

REPORT ON MACHINERY

No. 76168

20 NOV. 1922

Date of writing Report *Nov 17th 1922* When handed in at Local Office *Nov 17th 1922* Port of *NEWCASTLE-ON-TYNE*
 No. in Survey held at *Newcastle-on-Tyne* Date, First Survey *Feb 16th 1921* Last Survey *Nov 16th 1922*
 Reg. Book. *80739* on the *Steel Screw Steamer "San Rosendo"* (Number of Visits *59*)
 Master *Built at Newcastle* By whom built *Armstrong Whitworth & Co* Tons *Gross 7000*
 Engines made at *Newcastle* By whom made *Wallis & Simpson & Co Ltd* When built *1922*
 Boilers made at *82* By whom made *82* when made *1922*
 Registered Horse Power *Owners Eagle Oil Co Ltd* Port belonging to *London*
 Nom. Horse Power as per Section 28 *538* Is Refrigerating Machinery fitted for cargo purposes *No* Is Electric Light fitted *Yes*

ENGINES, &c.—Description of Engines *Triple Expansion* No. of Cylinders *3* No. of Cranks *3*
 Dia. of Cylinders *27-45-45* Length of Stroke *48* Revs. per minute *68* Dia. of Screw shaft *as per rule 15.19* Material of *steel*
 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 *5-4*
 Dia. of Tunnel shaft *as per rule 13.29* Dia. of Crank shaft journals *as per rule 14.06* Dia. of Crank pin *14.98* Size of Crank webs *14.98* Dia. of thrust shaft under
 collars *14.98* Dia. of screw *18-9* Pitch of Screw *14-9* No. of Blades *4* State whether moveable *Yes* Total surface *110 ft²*
 No. of Feed pumps *2* Diameter of ditto *4 1/2* Stroke *26* Can one be overhauled while the other is at work *Yes*
 No. of Bilge pumps *2* Diameter of ditto *4 1/2* Stroke *26* Can one be overhauled while the other is at work *Yes*
 No. of Donkey Engines *2* Sizes of Pumps *Ballast = 12" x 12"* No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room *4-3 1/2" in E Room and 1-3 1/2" in stoke hold* In Holds, &c. *None*

No. of Bilge Injections *one* sizes *14* Connected to condenser, or to circulating pump *Yes* Is a separate Donkey Suction fitted in Engine room & size *Yes 3 1/2*
 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
 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 *main below*
 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*
 Is the Screw Shaft Tunnel watertight *None* Is it fitted with a watertight door *worked from*

BOILERS, &c.—(Letter for record *8.2*) Manufacturers of Steel *John Spencer*
 Total Heating Surface of Boilers *8040 ft²* Is Forced Draft fitted *Yes* No. and Description of Boilers *3 Horizontal Multitubular 3E*
 Working Pressure *180 lbs* Tested by hydraulic pressure to *320* Date of test *2.2.22* No. of Certificate *9646*
 Can each boiler be worked separately *Yes* Area of fire grate in each boiler *62 ft²* No. and Description of Safety Valves to
 each boiler *2 Spring loaded* Area of each valve *11.045 ft²* Pressure to which they are adjusted *180 lbs* Are they fitted with easing gear *Yes*
 Smallest distance between boilers or uptakes and bunkers or woodwork *2-0* *Minimum* dia. of boilers *15-9* Length *12-2 1/8* Material of shell plates *steel*
 Thickness *1 1/2* Range of tensile strength *30 to 34* Are the shell plates welded or flanged *No* Descrip. of riveting: cir. seams *double*
 long. seams *2-1/2* Diameter of rivet holes in long. seams *1 1/16* Pitch of rivets *8 1/16* Lap of plates or width of butt straps *19 1/2*
 Per centages of strength of longitudinal joint *89.5* Working pressure of shell by rules *184 lbs* Size of manhole in shell *16" x 12"*
 Size of compensating ring *9 1/8 x 10 1/4 x 1 1/8* No. and Description of Furnaces in each boiler *3 Horizontal* Material *steel* Outside diameter *48 3/8*
 Length of plain part *top* Thickness of plates *bottom* *5 1/8* Description of longitudinal joint *Welded* No. of strengthening rings
 Working pressure of furnace by the rules *202* Combustion chamber plates: Material *steel* Thickness: Sides *5/8* Back *5/8* Top *5/8* Bottom *3/4*
 Pitch of stays to ditto: Sides *8 3/8 x 8 3/8* Back *8 3/8 x 8 3/8* Top *8 3/8 x 8 3/8* If stays are fitted with nuts or riveted heads *Nuts* Working pressure by rules *182*
 Material of stays *Iron* Area at smallest part *2.03 ft²* Area supported by each stay *52.0* Working pressure by rules *191.75* End plates in steam space:
 Material *steel* Thickness *1 1/16* Pitch of stays *23 1/2 x 22 1/2* How are stays secured *double* Working pressure by rules *191.75* Material of stays *steel*
 Area at smallest part *9.82 ft²* Area supported by each stay *52.9* Working pressure by rules *208.25* Material of Front plates at bottom *steel*
 Thickness *1* Material of Lower back plate *steel* Thickness *7/8* Greatest pitch of stays *14 1/4 x 8 3/8* Working pressure of plate by rules *250*
 Diameter of tubes *2 1/2* Pitch of tubes *3 3/4 x 3 1/8* Material of tube plates *steel* Thickness: Front *1* Back *13/16* Mean pitch of stays *9.26*
 Pitch across wide water spaces *13 3/4 x 7 1/8* Working pressures by rules *205 lbs* Girders to Chamber tops: Material *steel* Depth and
 thickness of girder at centre *8 3/8 x 1 1/2* Length as per rule *35 1/2* Distance apart *8 1/4* Number and pitch of stays in each *3-8 3/8*
 Working pressure by rules *182.5* Steam dome: description of joint to shell *None* % of strength of joint

