

## REPORT ON MACHINERY.

No. 19424

Port of Hull

Received at London Office

MON. 23 SEP 1907

No. in Survey held at HullDate, first Survey Mar 22<sup>nd</sup>Last Survey Sep 9<sup>th</sup> 1907(Number of Visits 23)

Reg. Book.

14 Supp on the Trawler "OTHELLO"Gross 205  
Tons Net 64

Master

Built at BeverlyBy whom built Good, Weems & GemmillWhen built 1907Engines made at HullBy whom made Amos & Smithwhen made 1907-9Boilers made at S.By whom made S.when made S.Registered Horse Power ✓Owners Hull's Steam Towing Co.Port belonging to HullNom. Horse Power as per Section 28 49Is Refrigerating Machinery fitted for cargo purposes NoIs Electric Light fitted No

## ENGINES, &amp;c.—Description of Engines

Triple expansionNo. of Cylinders 3No. of Cranks 3Dia. of Cylinders 10" x 16" x 28" Length of Stroke 24" Revs. per minute 100 Dia. of Screw shaft 7 1/2" Material of 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 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 32"Dia. of Tunnel shaft 6 1/4" Dia. of Crank shaft journals 6 1/2" Dia. of Crank pin 6 1/2" Size of Crank webs 18" x 12" Dia. of thrust shaft under collars 6 1/4" Dia. of screw 10" 0 Pitch of Screw 8 1/2" No. of Blades 4 State whether moveable No Total surface 29.8 sqNo. of Feed pumps 1 Diameter of ditto 2 1/2" Stroke 11" Can one be overhauled while the other is at work ✓No. of Bilge pumps 1 Diameter of ditto 2 1/2" Stroke 11" Can one be overhauled while the other is at work ✓No. of Donkey Engines 2 Sizes of Pumps 6" x 3" x 6", 5" x 5" x 5" No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room 2-2" (For & AFT) In Holds, &c. 2-2" (Bilge tank & main tank)2 1/2" Cylin Suction from air high & discharge in deck.No. of Bilge Injections 1 sizes 2 1/2" Connected to condenser, or to circulating pump Condenser Is a separate Donkey Suction fitted in Engine room & size 2 1/2" CylinAre 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 NoneAre 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 Suctions & fuel tank How are they protected work 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 12/7/07 of Stern Tube 12/7/07 Screw shaft and Propeller 12/7/07Is the Screw Shaft Tunnel watertight ✓ Is it fitted with a watertight door ✓ worked from ✓

## BOILERS, &amp;c.—(Letter for record

Manufacturers of Steel Steel Co of ScotlandTotal Heating Surface of Boilers 840 sq Is Forced Draft fitted No No. and Description of Boilers 1. S.E. MachineryWorking Pressure 200 Tested by hydraulic pressure to 400 lbs. Date of test 14.8.07 No. of Certificate 1584Can each boiler be worked separately ✓ Area of fire grate in each boiler 27.3 sq No. and Description of Safety Valves toeach boiler 2 Spring loaded Area of each valve 3.14 sq Pressure to which they are adjusted 200 lbs. Are they fitted with easing gear YesSmallest distance between boilers or uptakes and bunkers or woodwork 7 1/2" Mean dia. of boilers 11" 0 Length 9' 4" Material of shell plates SteelThickness 1" Range of tensile strength 28-32 lbs Are the shell plates welded or flanged No Descrip. of riveting: cir. seams S.R. Lap.long. seams S.R. S. rivet Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 7.6" Lap of plates or width of butt straps 16 1/4"Per centages of strength of longitudinal joint 96.5 Working pressure of shell by rules 200 lbs. 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 2 plain Material Steel Outside diameter 3' 2 1/2"Length of plain part 5' 8 1/4" Thickness of plates 1 1/2" Description of longitudinal joint welded No. of strengthening rings ✓Working pressure of furnace by the rules 211 Combustion chamber plates: Material Steel Thickness: Sides 2 3/4" Back 1 1/2" Top 5/8" Bottom 3/4"Pitch of stays to ditto: Sides 8 1/2" x 8 1/2" Back 8 1/2" x 7 1/2" Top 8" x 7 1/2" If stays are fitted with nuts or riveted heads None Working pressure by rules 224Material of stays Steel Diameter at smallest part 1 1/2" Area supported by each stay 72.25 sq Working pressure by rules 258 End plates in steam space:Material Steel Thickness 1 1/2" Pitch of stays 13 1/4" x 13" How are stays secured S.R. rivet Working pressure by rules 242 Material of stays SteelDiameter at smallest part 4' 1" Area supported by each stay 172 sq Working pressure by rules 238 Material of Front plates at bottom SteelThickness 1 1/2" Material of Lower back plate Steel Thickness 1 1/2" Greatest pitch of stays 15" Working pressure of plate by rules 200Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates Steel Thickness: Front 1 1/2" Back 7/8" Mean pitch of stays 9 1/2"Pitch across wide water spaces 13 1/2" Working pressures by rules 202 Girders to Chamber tops: Material Iron Depth andthickness of girder at centre 8 1/2" x 1 1/2" Length as per rule 2' 6 3/8" Distance apart 7 1/2" Number and pitch of stays in each 2 x 8"Working pressure by rules 226 Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler workedseparately ✓ 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 ✓

