

REPORT ON MACHINERY.

No. 23512

MAR 31 1911

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Date of writing Report Mar 25 1911 When handed in at Local Office1911 Port of HullNo. in Survey held at Hull
Reg. Book.Date, First Survey Sep 21/10Last Survey Mar 18th 19118 Supp on the S/Trawler YESSO(Number of Visits 52)Gross 229Net 118

Master

Built at BelbyBy whom built Lockhart & CoWhen built 1911Engines made at HullBy whom made Amos & Smith Ltd.when made 5Boilers made at 5By whom made 5when made 5Registered Horse Power -Owners H. L. TaylorPort belonging to GrimsbyNom. Horse Power as per Section 28 69Is Refrigerating Machinery fitted for cargo purposes NoIs Electric Light fitted NoENGINES, &c.—Description of Engines Vertical triple expansion No. of Cylinders 3 No. of Cranks 3Dia. of Cylinders 12 1/2 x 21 x 34 Length of Stroke 24 Revs. per minute 114 Dia. of Screw shaft 7 1/2 as per rule 7 1/2 as fitted 7 3/8 Material of screw shaft IronIs 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 tightin the propeller boss Yes If the liner is in more than one length are the joints burned Yes If the liner does not fit tightly at the partbetween the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive Yes If twoliners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 2' 9"Dia. of Tunnel shaft 6 3/4 as per rule 6 3/4 as fitted 6 3/4 Dia. of Crank shaft journals 6 3/4 as per rule 6 3/4 as fitted 6 3/4 Dia. of Crank pin 6 3/4 Size of Crank webs 3 3/4 x 4 3/4 Dia. of thrust shaft undercollars 6 3/4 Dia. of screw 8 1/2 Pitch of Screw 10 1/2 No. of Blades 4 State whether moveable No Total surface 29 ftNo. of Feed pumps 1 Diameter of ditto 2 1/2 Stroke 13 Can one be overhauled while the other is at work YesNo. of Bilge pumps 1 Diameter of ditto 3 Stroke 13 Can one be overhauled while the other is at work YesNo. of Donkey Engines One Sizes of Pumps 6 x 3 x 6 No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room 1-2' Ford In Holds, &c. 2-2' (Forehold & Stowage hold)2' Green suction for all bilges with discharging on deckNo. of Bilge Injections 1 sizes 3 Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size 2' GreenAre 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 YesAre all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks BothAre 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 AboveAre 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 YesWhat pipes are carried through the bunkers Hold suction How are they protected Wood casingAre all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times YesAre the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges YesDates of examination of completion of fitting of Sea Connections 14.2.11 of Stern Tube 14.2.11 Screw shaft and Propeller 14.2.11Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door Yes worked from -BOILERS, &c.—(Letter for record S) Manufacturers of Steel Phoenix & Co. HorridTotal Heating Surface of Boilers 1164 Is Forced Draft fitted No No. and Description of Boilers 1 S.E. MacmillanWorking Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 24.2.11 No. of Certificate 1790Can each boiler be worked separately Yes Area of fire grate in each boiler 34 ft No. and Description of Safety Valves toeach boiler 2 Spring loaded Area of each valve 3.97 Pressure to which they are adjusted 185 Are they fitted with easing gear YesSmallest distance between boilers or uptakes and bunkers or woodwork 7 Mean dia. of boilers 12' 0" Length 10' 12" Material of shell plates SteelThickness 1 Range of tensile strength 28-32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams 5/8 Laplong. seams 1/2 S. & W. Diameter of rivet holes in long. seams 1/8 Pitch of rivets 7 1/2 Lap of plates or width of butt straps 16 1/2Per centages of strength of longitudinal joint 98.5 Working pressure of shell by rules 181 Size of manhole in shell 16 x 12Size of compensating ring 40 x 30 x 1 No. and Description of Furnaces in each boiler 2 plain Material Steel Outside diameter 3' 6 1/2Length of plain part 7 1/2 Thickness of plates 1 1/2 Description of longitudinal joint Welded No. of strengthening rings oneWorking pressure of furnace by the rules 185 Combustion chamber plates: Material Steel Thickness: Sides 1/2 Back 1/2 Top 5/8 Bottom 1/2Pitch of stays to ditto: Sides 9 1/4 x 7 Back 9 1/4 x 8 1/2 Top 7 1/2 x 8 If stays are fitted with nuts or riveted heads Yes Working pressure by rules 208Material of stays Steel Diameter at smallest part 1 1/4 Area supported by each stay 78.5 Working pressure by rules 236 End plates in steam space:Material Steel Thickness 3/16 Pitch of stays 16 x 15 1/2 How are stays secured By nuts and washers Working pressure by rules 181 Material of stays SteelDiameter at smallest part 5' 05 Area supported by each stay 244 Working pressure by rules 215 Material of Front plates at bottom SteelThickness 2 1/2 Material of Lower back plate Steel Thickness 1 1/2 Greatest pitch of stays 14 x 9 1/2 Working pressure of plate by rules 216Diameter of tubes 3 1/2 Pitch of tubes 5 x 4 3/4 Material of tube plates Steel Thickness: Front 3/32 Back 27 Mean pitch of stays 11 x 9 1/2Pitch across wide water spaces 14 Working pressures by rules 182 Girders to Chamber tops: Material Steel Depth andthickness of girder at centre 7 1/2 x 2 Length as per rule 2' 9" Distance apart 8 Number and pitch of stays in each 30 7 1/2Working pressure by rules 190 Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler workedseparately Yes Diameter - Length - Thickness of shell plates - Material - Description of longitudinal joint - Diam. of rivetholes - 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 -

