

REPORT ON MACHINERY.

No. 55823

WED. 9 DEC 1908

Port of Newcastle.

Received at London Office

No. in Survey held at Newcastle. Date, first Survey Dec 3rd 07 Last Survey 5 December 1908

Reg. Book. on the S/S. "El. Lobo" (Number of Voids 44) Tons 4800

Master N. O. Gray Built at Newcastle By whom built Armstrong Whitworth & Co. When built 1908

Engines made at Walsend. By whom made Walkend & Simpson & Co. when made 1908

Boilers made at " By whom made " when made 1908

Registered Horse Power " Owners C. J. Bowings & Co. Ltd Part belonging to London

Nom. Horse Power as per Section 28 440 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines In CRD No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 26. 43. 42 Length of Stroke 48 Revs. per minute 65 Dia. of Screw shaft as per rule 11.56 Material of screw shaft as fitted 154

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 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 5' 1"

Dia. of Tunnel shaft as per rule 13.04 Dia. of Crank shaft journals as per rule 13.04 Dia. of Crank pin 14 Size of Crank webs 282.93 Dia. of thrust shaft under collars 14 Dia. of screw 18.6 Pitch of Screw 17.6 No. of Blades 4 State whether moveable f Total surface 1087

No. of Feed pumps 2 Diameter of ditto 7.92 Stroke 18 Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 4.5 Stroke 24 Can one be overhauled while the other is at work yes

No. of Donkey Engines 2 Sizes of Pumps 72, 5.6, 6.82, 6 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 3 of 32 In Holds, &c. Store 2 of 2 Cargo. 2 of 23

No. of Bilge Injections 1 sizes 4 Connected to condenser, or to circulating pump CR Is a separate Donkey Suction fitted in Engine room & size yes 32

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 none How are they protected yes

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 23.10.08 of Stern Tube 23.10.08 Screw shaft and Propeller 23.10.08

Is the Screw Shaft Tunnel watertight none Is it fitted with a watertight door yes worked from "

BOILERS, &c.—(Letter for record DR) Manufacturers of Steel J. Spence & Sons Ltd

Total Heating Surface of Boilers 7488 Is Forced Draft fitted no No. and Description of Boilers 3, 3 Cylinders

Working Pressure 180 lbs Tested by hydraulic pressure to 360 Date of test 3/2/08 No. of Certificate 7702

Can each boiler be worked separately yes Area of fire grate in each boiler 653 No. and Description of Safety Valves to each boiler 3 Spring Area of each valve 8.29 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 2 feet Mean dia. of boilers 15' 6" Length 12 ft Material of shell plates S

Thickness 1 3/8 Range of tensile strength 29-33 Are the shell plates welded or flanged ends Descrip. of riveting: cir. seams d. & lap long. seams d. butts Diameter of rivet holes in long. seams 1 3/8 Pitch of rivets 9 3/8 Lap of plates or width of butt strap 2 1/8

Per centages of strength of longitudinal joint rivets 92.5 Working pressure of shell by rules 212 Size of manhole in shell 16' x 12' plate 85.1

Size of compensating ring McNeill's No. and Description of Furnaces in each boiler 3 Deyton Material S Outside diameter 4 ft.

Length of plain part top 19 Thickness of plates bottom 32 Description of longitudinal joint weld No. of strengthening rings "

Working pressure of furnace by the rules 197 Combustion chamber plates: Material S Thickness: Sides 3/8 Back 3/8 Top 3/8 Bottom 1"

Pitch of stays to ditto: Sides 8 1/2 x 7 1/2 Back 7 1/2 x 7 1/2 Top 7 1/2 x 7 1/2 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 228

Material of stays S Diameter at smallest part 2.03 Area supported by each stay 65 Working pressure by rules 335 End plates in steam space: Material S Thickness 1 1/2 Pitch of stays 14 1/2 x 15 How are stays secured d. nuts Working pressure by rules 246 Material of stays S

Diameter at smallest part 6.1 Area supported by each stay 964 Working pressure by rules 244 Material of Front plates at bottom S

Thickness 1" Material of Lower back plate S Thickness 1 5/16 Greatest pitch of stays 13 1/16 Working pressure of plate by rules 224

Diameter of tubes 3 Pitch of tubes 4 1/2 x 4 1/2 Material of tube plates S Thickness: Front 1" Back 3/4" Mean pitch of stays 8 1/2 x 8 5/8

Pitch across wide water spaces 14 Working pressures by rules 183 Girders to Chamber tops: Material S Depth and thickness of girder at centre 9 3/4 x 1 1/2 Length as per rule 362 Distance apart 4 1/2 Number and pitch of stays in each 3 of 8 1/2