Diameter *✓* Thickness of shell plates *✓* Material *✓* Description of longitudinal joint *✓* Diam. of rivet holes *✓*
 Pitch of rivets *✓* Working pressure of shell by rules *✓* Crown plates *✓* Thickness *✓* How stayed *✓*
 SUPERHEATER. Type *None* Date of Approval of Plan *✓* Tested by Hydraulic Pressure to *✓*
 Date of Test *✓* Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler *✓*
 Diameter of Safety Valve *✓* Pressure to which each is adjusted *✓* Is Easing Gear fitted *✓*

WS46-0121

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 2 Top end bolts, 2 bottom end bolts, 2 main bearing bolts, a set of coupling bolts, one tail shaft, a set of edge pump valves, a set of bottom pump valves, a set of springs for HP-MP-LP pistons and for the HP piston valve, a pair of bottom end tranes, one eccentric shaft complete, one air pump rod, a L.P. valve spindle, 12 studs and for pin rings, 50 condenser tubes, 100 ferrules, one set of air pump & high horn valves, 2 crank valve springs, 2 cast steel propeller blades, 20 plain tubes for boiler, and one stay tube, one dozen water gauge glasses, 4 dozen washers for water gauge glasses, 6 feed check valves, 2 boiler safety valve springs, one set of valves & seats for one boiler feed pump, one set of bucket rings for same, four valves & seats respectively for the aux feed pump, the general service pump, the ballast pump, assorted bolts & nuts, and more of various sizes.

The foregoing is a correct description,

FOR THE WALLSEND SLIPWAY & ENGINEERING CO., LIMITED.

Manufacturer.

DIRECTOR.

Dates of Survey while building { During progress of work in shops -- 1921 Feb 16-21 April 15 May 26 July 5-22 Aug 22 Sept 2-7-8-9-13-29 Oct 5-7-25 Nov 10-15 Dec 1-8-12-13-20-1922 Jan 4-9-10-17-20-24 Feb 2-16-21 March 2-8-10-14-19 April 19 May 4-10-30 June 30 July 6-17-18-28 August 30 Sept 4
During erection on board vessel -- 1922 Sept 8-13-20-25-28 Oct 5-12-25 Nov 7-16
Total No. of visits 59

Is the approved plan of main boiler forwarded herewith? Yes

" " " donkey " " " None

Dates of Examination of principal parts—Cylinders 25-10-21 Slides 9-1-22 Covers 8-11-21 Pistons 21-2-22 Rods 21-2-21

Connecting rods 21-2-21 Crank shaft 28-10-21 Thrust shaft 28-7-22 Tunnel shafts None Screw shaft 24-1-22 Propeller 4-5-22

Stern tube 30-5-22 Steam pipes tested 25-9-22 Engine and boiler seatings 7-9-22 Engines holding down bolts 28-9-22

Completion of pumping arrangements 28-9-22 Boilers fixed 28-9-22 Engines tried under steam 25-10-22

Completion of fitting sea connections 30-8-22 Stern tube 30-8-22 Screw shaft and propeller 20-9-22

Main boiler safety valves adjusted 25-10-22 Thickness of adjusting washers P=1/8" S=1/2" P=1/8" S=1/2" P=1/8" S=1/2"

Material of Crank shaft steel Identification Mark on Do. MR-28-21 Material of Thrust shaft steel Identification Mark on Do. WTA-28-1

Material of Tunnel shafts None Identification Marks on Do. None Material of Screw shafts steel Identification Marks on Do. MR-24-1

Material of Steam Pipes Lap welded steel Test pressure 540 lbs

Is an installation fitted for burning oil fuel? Yes Is the flash point of the oil to be used over 150°F? Yes

Have the requirements of Section 49 of the Rules been complied with? Yes

Is this machinery duplicate of a previous case? Yes If so, state name of vessel S.S. San Roberto & others.

General Remarks (State quality of workmanship, opinions as to class, &c.) This vessel's machinery has been

examined during construction, and the materials and workmanship are good

in accordance with the requirements of the rules, and the approved plan

on completion it was submitted to a steam trial with satisfactory results

during which the safety valves were adjusted to the working pressure.

It is therefore eligible in my opinion to be classed in the

Register Book, with the notation of +L.M.C. 11.22. "Fitted for burning

oil fuel". Flash point above 150°F.

It is submitted that
this vessel is eligible for
THE RECORD. +L.M.C. 11.22. F.D. C.L.

Fitted for oil fuel 11.22. F.P. above 150°F.

The amount of Entry Fee ... £ 6 : 0

Special ... £ 101 : 18

Donkey Boiler Fee ... £ :

Travelling Expenses (if any) £ :

When applied for,

When received,

Committee's Minute TUE. 28 NOV 1922

Assigned

+L.M.C. 11.22

F.D. C.L.

Fitted for oil fuel 11.22
F.P. above 150°F.

Maurice Ritson

Engineer Surveyor to Lloyd's Register of Shipping.



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