

Rpt. 4.

REPORT ON MACHINERY.

No. 65301

Received at London Office

MON. DEC. 22. 1913

Date of writing Report 12th Dec 1913 When handed in at Local Office

19 Port of

NEWCASTLE-ON-TYNE.

No. in Survey held at Newcastle
Reg. Book.Date, First Survey 6th Aug 1912 Last Survey 12th Dec 1913

on the S. S. "San Baleno"

Number of Visits 91

Gross 6433

Net 4054

When built 1913

Master Built at Newcastle By whom built Palmes' Co

Engines made at Newcastle By whom made Palmes' Co

when made 1913

Boilers made at do By whom made do

when made 1913

Registered Horse Power Owners Eagle Oil Transport Co Ltd Port belonging to London

Nom. Horse Power as per Section 28 554 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Quadruple Expansion No. of Cylinders 4 No. of Cranks 4
Dia. of Cylinders 24"-35"-50½"-73" Length of Stroke 51" Revs. per minute 75 Dia. of Screw shaft as per rule 15"-26" Material of Steel
as fitted 15¾" screw shaft
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'-3"
Dia. of Tunnel shaft as per rule 13.45" as fitted 14½" Dia. of Crank shaft journals as per rule 14.12" as fitted 14½" Dia. of Crank pin 14½" Size of Crank webs 20¾"x9¾" Dia. of thrust shaft under
collars 14½" Dia. of screw 18'-6" Pitch of Screw 16'-3" No. of Blades 4 State whether moveable Yes Total surface 108 sq
No. of Feed pumps 2 Diameter of ditto 4¾" Stroke 24" Can one be overhauled while the other is at work Yes
No. of Bilge pumps 2 Diameter of ditto 4½" Stroke 24" Can one be overhauled while the other is at work Yes
No. of Donkey Engines 2 Sizes of Pumps 10"x12"x12" + 8"x6"x8" No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room Four 3½" In Holds, &c. None

No. of Bilge Injections 1 sizes 12" Connected to condenser or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes 9"
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 Both
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
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 21-10-13 of Stern Tube 21-10-13 Screw shaft and Propeller 29-10-13
Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record R) Manufacturers of Steel J. Spencer & Sons & Palmes' Co
Total Heating Surface of Boilers 7734 sq Is Forced Draft fitted Yes No. and Description of Boilers 3 Single-ended
Working Pressure 220 lbs Tested by hydraulic pressure to 440 lbs Date of test 13-6-13 No. of Certificate 8516
Can each boiler be worked separately Yes Area of fire grate in each boiler 57 sq No. and Description of Safety Valves to
each boiler Two, spring Area of each valve 7.07 sq Pressure to which they are adjusted 225 lbs Are they fitted with easing gear Yes
Smallest distance between boilers or uptakes and bunkers or woodwork 26" Mean dia. of boilers 15'-6" Length 11'-9" Material of shell plates Steel
Thickness 1½" Range of tensile strength 32-35 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams S. Lap
long. seams 4BS + Rivet Diameter of rivet holes in long. seams 1½" Pitch of rivets 9¾" Lap of plates or width of butt straps 22½"
Per centages of strength of longitudinal joint rivets 101 plate 83 Working pressure of shell by rules 258 lbs Size of manhole in shell 16"x12"
Size of compensating ring 36½"x32½"x1½" No. and Description of Furnaces in each boiler 3, Saighton's Material Steel Outside diameter 48"
Length of plain part top 23 bottom 32 Thickness of plates crown 23 bottom 32 Description of longitudinal joint Welded No. of strengthening rings
Working pressure of furnace by the rules 248 lbs Combustion chamber plates: Material Steel Thickness: Sides 1½" Back 1½" Top 1½" Bottom 1½"
Pitch of stays to ditto: Sides 8½"x7½" Back 7½"x7½" Top 8½"x7½" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 254 lbs
Material of stays Iron Diameter at smallest part 2.03 sq Area supported by each stay 61.76 sq Working pressure by rules 245 lbs End plates in steam space:
Material Steel Thickness 1½" Pitch of stays 16½"x16" How are stays secured Sn + W Working pressure by rules 226 lbs Material of stays Steel
Diameter at smallest part 7.24 sq Area supported by each stay 264 sq Working pressure by rules 275 lbs Material of Front plates at bottom Steel
Thickness 1½" Material of Lower back plate Steel Thickness 3½" Greatest pitch of stays 14" Working pressure of plate by rules 250 lbs
Diameter of tubes 2½" Pitch of tubes 3¾"x3¾" Material of tube plates Steel Thickness: Front 1½" Back 2½" Mean pitch of stays 8½"
Pitch across wide water spaces 13½" Working pressures by rules 236 lbs Girders to Chamber tops: Material Steel Depth and
thickness of girder at centre 9¼"x13¼" Length as per rule 32½" Distance apart 8¾" Number and pitch of stays in each 3-7½"
Working pressure by rules 233 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

