

REPORT ON MACHINERY.

No. 21832

U.S. 26 OCT 1909

Port of Hull Received at London Office
 No. in Survey held at Hull Date, first Survey July 30th Last Survey Oct. 18th 1909
 (Number of Visits 24)
 Supp on the Hawke **ALBATROZ** Tons { Gross 325
 Net 174
 Master Built at Selby By whom built Bochmans & Sons When built 1909
 Engines made at Hull By whom made Amos & Smith Ltd. when made 5
 Deckers made at 5 By whom made 5 when made 5
 Registered Horse Power 85 Owners Empresada de Pesca Maritima Limitada Port belonging to Lisbon
 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes

GINES, &c.—Description of Engines Horizontal triple expansion No. of Cylinders 3 No. of Cranks 3
 No. of Cylinders 13-22½-37 Length of Stroke 24 Revs. per minute 114 Dia. of Screw shaft 7.56 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
 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 part
 between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive Yes If two
 liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 2'9"
 Dia. of Tunnel shaft 6.58 Dia. of Crank shaft journals 6.9 Dia. of Crank pin 7½ Size of Crank webs 14½x4½ Dia. of thrust shaft under
 bars 7½ Dia. of screw 9'6" Pitch of Screw 10'9" No. of Blades 4 State whether moveable No. Total surface 33 sq.
 No. of Feed pumps 2 Diameter of ditto 27 Stroke 12 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 27 Stroke 12 Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 2 Sizes of Pumps 6x3x6 - 4½x2½x4 No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room 2-2' (Fore & aft) In Holds, &c. 2-2' (Hold & stow well)
 No. 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" 2½"
 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
 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 1.9.09 of Stern Tube 1.9.09 Screw shaft and Propeller 15.10.09
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Yes

MANUFACTURERS, &c.—(Letter for record S) Manufacturers of Steel Phoenix & Hoare, Westphalia
 Total Heating Surface of Boilers 1520 sq. 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 30.9.09 No. of Certificate 1724
 Can each boiler be worked separately Yes Area of fire grate in each boiler 52 sq. No. and Description of Safety Valves to
 each boiler 2 Spring loaded Area of each valve 5.93 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 7" Mean dia. of boilers 3'6" Length 10'6" Material of shell plates Steel
 Thickness 1/32" Range of tensile strength 28-32 Are the shell plates welded or flanged No. Descrip. of riveting: cir. seams SA Rap.
 Long. seams SA Rap. Diameter of rivet holes in long. seams 1/8" Pitch of rivets 7.77" Lap of plates or width of butt straps 16 3/4"
 Percentages of strength of longitudinal joint
 rivets 87 Working pressure of shell by rules 182 Size of manhole in shell 16x12"
 plate 85.5
 No. and Description of Furnaces in each boiler 3 plain Material Steel Outside diameter 3'3 1/2"
 Length of plain part 69.5 Thickness of plates 3/4" Description of longitudinal joint welded No. of strengthening rings 1
 Working pressure of furnace by the rules 196 Combustion chamber plates: Material Steel Thickness: Sides 4/16" Back 7/16" Top 4/16" Bottom 4/16"
 Pitch of stays to ditto: Sides 9 1/4 x 9 1/2" Back 8 1/4 x 7 1/2" Top 8 1/2 x 9 1/2" If stays are fitted with nuts or riveted heads Yes Working pressure by rules 186
 Material of stays Steel Diameter at smallest part 1 1/2" Area supported by each stay 18.75 Working pressure by rules 198 End plates in steam space:
 Material Steel Thickness 1/4" Pitch of stays 17 1/2" How are stays secured Welded Working pressure by rules 220 Material of stays Steel
 Diameter at smallest part 6 1/2" Area supported by each stay 293 Working pressure by rules 216 Material of Front plates at bottom Steel
 Thickness 29/32" Material of Lower back plate Steel Thickness 7/8" Greatest pitch of stays 14 x 10" Working pressure of plate by rules 180
 Diameter of tubes 3 1/2" Pitch of tubes 4 3/4 x 4 3/4" Material of tube plates Steel Thickness: Front 29/32" Back 7/8" Mean pitch of stays 9 3/4 x 14 1/4"
 Pitch across wide water spaces 14" Working pressures by rules 182 Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 9 x 1 1/2" Length as per rule 2 1/8" Distance apart 8 1/2" Number and pitch of stays in each 20 8 1/2"
 Working pressure by rules 200 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
 Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness
 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

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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 rods bolted on to two main bearing bolts, one set of coupling bolts & nuts, one set of gear & helix pump valves, one set of air pump valves, one main & one donkey feed check valve, assorted bolts nuts etc*

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

Manufacturer. *W. H. H. H.* Managing Director.

Dates of Survey while building { During progress of work in shops - - } 1909 - July 30. Aug 4. 11. 20. 26. 28. 31. *J. J.* Sept. 1. 2. 8. 13. 15. 18. 28. 30. Oct. 6. 7. 9. 11.
 { During erection on board vessel - - } Oct. 12. 14. 15. 16. 18.
 Total No. of visits *24* Is the approved plan of main boiler forwarded herewith *yes.*

Dates of Examination of principal parts—Cylinders *2.9.09*, Slides *18.9.09*, Covers *2.9.09*, Pistons *18.9.09*, Rods *2.9.09*, Connecting rods *2.9.09*, Crank shaft *8.9.09*, Thrust shaft *26.8.09*, Tunnel shafts */*, Screw shaft *26.8.09*, Propeller *26.8.09*, Stern tube *26.8.09*, Steam pipes tested *9.10.09*, Engine and boiler seatings *1.9.09*, Engines holding down bolts *7.10.09*, Completion of pumping arrangements *18.10.09*, Boilers fixed *7.10.09*, Engines tried under steam *12.10.09*, Main boiler safety valves adjusted *12.10.09*, Thickness of adjusting washers *P 5/16 S 9/32*, Material of Crank shaft *Steel*, Identification Mark on Do. *592 J.M.G.*, Material of Thrust shaft *Steel*, Identification Mark on Do. *26.8.09 J.M.G.*, Material of Tunnel shafts */*, Identification Marks on Do. */*, Material of Screw shafts *Iron*, Identification Marks on Do. *26.8.09 J.M.G.*, Material of Steam Pipes *Solid drawn copper*, Test pressure *300 lbs.*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery & boiler of this vessel have been constructed under Special Survey, all 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. 10-09 in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 10,09

J. J.
27.10.09. *J. J.*

The amount of Entry Fee. £ : *5.00* When applied for, *23/10/1909*
 Special £ *12.15.00*
 Donkey Boiler Fee £ : :
 Travelling Expenses (if any) £ : *8.2* When received, *30.10.09*

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

Committee's Minute **FRI. 29 OCT 1909**
 Assigned *L.M.C. 10.09*



Certificate (if required) to be sent to Hull

The Surveyors are requested not to write on or below the space for Committee's Minute.