate by rules 226 lbs
 Diameter of tubes 3 1/4" Pitch of tubes 4 1/4" - 4 3/4" Material of tube plates Steel Thickness: Front 3 1/32" Back 7/8" Mean pitch of stays 9 7/8"
 Pitch across wide water spaces 14" Working pressures by rules 208 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 9 1/2" x 1 3/4" Length as per rule 2' - 9 1/2" Distance apart 8 1/2" Number and pitch of stays in each 3 - 7 1/2"
 Working pressure by rules 227 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, and a quantity of assorted bolts nuts etc*

The foregoing is a correct description,
F. J. Salterthorpe Manufacturer.

Dates of Survey while building { During progress of work in shops - - } *1907: Jun 22. 26. 30. Aug 23. 30. Sep 4. 9. 12. 19. 24. Oct 7. 8. 9. 10. 18. 26.*
 { During erection on board vessel - - } *Oct 28. 31 Nov 1. 4. 5. 8. 9. 11. 12. 13.*
 Total No. of visits *26* Is the approved plan of main boiler forwarded herewith *Yes*

Dates of Examination of principal parts—Cylinders *10. 10. 07* Slides *18. 10. 07* Covers *24. 9. 07* Pistons *10. 10. 07* Rods *18. 10. 07*
 Connecting rods *18. 10. 07* Crank shaft *24. 9. 07* Thrust shaft *24. 9. 07* Tunnel shafts _____ Screw shaft *7. 10. 07* Propeller *24. 9. 07*
 Stern tube *24. 9. 07* Steam pipes tested *31. 10. 07* Engine and boiler seatings *26. 10. 07* Engines holding down bolts *5. 11. 07*
 Completion of pumping arrangements *12. 11. 07* Boilers fixed *5. 11. 07* Engines tried under steam *13. 11. 07*
 Main boiler safety valves adjusted *5. 11. 07* Thickness of adjusting washers *5/16 . 11/32*

Material of Crank shaft *Steel* Identification Mark on Do. *1963ATG* Material of Thrust shaft *Steel* Identification Mark on Do. *109GAH*
 Material of Tunnel shafts _____ Identification Marks on Do. _____ Material of Screw shafts *Steel* Identification Marks on Do. *109GAH*
 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 placed on board, and 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. 11.07 in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD. *L.M.C. 11.07*

HC 4-12-07

The amount of Entry Fee. . . £ *1* : : : When applied for, *3/12/07*
 Special £ *13* : *7* : : :
 Donkey Boiler Fee £ . : : : When received, *15/2/08*
 Travelling Expenses (if any) £ . : : : *9/2/08*

James Barclay
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.
21. 11. 07

Committee's Minute *FRI. 6 DEC 1907*

Assigned *+ L.M.C. 11.07*



Certificate (if required) to be sent to Shell

The Surveyors are requested not to write on or below the space for Committee's Minute.