

Tull Rpt No 19405

Nwc No 53443

Gl 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 31st May Last Survey 6th Aug 1907
Reg. Book. Marine Engines. Trawler. "Phoebe" (Number of Visits 8)
Master ✓ Built at Goolle By whom built Goolle Shipbuilding Co (No 95) When built 1907
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 Is. Colman Port belonging to 8 Bentwood
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
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 ✓ Length of stern bush 2' 9"
Dia. of Tunnel shaft as per rule 1.5" Dia. of Crank shaft journals as per rule 6.9" Dia. of Crank pin 7 1/4" Size of Crank webs 26 3/4" x 14 1/2" Dia. of thrust shaft under
collars 7 1/4" Dia. of screw 9' 5" Pitch of Screw 12-0" No. of Blades 4 State whether moveable No Total surface 29 #
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
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 1/2 Is Forced Draft fitted No No. and Description of Boilers 1 SE of Matti
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 hariculan 1 1/2" x 1 1/2" 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 Thicknes 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

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. Lidenwood Manufacturer.

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

Is the approved plan of main boiler forwarded herewith No

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 18. 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 360 lbs

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 & Challengers.

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

28/8/07
29/9/07

The amount of Entry Fee. £ 1 : 10 : 0
 Special £ 5 : 6 : 8
 Donkey Boiler Fee £ 2 : 12 : 6
 Travelling Expenses (if any) £ 5 : 15 : 0
 When applied for. 26 AUG 1907
 When received. 29 AUG 1907

Committee's Minute

Assigned Deferred for completion

For Newcastle.

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

FRI. 20 SEP 1907

+ LMC 8.07

MACHINERY CERTIFICATE WRITTEN