

# REPORT ON MACHINERY.

No. 22074

Port of Hull.

Received at London Office

JAN. 18 JAN 1910

No. in Survey held at Hull. Date, first Survey Sep. 18/09 Last Survey Jan. 4<sup>th</sup> 1910  
 Reg. Book. 15 Puff. on the 5/2 Trawler YARANIS (Number of Visits 28)  
 Master Selby. Built at Selby. By whom built Lochane & Sons. Tons { Gross 258 Net 107  
 Engines made at Hull. By whom made Amos & Smith Ltd. when made 5  
 Boilers made at 5 By whom made 5 when made 5  
 Registered Horse Power - Owners McCre. Stan Fishing Co. Ltd. Port belonging to Grimby  
 Nom. Horse Power as per Section 28 69. Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted No.

ENGINES, &c.—Description of Engines Inverted triple expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 12-21-34 Length of Stroke 24 Revs. per minute 116 Dia. of Screw shaft 7.08 as per rule 7.3 as fitted 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 3'-0"

Dia. of Tunnel shaft 6.25 as per rule 6.2 as fitted Dia. of Crank shaft journals 6.56 as per rule 6.7 as fitted Dia. of Crank pin 6.7 Size of Crank webs 13 1/2 x 4 1/2 Dia. of thrust shaft under collars 6 7/8 Dia. of screw 8'-9" Pitch of Screw 10'-9" No. of Blades 4 State whether moveable No. Total surface 29 #

No. of Feed pumps 1 Diameter of ditto 2 5/8 Stroke 13 Can one be overhauled while the other is at work ✓  
 No. of Bilge pumps 1 Diameter of ditto 3 Stroke 13 Can one be overhauled while the other is at work ✓

No. of Donkey Engines one Sizes of Pumps 6 x 3 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 1-2" Ford. In Holds, &c. 3-2" (Fore peak, fish room, reserve bunker) 1-2 1/2" Ejector suction to all bilges with discharge on deck.

No. of Bilge Injections 1 sizes 3" Connected to condenser, or to circulating pump ✓ Is a separate Donkey Suction fitted in Engine room & size 2 1/2" Ejector

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 26.11.09 of Stern Tube 26.11.09 Screw shaft and Propeller 26.11.09

Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door ✓ worked from ✓

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Phoenix & Herd, Westphalen

Total Heating Surface of Boilers 1164 # Is Forced Draft fitted No. No. and Description of Boilers 1. S.E. Multitubular  
 Working Pressure 180 lbs. Tested by hydraulic pressure to 360 lbs. Date of test 12/2.09. No. of Certificate 1728.

Can each boiler be worked separately ✓ Area of fire grate in each boiler 34 # No. and Description of Safety Valves to each boiler 2 Spring loaded. Area of each valve 3.97 # 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 5" Mean dia. of boilers 12-0" Length 10 1/2 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 SA Lap

long. seams SA S laps Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 7 1/2" Lap of plates or width of butt straps 16 1/4"  
 Per centages of strength of longitudinal joint rivets 98.5 Working pressure of shell by rules 181 Size of manhole in shell 16 x 12"

Size of compensating ring 40 x 30 x 1" No. and Description of Furnaces in each boiler 1 plain Material Steel Outside diameter 3'-6 1/2"  
 Length of plain part top 72" bottom 64" Thickness of plates crown 4 1/2" bottom 4" Description of longitudinal joint Welded No. of strengthening rings one

Working pressure of furnace by the rules 185 Combustion chamber plates: Material Steel Thickness: Sides 4 1/2" Back 4 1/2" Top 5" Bottom 4 1/2"  
 Pitch of stays to ditto: Sides 9 1/2 x 7" Back 9 1/2 x 8 1/2" Top 7 1/2 x 8" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 208

Material of stays Steel Diameter at smallest part 2 1/2" Area supported by each stay 78.5 # Working pressure by rules 236 End plates in steam space: Material Steel Thickness 3/32" Pitch of stays 16 x 15 1/2" How are stays secured Washer Working pressure by rules 181 Material of stays Steel

Diameter at smallest part 5.05 # Area supported by each stay 244 # Working pressure by rules 215 Material of Front plates at bottom Steel  
 Thickness 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 216

