

REPORT ON MACHINERY.

No. 20,447

Port of Hull Received at London Office MUN. 24 AUG 1908

No. in Survey held at Goole, Hull Date, first Survey May 6th Last Survey Aug 15th 1908

Reg. Book. 22 on the Shel Se. S. His V (Number of Visits 22)

Master Goole Built at Goole By whom built Goole S. B. & Co. Ltd Tons Gross 209
Net 93

Engines made at Hull By whom made Earles & Co. Ltd when made 1908

Boilers made at Hull By whom made Earles & Co. Ltd when made 1908

Registered Horse Power 64.6 Owners L'His Soc. Co-operative Ltd Port belonging to Ostend

Nom. Horse Power as per Section 28 64.6 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" - 20" - 32" Length of Stroke 23" Revs. per minute 123 Dia. of Screw shaft 6.9" Material of Steel
 as fitted 7.5" screw shaft

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 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 34"

Dia. of plain part shaft as per rule 6.1" Dia. of Crank shaft journals as per rule 6.4" Dia. of Crank pin 6.2" Size of Crank webs 13" x 4.4" Dia. of thrust shaft under
 collars 6.2" as fitted 6.4" Dia. of screw 8" - 6" Pitch of Screw 11" - 0" No. of Blades 4 State whether moveable No Total surface 25 sq

No. of Feed pumps 1 Diameter of ditto 2.2" Stroke 10" Can one be overhauled while the other is at work —

No. of Bilge pumps 1 Diameter of ditto 2.2" Stroke 10" Can one be overhauled while the other is at work —

No. of Donkey Engines One Sizes of Pumps 5 + 2.2 x 5 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room One 2" One 2.2" In Holds, &c. One 2" from slush well, one 2"
from ballast tank, and ejector suction from all parts.

No. of Bilge Injections 1 sizes 3.2" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size Yes 2.2"

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 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 No 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 Tank 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 26.6.08 of Stern Tube 26.6.08 Screw shaft and Propeller 26.6.08

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 & Co. of Scotland

Total Heating Surface of Boilers 1150 sq Is Forced Draft fitted No No. and Description of Boilers One cyl. Muelin

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 9.7.08 No. of Certificate 1654

Can each boiler be worked separately — Area of fire grate in each boiler 31 sq No. and Description of Safety Valves to
 each boiler Two Spring Area of each valve 3.14 sq Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 6" Int. dia. of boilers 12' - 0" Length 10' - 0" Material of shell plates Steel

Thickness 1" Range of tensile strength 28 - 32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams L. D.
 long. seams O. B. S. Y. R. Diameter of rivet holes in long. seams 1" Pitch of rivets 6.16" Lap of plates or width of butt straps 14.5"

Per centages of strength of longitudinal joint rivets 85.6 Working pressure of shell by rules 182 lbs Size of manhole in shell 16" x 12"
 plate 85.3

Size of compensating ring 30" x 28" x 1" No. and Description of Furnaces in each boiler Two plain Material Steel Outside diameter 41"

Length of plain part top 6' - 6" bottom 6' - 6" Thickness of plates crown 4.9" bottom 4.4" Description of longitudinal joint Welded No. of strengthening rings as plan

Working pressure of furnace by the rules 184 lbs Combustion chamber plates: Material Steel Thickness: Sides 5/8" Back 41/64" Top 5/8" Bottom 5/8"

Pitch of stays to ditto: Sides 9" x 7" Back 9" x 8.5" Top 9" x 7" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 180 lbs

Material of stays Steel Diameter at smallest part 1.5" Area supported by each stay 101.25 sq Working pressure by rules 183 lbs End plates in steam space:

Material Steel Thickness 1" Pitch of stays 16" x 15.2" How are stays secured O. B. W. Working pressure by rules 180 lbs Material of stays Steel

Diameter at smallest part 2.9" Area supported by each stay 248 sq Working pressure by rules 216 lbs Material of Front plates at bottom Steel

Thickness 3/8" Material of Lower back plate Steel Thickness 5/8" Greatest pitch of stays 14" x 9" Working pressure of plate by rules 191 lbs

Diameter of tubes 3.2" Pitch of tubes 5" x 5" Material of tube plates Steel Thickness: Front 3/32" Back 1/16" Mean pitch of stays 10"

Pitch across wide water spaces 14" Working pressures by rules 182 lbs Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 8.4" x 1.3" Length as per rule 2' - 7.2" Distance apart 9" Number and pitch of stays in each 3 - 7"

Working pressure by rules 182 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 —

009505-009513-0104

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, feed and bilge pump valves, and a quantity of assorted bolts nuts etc.

The foregoing is a correct description,

J. J. Palethorpe Manufacturer.

Dates of Survey while building { During progress of work in shops - 1908 - May 6. 12. 20. 29 Jun 3. 17. 22. 25. 26. 29. Jul 4. 9. 15. 16. 20. 21. 22. 24. 27. }
 { During erection on board vessel - July 28. 30. Aug 15. }
 Total No. of visits 22.

Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Cylinders 25.6.08 Slides 16.7.08 Covers 25.6.08 Pistons 25.6.08 Rods 25.6.08
 Connecting rods 25.6.08 Crank shaft 25.6.08 Thrust shaft 27.7.08 Tunnel shafts ———— Screw shaft 22.6.08 Propeller 22.6.08
 Stern tube 22.6.08 Steam pipes tested 22.7.08 Engine and boiler seatings 16.7.08 Engines holding down bolts 27.7.08
 Completion of pumping arrangements 30.7.08 Boilers fixed 27.7.08 Engines tried under steam 27.7.08
 Main boiler safety valves adjusted 27.7.08 Thickness of adjusting washers 3/8" port 5/16" Star.
 Material of Crank shaft Steel Identification Mark on Do. 2077ATG Material of Thrust shaft Steel Identification Mark on Do. 13YSAH
 Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Steel Identification Marks on Do. 13YSAH
 Material of Steam Pipes Solid drawn Copper Test pressure 400 lbs

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 workmanship and materials 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 and respectfully submitted as being eligible in my opinion to be classed with the notation of $\frac{1}{2}$ L.M.C. 8.08 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. L.M.C. 8.08.

APR 24/808

JSC. 24.8.08

The amount of Entry Fee £ 1 : : : When applied for.
 Special £ 9 : 15 : 22/8 1908.
 Donkey Boiler Fee £ : : : When received.
 Travelling Expenses (if any) £ : 12 : 8 29/8 1908.

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

Committee's Minute TUES. 25 AUG 1908

Assigned

MACHINER
 WRITTEN.