

Iull Rpt No 19405

Nwc. No. 53443

Glo No. 25671

Rpt. 4.

# REPORT ON MACHINERY.

Port of Glasgow.

Received at London Office THUR. 19 SEP. 1907

No. in Survey held at Coatbridge N.B.

Date, first Survey 31<sup>st</sup> May Last Survey 6<sup>th</sup> Aug 1907

Reg. Book. Marine Engines. Trawler. "Phoebe"

(Number of Visits 8)

Master  Built at Goole

By whom built Goole Shipbuilding Co. (No. 95) When built 1907.

Tons { Gross 248.46  
Net 199.34

Engines made at Coatbridge

By whom made W. V. V. Ridgwood Esq. (No. 269) when made 1907.

Boilers made at Wallsend

By whom made Wallsend Slipway Co. (No. 190B) when made 1907.

Registered Horse Power

Owners W. Colman.

Port belonging to Stentwood.

Nom. Horse Power as per Section 28 75.33

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" - 21" - 35" Length of Stroke 25" Revs. per minute 108

Dia. of Screw shaft as per rule 7.5" Material of screw shaft Iron  
as fitted 7.4"

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  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

Dia. of Tunnel shaft as per rule 1.56 Dia. of Crank shaft journals as per rule 6.9" Dia. of Crank pin 7.4" Size of Crank webs 26 3/4 x 14 1/2 Dia. of thrust shaft under collars 7.4" Dia. of screw 9.5" Pitch of Screw 12-0" No. of Blades 4 State whether moveable No Total surface 29 # Length of stern bush 2-9"

No. of Feed pumps 2 Diameter of ditto 2 1/2" Stroke 12" Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 2 1/2" Stroke 12" Can one be overhauled while the other is at work yes

No. of Donkey Engines 2 Sizes of Pumps one 5 1/2 x 3 1/2 x 5" No. and size of Suctions connected to both Bilge and Donkey pumps one 6 x 6 x 6

In Engine Room Two 2" In Holds, &c. Two 2 1/2"

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 2"

Are all the bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible  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 valves cocks.

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 Suctions 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 8 aug 07 of Stern Tube 8. aug 07 Screw shaft and Propeller 8. aug 07

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

## BOILERS, &c.—(Letter for record) Manufacturers of Steel J. Spence & Sons Ltd

Total Heating Surface of Boilers 258 1/4 Is Forced Draft fitted No No. and Description of Boilers 1 SE of Mattin

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 18.7.07 No. of Certificate 7530

Can each boiler be worked separately  Area of fire grate in each boiler 42 3/4 No. and Description of Safety Valves to each boiler two direct spring Area of each valve 4.9" 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 9" Mean dia. of boilers horizontal 1/2 in. spheroidal Length Material of shell plates

Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams

long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

Per centages of strength of longitudinal joint Working pressure of shell by rules Size of manhole in shell

Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter

Length of plain part Thickness of plates Description of longitudinal joint No. of strengthening rings

Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom

Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules

Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space:

Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays

Diameter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom

Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays

Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and

thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each

Working pressure by rules Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked

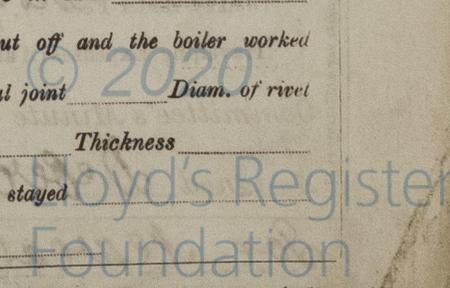
separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet

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

If not, state whether, and when, the same was done



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:— 2 Connecting rod bolts & nuts for top end, & 2 for bottom end, 2 main bearing bolts & nuts, 1 set each of feed & bilge pump valves, a quantity of assorted bolts & nuts, & iron of various sizes.

The foregoing is a correct description,  
 For W. Y. Y. Lidgerwood Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1907. May 31. June 15. 18. 25. July 8. 26. Aug. 1. 6.  
 { During erection on board vessel - - Nov. 1907. Aug. 9. 12. 15. 19.  
 Total No. of visits 13

Is the approved plan of main boiler forwarded herewith No  
 " " " donkey " " "

Dates of Examination of principal parts—Cylinders 31. 5. 07. Slides 31. 5. 07. Covers 31. 5. 07. Pistons 12. 6. 07. Rods 12. 6. 07.  
 Connecting rods 18. 6. 07. Crank shaft 25. 6. 07. Thrust shaft 6. 8. 07. Tunnel shafts ✓ Screw shaft 6. 8. 07. Propeller 26. 7. 07.  
 Stern tube 26. 7. 07. Steam pipes tested 15 Aug 07 Engine and boiler seatings 8. 8. 07 Engines holding down bolts 13. 8. 07  
 Completion of pumping arrangements 30. 8. 07 Boilers fixed 13. 8. 07 Engines tried under steam 19. 8. 07  
 Main boiler safety valves adjusted 19. 8. 07 Thickness of adjusting washers P.V.R. 3/8" S.V.R. 3/8"  
 Material of Crank shaft Steel Identification Mark on Do. 269 Material of Thrust shaft Steel Identification Mark on Do. 269.  
 Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts Iron. Identification Marks on Do. 269.  
 Material of Steam Pipes Copper. Test pressure 360lb

General Remarks (State quality of workmanship, opinions as to class, &c. The Engines & Boiler of this vessel have been built under Survey, & are of good materials & workmanship, & when satisfactorily fitted on board, will in our opinion be eligible for the L.M.C. 8.07 notation with date of completion

The Engine and boiler fitted on board tried under steam and found efficient  
 Leonard & Challcross.

It is submitted that this vessel is eligible for THE RECORD + LMC 8.07

LD  
 29/9/07

30.9.07

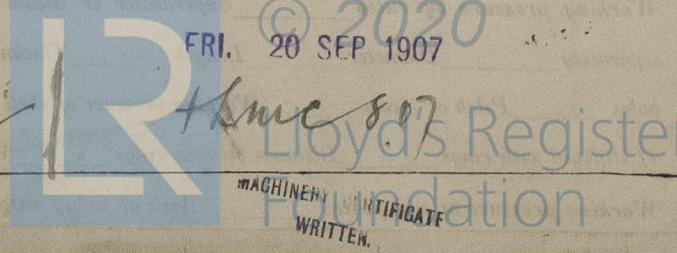
The amount of Entry Fee. £ 1: 10: 0  
 Special £ 5: 6: 0  
 Donkey Boiler Fee £ 2: 12: 0  
 Travelling Expenses (if any) £ 5: 15: 0  
 When applied for. 26 AUG 1907  
 When received. 29 AUG 1907

A. H. Fielditch, Leonard & Challcross  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

Assigned Deferred for completion.

See Newcastle.



Certificate (if required) to be sent to...

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