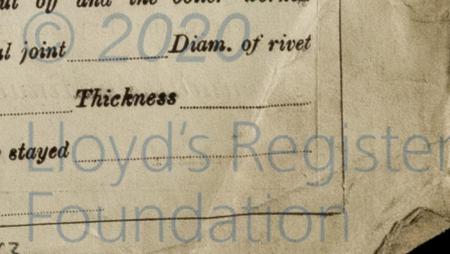
Working pressure by rules 189 Superheater or Steam chest; how connected to boiler " Can the superheater be shut off and the boiler worked separately "

Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet 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

003162 003174 0063



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:— *1 Set connecting rod bolts & nuts, two main bearing bolts & nuts; 1 set coupling bolts & nuts. 1 set Reed Helge pump valves, propeller, propeller shaft, nut bolts studs, assorted iron, condenser & boiler tubes.*

The foregoing is a correct description,
FOR THE WALSLED SLIPWAY & ENGINEERING CO. LIMITED.

Manufacturer.

Dates of Survey while building

During progress of work in shops—	9.1.08	10.1.08	11.1.08	12.1.08	13.1.08	14.1.08	15.1.08	16.1.08	17.1.08	18.1.08	19.1.08	20.1.08	21.1.08	22.1.08	23.1.08	24.1.08	25.1.08	26.1.08	27.1.08	28.1.08	29.1.08	30.1.08	31.1.08
During erection on board vessel—	1.2.08	2.2.08	3.2.08	4.2.08	5.2.08	6.2.08	7.2.08	8.2.08	9.2.08	10.2.08	11.2.08	12.2.08	13.2.08	14.2.08	15.2.08	16.2.08	17.2.08	18.2.08	19.2.08	20.2.08	21.2.08	22.2.08	23.2.08
Total No. of visits	44																						

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

Dates of Examination of principal parts—Cylinders *9.1.08* Slides *8.12.07* Covers *8.12.07* Pistons *13.1.08* Rods *13.1.08*

Connecting rods *13.1.08* Crank shaft *6.10.08* Thrust shaft *6.10.08* Tunnel shafts ✓ Screw shaft *21.10.08* Propeller *21.10.08*

Stern tube *21.10.08* Steam pipes tested *31 March* Engine and boiler seatings *23.10.08* Engines holding down bolts *23.10.08*

Completion of pumping arrangements *5.12.08* Boilers fixed *23.10.08* Engines tried under steam *13.11.08*

Main boiler safety valves adjusted *13.11.08* Thickness of adjusting washers *PB 3/32 5/32 SB 1/16 3/16 FB 3/32 5/32*

Material of Crank shaft *S* Identification Mark on Do. *R. JTF* Material of Thrust shaft *S* Identification Mark on Do. *R. JTF*

Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts *S* Identification Marks on Do. *R. JTF*

Material of Steam Pipes *M. S.* Test pressure *540*

General Remarks (State quality of workmanship, opinions as to class, &c. *Machinery and boilers built under special survey. Materials and workmanship both good. Engines and boilers examined under full steam & found satisfactory. It is submitted that this vessel is eligible for the record of LMC. 12.08*

The boilers are fitted to burn coal or liquid fuel on the Rooting Boyd system. The installation tested & found satisfactory.

It is submitted that this vessel is eligible for THE RECORD. + LMC 12.08.

*elec. Light
Fitted for liquid fuel.
S.P.R. 9/12/08*

The amount of Entry Fee. . . £ 3 : : : When applied for, *8 DEC 1908*

Special . . . £ 41 : 14 : : : When received, *12-12-08*

Donkey Boiler Fee . . . £ : : : : *14/12/08*

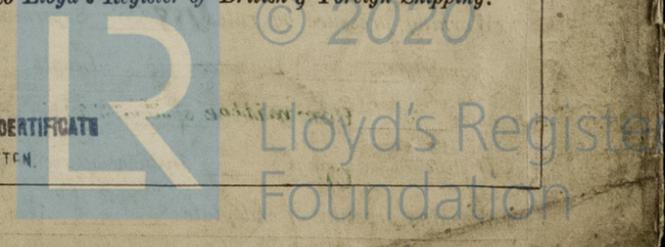
Travelling Expenses (if any) £ : : : : *14/12/08*

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

Committee's Minute
Assigned

FRI. DEC 11 1908

*+ L.M.C. 12.08
elec light
Fitted for liquid fuel. 12.08*



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