009235-009242-0094

IS A DONKEY BOILER FITTED? *no*

If so, is a report now forwarded? *✓*

SPARE GEAR. State the articles supplied:— *Two top-end, 2 bottom-end + 2 main-bearing bolts & nuts, 1 set of coupling bolts, 1 set of feed & bidge pump valves, 1 set of rings for each piston, a quantity of assorted bolts, nuts & iron, a screw shaft, a propeller boss, 2 propeller blades, a slide valve spindle, a pair of crank pin bushes, 1 eccentric sheave & strap, 1 air pump rod, 2 safety valve springs.*

27/12/13 The foregoing is a correct description,

Salmon & Co. Ltd.

Manufacturer.

General Manager, Engine Works Dept.

Dates of Survey while building	{	During progress of work in shops --	1912 Aug 6, 7, 8, 15, 16, 21, 26, 27, 28, 29, Sep 3, 9, 10, 16, 23, 25, 26, Oct 10, 15, 28, 29, Nov 5, 6, 13, 27, Dec 5, 16, 17
		During erection on board vessel --	1913 Jan 7, 9, 16, 17, 20, 24, 25, 30, Feb 4, 5, 10, 12, 14, 21, 24, Mar 5, 6, 7, 11, 26, Apr 4, 7, 17, 20, 28
		Total No. of visits	May 6, 14, 29, Jun 3, 5, 13, Jul 10, 25, Aug 7, 11, 19, 21, 27, 29, Sep 4, 16, 19, 29, 30, Oct 2, 6, 15, 17, 21, 24, 29, 30, Nov 3, 5, 25, Dec 1, 2, 4, 5, 8, 10, 11, 12

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

" " " donkey " " " *yes*

Dates of Examination of principal parts—Cylinders 27-11-12 Slides 9-1-13 Covers 8-8-12 Pistons 15-10-12 Rods 9-1-13

Connecting rods 27-11-12 Crank shaft 21-2-13 Thrust shaft 21-2-13 Tunnel shafts 3-9-13 Screw shaft 5-6-13 Propeller 5-6-13

Stern tube 2-10-13 Steam pipes tested 1-12-13 Engine and boiler seatings 30-9-13 Engines holding down bolts 4-12-13

Completion of pumping arrangements 5-12-13 Boilers fixed 4-12-13 Engines tried under steam 5-12-13

Main boiler safety valves adjusted 5-12-13 Thickness of adjusting washers PB. $P\frac{13}{32} S\frac{13}{32}$ SB. $P\frac{7}{16} S\frac{3}{4}$ FB $P\frac{7}{16} S\frac{7}{16}$

Material of Crank shaft *Steel* Identification Mark on Do. *Y 2-13* Material of Thrust shaft *Steel* Identification Mark on Do. *Y 2-13*

Material of Tunnel shafts *Steel* Identification Marks on Do. *Y 9-13* Material of Screw shafts *Steel* Identification Marks on Do. *Y 6-13*

Material of Steam Pipes *Steel* Test pressure *440 lbs*

Is an installation fitted for burning oil fuel *yes* Is the flash point of the oil to be used over 150°F. *no*

Have the requirements of Section 49 of the Rules been complied with *yes*

Is this machinery duplicate of a previous case *no* If so, state name of vessel *✓*

General Remarks (State quality of workmanship, opinions as to class, &c. *The engines & boilers of this vessel have been constructed under special survey & the materials & workmanship are found to be good. The engines have been tried under steam and the safety valves adjusted at the working pressure. The boilers have been fitted for burning oil fuel on the Wallsend-Howden system and the special requirements for low-flash oil have been complied with. The approved plan of oil burning arrangement is forwarded herewith, please refer to it for reference in the case of the sister vessel. A report on the electric installation will be forwarded when received from the Electricians.*

The machinery is now in good & safe working condition & eligible in my opinion to have the notations of + LMC 12-13 Fitted for low flash oil fuel 12-13.

It is submitted that this vessel is eligible for THE RECORD + LMC 12.13. FD

Fitted for low flash oil fuel 12.13

The amount of Entry Fee ...	£ 3 : 0 0	When applied for, DEC 16 1913
Special ...	£ 47 : 14 0	
Donkey Boiler Fee ...	£ ✓ : ✓	When received, 22/12/13
Travelling Expenses (if any) £	✓ : ✓	

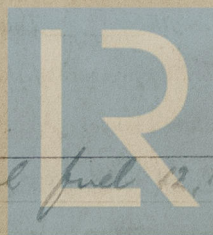
Thomas Field Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute TUE DEC 23 1913

Assigned *Home 12.13*

fitted for low flash oil fuel 12.13

MACHINERY CERTIFICATE



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