W431-0088

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 & two bottom end connecting rods bolts nuts, two main bearing bolts nuts, one set of coupling bolts nuts, one set of feed & big pump valves, one main & one donkey feed check valve assorted bolts & nuts.*

The foregoing is a correct description, **FOR AMOS & SMITH LTD.**

Manufacturer.

Dates of Survey while building { During progress of work in shops -- } 1910:— Sep 21. 23 Oct 8. 22. 27. 31 Nov 2. 5. 9. 10. 15. 17. 19. 22. 24. 26. 29 Dec 2. 8. 13.
 { During erection on board vessel --- } Dec 16. 20. 22. 30. 1911:— Jan 5. 10. 12. 17. 21. 23. 25. 27 Feb 2. 4. 6. 7. 8. 9. 14. 15. 17. 20. 24 Mar 2. 4. 7.
 Total No. of visits 57

Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts—Cylinders 15.2.11 Slides 2.3.11 Covers 15.2.11 Pistons 15.2.11 Rods 20.2.11
 Connecting rods 20.2.11 Crank shaft 15.2.11 Thrust shaft 20.2.11 Tunnel shafts ✓ Screw shaft 6.2.11 Propeller 6.2.11
 Stern tube 6.2.11 Steam pipes tested 11.3.11 Engine and boiler seatings 14.2.11 Engines holding down bolts 13.3.11
 Completion of pumping arrangements 18.3.11 Boilers fixed 13.3.11 Engines tried under steam 14.3.11
 Main boiler safety valves adjusted 14.3.11 Thickness of adjusting washers *4 7/8 5 7/8*
 Material of Crank shaft *Steel* Identification Mark on Do. *687.15.2.11* Material of Thrust shaft *Steel* Identification Mark on Do. *20.2.11*
 Material of Tunnel shafts Identification Marks on Do. *687.6.2.11* Material of Screw shafts *Iron* Identification Marks on Do. *57.5.*
 Material of Steam Pipes *Solid drawn copper* Test pressure *360 lbs*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The machinery & boiler of this vessel have been constructed under Special Survey, are of good material & workmanship & have been fitted & secured on board in accordance with the Rules. They are now in good working condition & eligible in my opinion to have record of L.M.C 3-11 in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD + L.M.C 3.11.

JWR 31/3/11

APR

The amount of Entry Fee .. £ 1 : 0 : 0 When applied for, 29.3.11
 Special .. £ 10 : 7 : 4
 Donkey Boiler Fee .. £ : : :
 Travelling Expenses (if any) £ - : 10 : 10 When received, 31.3.11

Committee's Minute

Assigned

John W. Gwynne
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

TUE 4 APR 1911

+ L.M.C 3.11



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