

REPORT ON MACHINERY.

Port of Hull

Received at London Office JUN. 7 MAY 1907

No. in Survey held at Selby & Hull Date, first Survey Dec. 7th '06 Last Survey Apr 15th 1907
 Reg. Book. 338uff on the Screw Trawler "Orlando" (Number of Visits 24)
 Master _____ Built at Selby By whom built Cochrane & Sons Tons { Gross 276 Net 124
 Engines made at Hull By whom made Amos & Smith when made 1907
 Boilers made at do By whom made do when made 1907
 Registered Horse Power _____ Owners Dolphin Steam Fishing Co Ltd Port belonging to Grimsby
 Nom. Horse Power as per Section 28 69.8 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Triple No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 12 1/4", 21", 34" Length of Stroke 24" Revs. per minute 114 Dia. of Screw shaft as per rule 7" Material of screw shaft Iron
 as fitted 7 3/8"
 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'-11"
 Dia. of Tunnel shaft as per rule 6.3" Dia. of Crank shaft journals as per rule 6.6" Dia. of Crank pin 6 7/8" Size of Crank webs 10 1/2" x 4 3/8" Dia. of thrust shaft under
 collars 6 7/8" Dia. of screw 8'-7" Pitch of Screw 10'-2" No. of Blades 4 State whether moveable No Total surface 27 sq. ft.
 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 One 2" dia. In Holds, &c. Three 2" dia.
Ejector suction from engine room bilge & discharge on deck.
 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 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 None
 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 1.2.07 of Stern Tube 1.2.07 Screw shaft and Propeller 1.2.07
 Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door ✓ worked from ✓

BOILERS, &c.—(Letter for record (5)) Manufacturers of Steel The Steel Coy of Scotland &c.
 Total Heating Surface of Boilers 1192 sq. ft. Forced Draft fitted No No. and Description of Boilers One S.E. Cyl. Multi
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 15.3.07 No. of Certificate 1551
 Can each boiler be worked separately ✓ Area of fire grate in each boiler 35 sq. ft. No. and Description of Safety Valves to
 each boiler Two spring Area of each valve 3.9" 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 5 1/2" Mean dia. of boilers 12'-6" Length 10'-1 3/4" Material of shell plates Steel
 Thickness 1 1/2" Range of tensile strength 28-32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams DR Lap
 long. seams DR Lap Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 7.63" Lap of plates or width of butt straps 16 1/4"
 Per centages of strength of longitudinal joint rivets 94 Working pressure of shell by rules 181 lbs Size of manhole in shell 16" x 12"
 plate 85.2
 Size of compensating ring 40" x 30" x 1 1/2" No. and Description of Furnaces in each boiler Two plain Material Steel Outside diameter 43.53"
 Length of plain part top 6'-4" Thickness of plates crown 4 1/2" Description of longitudinal joint Welded No. of strengthening rings ✓
 bottom 5'-10 1/2" bottom 6'-4"
 Working pressure of furnace by the rules 180 lbs Combustion chamber plates: Material Steel Thickness: Sides 23/32" Back 1/16" Top 5/8" Bottom 23/32"
 Pitch of stays to ditto: Sides 9 1/4" x 7" Back 9" x 8 3/4" Top 8 1/2" x 7" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 208 lbs
 Material of stays Steel Diameter at smallest part 1 1/2" Area supported by each stay 64.75" Working pressure by rules 218 End plates in steam space:
 Material Steel Thickness 1 1/2" Pitch of stays 16 1/4" x 15" How are stays secured screwed into end plates Working pressure by rules 196 lbs Material of stays Steel
 Diameter at smallest part 5.05" Area supported by each stay 244" Working pressure by rules 207 Material of Front plates at bottom Steel
 Thickness 29/32" Material of Lower back plate Steel Thickness 15/16" Greatest pitch of stays 14" x 8 3/4" Working pressure of plate by rules 222 lbs
 Diameter of tubes 3 1/2" Pitch of tubes 4 15/16" x 4 3/4" Material of tube plates Steel Thickness: Front 29/32" Back 27/32" Mean pitch of stays 9 7/8" x 9 1/2"
 Pitch across wide water spaces 14" Working pressures by rules 183 lbs Girders to Chamber tops: Material Iron Depth and
 thickness of girder at centre 8 3/4" x 2" Length as per rule 2'-9" Distance apart 8 1/2" Number and pitch of stays in each 3 @ 7"
 Working pressure by rules 188 lbs 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 ✓

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 bearing bolts + nuts. One set of coupling bolts + nuts. One set of feed + bilge pump valves. Main + donkey feed check valves. Assorted bolts + nuts etc.*

The foregoing is a correct description,

FOR AMOS & SMITH

Manufacturer.

Dates of Survey while building

During progress of work in shops - -	1906 - Dec 7	1907 - Jan 1, 2, 7, 9, 10, 16, 18, 25, Feb 1, 7, 8, 18, Mar 5, 13, 15, 22, Apr 4, Apr 5, 8, 11, 12
During erection on board vessel - -	Apr 13, 15	
Total No. of visits	24	

Is the approved plan of main boiler forwarded herewith yes

Dates of Examination of principal parts

Cylinders	2.1.07	Slides	22.3.07	Covers	22.3.07	Pistons	22.3.07	Rods	13.3.07
Connecting rods	7.2.07	Crank shaft	5.3.07	Thrust shaft	5.3.07	Tunnel shafts	✓	Screw shaft	25.1.07
Stern tube	25.1.07	Steam pipes tested	12.4.07	Engine and boiler seatings	1.2.07	Engines holding down bolts	4.4.07		
Completion of pumping arrangements	13.4.07	Boilers fixed	5.4.07	Engines tried under steam	13.4.07				
Main boiler safety valves adjusted	13.4.07	Thickness of adjusting washers	$P \frac{5}{16}$ $S \frac{3}{8}$						
Material of Crank shaft	Steel	Identification Mark on Do.	326 J.K. 5.3.07	Material of Thrust shaft	Steel	Identification Mark on Do.	5.3.07		
Material of Tunnel shafts	✓	Identification Marks on Do.	✓	Material of Screw shafts	Iron	Identification Marks on Do.	25.1.07		
Material of Steam Pipes	Solid drawn copper	Test pressure	360 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, are of good material and workmanship, and have been fitted and secured on board in accordance with the Rules. They are now in good working condition and in my opinion eligible to have the notation of + L.M.C. 4.07 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. **+ L.M.C. 4.07.**

J.P. 7/5/07

R.S. 7.5.07

The amount of Entry Fee. £ 1 : : : When applied for.

Special £ 10 : 10 : : 6/57 1907

Donkey Boiler Fee £ . : : : When received.

Travelling Expenses (if any) £ . : 8 2 31/5707 1/6/07

J. Kerr
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute **FRI. 10 MAY 1907**

Assigned *+ L.M.C. 4.07*

Certificate (if required) to be sent to Hull