W818-0125



# VERTICAL DONKEY BOILER— Manufacturers of Steel

No. *21907* Description *Vertical Donkey Boiler*

Made at *Amos & Smith* By whom made *Amos & Smith* When made *1907* Where fixed *Amos & Smith*

Working pressure *150 lbs* tested by hydraulic pressure to *200 lbs* Date of test *23/8/07* No. of Certificate *23.9.07* Fire grate area *10 sq ft* Description of Safety Valves *Two*

No. of Safety Valves *Two* Area of each *10 sq ft* Pressure to which they are adjusted *150 lbs* Date of adjustment *23/8/07*

If fitted with easing gear *No* If steam from main boilers can enter the donkey boiler *No* Dia. of donkey boiler *10 in* Length *10 ft*

Material of shell plates *Steel* Thickness *1/2 in* Range of tensile strength *36,000 lbs* Descrip. of riveting long. seams *Double*

Dia. of rivet holes *1/4 in* Whether punched or drilled *Punched* Pitch of rivets *2 in* Lap of plating *1 in* Per centage of strength of joint *85%*

Working pressure of shell by rules *150 lbs* Thickness of shell crown plates *1/2 in* Radius of do. *10 in* No. of stays to do. *10* Dia. of stays *1 in*

Diameter of furnace Top *10 in* Bottom *10 in* Length of furnace *10 ft* Thickness of furnace plates *1/2 in* Description of joint *Double*

Working pressure of furnace by rules *150 lbs* Thickness of furnace crown plates *1/2 in* Stayed by *Stays*

Diameter of uptake *10 in* Thickness of uptake plates *1/2 in* Thickness of water tubes *1/2 in* Dates of survey *23/8/07*

SPARE GEAR. State the articles supplied:— *Two top, two bottom end connecting rods & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one set of feed & high pump valves. Main & donkey feed check valve, bottom end valve etc.*

The foregoing is a correct description,

Manufacturer.

FOR AMOS & SMITH

*W. J. Hide*

MANAGING PARTNER

Dates of Survey while building *1907:— Mar 22. Apr 5. 25 May 17. 24. 31. Jun 5. 22. Jul 1. 10. 11. 12. 20. 26. 30*

During progress of work in shops *Aug 17. 21. 23. 27*

During erection on board vessel *Sep 3. 5. 7. 9*

Total No. of visits *23*

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

Dates of Examination of principal parts—Cylinders *12/8/07* Slides *23/8/07* Covers *23/8/07* Pistons *23/8/07* Rods *23/8/07*

Connecting rods *23/8/07* Crank shaft *17/5/07* Thrust shaft *23/8/07* Tunnel shafts *✓* Screw shaft *11/7/07* Propeller *10/7/07*

Stern tube *10/7/07* Steam pipes tested *4/9/07* Engine and boiler seatings *12/7/07* Engines holding down bolts *3/9/07*

Completion of pumping arrangements *5/9/07* Boilers fixed *31/8/07* Engines tried under steam *5/9/07*

Main boiler safety valves adjusted *5/9/07* Thickness of adjusting washers *5/16. P 5/16*

Material of Crank shaft *Steel* Identification Mark on Do. *367. 27.8.07. J.H.G.* Material of Thrust shaft *Steel* Identification Mark on Do. *367. 27.8.07. J.H.G.*

Material of Tunnel shafts *✓* Identification Marks on Do. *✓* Material of Screw shafts *Iron* Identification Marks on Do. *367. 27.8.07. J.H.G.*

Material of Steam Pipes *Steel drawn copper* Test pressure *400 lbs*

General Remarks (State quality of workmanship, opinions as to class, &c.)

*The engine & boiler of this vessel have been constructed under special survey, are of good material & workmanship, and have been fitted & secured on board in accordance with the rules. They are now in good working condition & eligible in my opinion to have the notation of 'L.M.C. 9.07' in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD. + L.M.C 9.07

*ARRR*

*23.9.07*

*23.9.07*

The amount of Entry Fee... £ *1*

Special... £ *8*

Donkey Boiler Fee... £ *2*

Travelling Expenses (if any) £ *2*

When applied for,

*21/9/07*

When received,

*30/9/07*

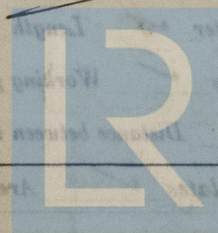
*John L. Gwynne*  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

TUES. 24 SEP 1907

Assigned

MACHINERY CERTIFICATE  
WRITTEN.



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Foundation