Diameter of tubes 3 1/2" Pitch of tubes 5 x 4 3/4" Material of tube plates Steel Thickness: Front 2 1/2" Back 2 1/2" Mean pitch of stays 16 x 9 1/2"  
 Pitch across wide water spaces 14" Working pressures by rules 182 Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 7 3/4 x 2" Length as per rule 2'-9" Distance apart 8" Number and pitch of stays in each 30 7 1/2"

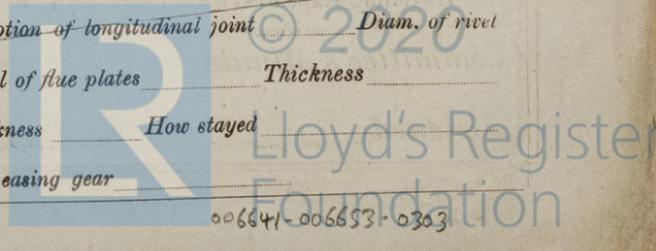
Working pressure by rules 140 Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked separately ✓

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 a Report also sent on the Hull of the Ship?



00664-006653-0303

**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 top & two bottom end connecting rod bolts & nuts two main turning bolts, one set of coupling bolts & nuts, one set of fuel & help pump valves, one main & one donkey fuel check valve, assorted bolts & nuts etc*

**FOR AMOS & SMITH LTD.**

The foregoing is a correct description,

Manufacturer.

*W. J. Hyde*  
Managing Director.

Dates of Survey while building { During progress of work in shops - } 1909:— Sep. 18. 23. Oct. 6. 9. 14. 22, 27, 28, 30. Nov. 2. 5. 10. 13. 20. 25. 26. Dec. 1. 8. 10. 13. 16. 18. 20. 24. 30  
 { During erection on board vessel - } 1910:— Jan. 1. 3. 4.  
 Total No. of visits **28**

Is the approved plan of main boiler forwarded herewith **Yes**  
 " " " donkey " " " **✓**

Dates of Examination of principal parts—Cylinders *5.11.09* Slides *25.11.09* Covers *5.11.09* Pistons *2.11.09* Rods *2.11.09*  
 Connecting rods *18.11.09* Crank shaft *5.11.09* Thrust shaft *1.12.09* Tunnel shafts *✓* Screw shaft *13.11.09* Propeller *13.11.09*  
 Stern tube *13.11.09* Steam pipes tested *24.12.09* Engine and boiler seatings *26.11.09* Engines holding down bolts *18.12.09*  
 Completion of pumping arrangements *31.1.10* Boilers fixed *30.12.09* Engines tried under steam *30.12.09*  
 Main boiler safety valves adjusted *31.1.10* Thickness of adjusting washers *7 3/8 5 5/16*  
 Material of Crank shaft *Steel* Identification Mark on Do. *65 J. 14* Material of Thrust shaft *Steel* Identification Mark on Do. *65 J. 14*  
 Material of Tunnel shafts *✓* Identification Marks on Do. *✓* Material of Screw shafts *Iron* Identification Marks on Do. *65 J. 14*  
 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 T.L.M.C. 1-10 in the Register Book.*)

*It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 1, 10*

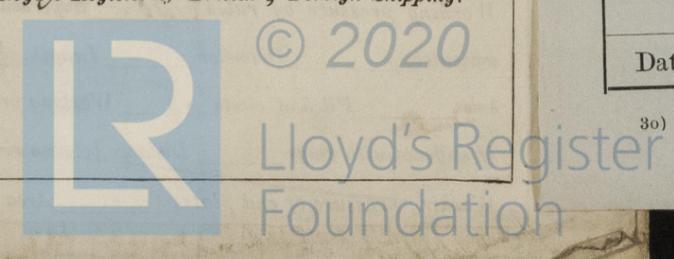
*W. J. D.*  
*J. W.* 18.1.10.

The amount of Entry Fee..	£ 1	: 00	When applied for,
Special ..	£ 10	: 70	17.1-19.10
Donkey Boiler Fee ..	£	:	When received,
Travelling Expenses (if any) £	:	: 82	28.1-19.10

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

Committee's Minute **FRI. 21 JAN 1910**

Assigned *+ L.M.C. 1, 10*



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Certificate (if required) to be sent to Committee's Minute.