

REPORT ON MACHINERY.

No. 23600

APR 24 1911

Received at London Office

Date of writing Report 19th Apr 1911 When handed in at Local Office 19th Apr 1911 Port of Hull
 No. in Survey held at Selby & Hull Date, First Survey Dec. 20th Last Survey 12th April 1911
 Reg. Book. 4944 on the Steel S. K. Neil Gow (Number of Visits 31) Tons { Gross 255 Net 107
 Master Selby Built at Selby By whom built Messrs Cochrane & Co when made 1911
 Engines made at Hull By whom made Messrs Charles D. Holmes & Co when made 1911
 Boilers made at Hull By whom made Charles D. Holmes & Co when made 1911
 Registered Horse Power 74 Owners Orient Steam Fishing Co. Ltd Port belonging to Grimby
 Nom. Horse Power as per Section 28 74 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 1/2" - 22" - 35" Length of Stroke 24" Revs. per minute 115 Dia. of Screw shaft 7.25" 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 burned 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 6.6" as per rule 6.6" Dia. of Crank shaft journals 7.25" as fitted 7.25" Dia. of Crank pin 7 1/4" Size of Crank webs 14 1/2" x 14 1/2" Dia. of thrust shaft under
 collars 7 1/2" Dia. of screw 8' - 7" Pitch of Screw 11' - 0" No. of Blades 4 State whether moveable No Total surface 29 1/2 sq ft
 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 One Sizes of Pumps 4" x 7" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room One 3", two 2" In Holds, &c. One 2" to fore hold, One 2" to slush
well. There is an injector for boiler. Ejector from all parts ship, & centrifugal pump for Condenser.
 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 Yes 2 1/2" G.
 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 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 2.3.11 of Stern Tube 2.3.11 Screw shaft and Propeller 2.3.11
 Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door — worked from —

BOILERS, &c.—(Letter for record 5) Manufacturers of Steel Phoenix A.S. Gas Works, Westfalia
 Total Heating Surface of Boiler 1285 sq ft Is Forced Draft fitted No No. and Description of Boilers 1 Cyl. Mult. Single Ended
 Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 17.3.11 No. of Certificate 1792
 Can each boiler be worked separately — 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 in 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' - 3 1/2" Length 10' - 3" Material of shell plates Steel
 Thickness 1 5/32" Range of tensile strength 29 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams L.O.
 long. seams O.S.L.P. Diameter of rivet holes in long. seams 1 5/32" Pitch of rivets 4 1/16" Lap of plates or width of butt straps 16 5/8"
 Per centages of strength of longitudinal joint
 rivets 87.8 Working pressure of shell by rules 200 lbs Size of manhole in shell 16" x 12"
 plate 84.95
 Size of compensating ring 4' x 1 1/2" No. and Description of Furnaces in each boiler 3 Plain Material S Outside diameter 38"
 Length of plain part top 75 1/2" bottom 71" Thickness of plates crown 4.9" bottom 6.4" Description of longitudinal joint Welded No. of strengthening rings 2 angle bars on bottom
 Working pressure of furnace by the rules 202 lbs Combustion chamber plates: Material S Thickness: Sides 3/4" Back 3/4" Top 3/4" Bottom 3/4"
 Pitch of stays to ditto: Sides 8' x 10" Back 7 1/2' x 11" Top 7 1/2' x 10 1/2" If stays are fitted with nuts or riveted heads No Working pressure by rules 220 lbs End plates in steam space:
 Material of stays S Area at smallest part 7.5 sq in Area supported by each stay 112.5 sq in Working pressure by rules 201 lbs Material of stays S
 Material S Thickness 1 1/32" Pitch of stays 19.2 x 18.2" How are stays secured O.N.W. Working pressure by rules 225 lbs Material of Front plates at bottom S
 Area at smallest part 7.5 sq in Area supported by each stay 346 sq in Working pressure by rules 225 lbs Material of Front plates at bottom S
 Thickness 1 5/16" Material of Lower back plate S Thickness 1 5/16" Greatest pitch of stays 14 1/2' x 10 1/2' Working pressure of plate by rules 211 lbs
 Diameter of tubes 3 1/2" Pitch of tubes 5' x 5" Material of tube plates S Thickness: Front 1 5/16" Back 7/8" Mean pitch of stays 10' x 10"
 Pitch across wide water spaces 14" Working pressures by rules 315 lbs Girders to Chamber tops: Material S Depth and
 thickness of girder at centre 9 1/2' x 2" Length as per rule 2-9 1/2' Distance apart 10 1/2' Number and pitch of stays in each Three 4 1/2'
 Working pressure by rules 205 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 _____ 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 and bottom end connecting rod bolts & nuts, two main bearing bolts and nuts, One set coupling bolts and nuts, One set each air, feed bilge pump valves, a quantity of assorted bolts and nuts, Two safety valve springs, escape valve springs, two check valves, four boiler tubes

The foregoing is a correct description,
p. pro **HOLMES & Co. LTD.**
W. Holmes Manufacturer.

DIRECTOR

Dates of Survey while building: During progress of work in shops -- } 1910: - Dec 20. 1911: - Jan 2. 6. 11. 13. 19. 23. 25. Feb 3. 9. 11. 14. 16. 20. 22. 27. 28. Mar 2. 17. 24. 28. 30. 31
 During erection on board vessel --- } Apr 1. 4. 5. 6. 7. 8. 10. 12.
 Total No. of visits 31.

Is the approved plan of main boiler forwarded herewith Yes

" " " donkey " " " _____

Dates of Examination of principal parts—Cylinders 14. 2. 11 Slides 2. 3. 11 Covers 19. 1. 11 Pistons 16. 2. 11 Rods 16. 2. 11

Connecting rods 16. 2. 11 Crank shaft 11. 2. 11 Thrust shaft 22. 2. 11 Tunnel shafts _____ Screw shaft 22. 2. 11 Propeller 2. 3. 11

Stern tube 28. 2. 11 Steam pipes tested 6. 4. 11 Engine and boiler seatings 2. 3. 11 Engines holding down bolts 8. 4. 11

Completion of pumping arrangements 12. 4. 11 Boilers fixed 8. 4. 11 Engines tried under steam 12. 4. 11

Main boiler safety valves adjusted 8. 4. 11 Thickness of adjusting washers $\frac{3}{8}$ $\frac{3}{8}$

Material of Crank shaft 5 Identification Mark on Do. 731 JB Material of Thrust shaft 5 Identification Mark on Do. 731 JB

Material of Tunnel shafts _____ Identification Marks on Do. _____ Material of Screw shafts 9 Identification Marks on Do. 731 JB

Material of Steam Pipes Solid drawn Copper Test pressure 400 lbs. \square

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 Rules, the material and workmanship are sound and 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 and respectfully submitted as being eligible in my opinion to be classed with the notation of $\frac{1}{2}$ L.M.C. 4. 11 in the Register Book

It is submitted that this vessel is eligible for THE RECORD, 4 LMC 4. 11

J.M. *J.S.M.*
 24/4/11

The amount of Entry Fee ... £ 1 : : : When applied for, 22-4-11

Special ... £ 11 : : : When received, 28. 4. 11

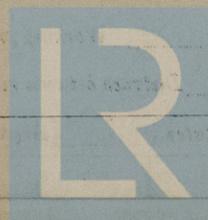
Donkey Boiler Fee ... £ : : : _____

Travelling Expenses (if any) £ : : : _____

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

Committee's Minute
 Assigned

10 P.M. 25 APR 1911
 Home 4. 11



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Certificate (if required) to be sent to Hull.

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

MACHINERY CERTIFICATE
 WRITTEN