

Received at London Office

Date of writing Report 12<sup>th</sup> April 1918 When handed in at Local Office 19 Port of Newcastle-on-Tyne  
No. in Survey held at Newcastle Date, First Survey 11 Aug 1916 Last Survey 20 April 1918  
Reg. Book. on the S.S. "Rona" (Number of Visits 84)

Master Built at Middlesbrough By whom built Sir Raylton Dixon & Co When built 1918

Engines made at Newcastle By whom made N. E. Marine Eng Co 2266 when made 1918

Boilers made at do By whom made do when made 1918

Registered Horse Power Owners The Colonial Sugar Refining Co Port belonging to Sydney

Nom. Horse Power as per Section 28 495 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" - 74" Length of Stroke 48" Revs. per minute 69 Dia. of Screw shaft as per rule 14.93" Material of screw shaft as fitted 16" Material of screw shaft Hon  
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'-6"  
Dia. of Tunnel shaft as per rule 13.38" Dia. of Crank shaft journals as per rule 14.05" Dia. of Crank pin 14 1/4" Size of Crank webs 22" x 9" Dia. of thrust shaft under collars 14 1/4" Dia. of screw 18'-0" Pitch of Screw 18'-0" No. of Blades 4 State whether moveable Yes Total surface 96 sq ft  
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 10" x 12" x 10" & 11" x 7" x 10" No. and size of Suctions connected to both Bilge and Donkey pumps  
In Engine Room Three 3 1/2" In Holds, &c. Two in each hold 3 1/2"

No. of Bilge Injections 1 sizes 9" 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 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 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 Ind  
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 Ind of Stern Tube Ind Screw shaft and Propeller 13-3-18  
Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door Yes worked from Yes

BOILERS, &c.—(Letter for record S) Manufacturers of Steel John Spence & Sons

Total Heating Surface of Boilers 7035 sq ft Is Forced Draft fitted Yes No. and Description of Boilers Three, single-ended  
Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 27-11-17 No. of Certificate 9023  
Can each boiler be worked separately Yes Area of fire grate in each boiler 56 sq ft No. and Description of Safety Valves to each boiler Two, Spring Area of each valve 9.62 sq in 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 3'-3" Mean dia. of boilers 14'-3 3/4" Length 12'-0" Material of shell plates Steel  
Thickness 1 3/32" Range of tensile strength 28 3/4 - 32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams S. Lap long. seams HBS. & Rivet Diameter of rivet holes in long. seams 1 3/8" Pitch of rivets 9 5/16" Lap of plates or width of butt straps 20 1/8"  
Per centages of strength of longitudinal joint rivets 92.9 plate 85.2 Working pressure of shell by rules 207 lbs Size of manhole in shell 16" x 12"  
Size of compensating ring Flanged No. and Description of Furnaces in each boiler 3, Morrison's Material Steel Outside diameter 44 1/2"  
Length of plain part top 9" bottom 9" Thickness of plates crown 9" bottom 7 1/16" Description of longitudinal joint Welded No. of strengthening rings 1  
Working pressure of furnace by the rules 198 lbs Combustion chamber plates: Material Steel Thickness: Sides 47" Back 23" Top 47" Bottom 1"  
Pitch of stays to ditto: Sides 11" x 8 1/2" Back 10 1/2" x 8 3/4" Top 11" x 8 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 190 lbs  
Material of stays Steel Diameter at smallest part 2.03" Area supported by each stay 93.5 sq in Working pressure by rules 195 lbs End plates in steam space: Material Steel Thickness 1 15/32" Pitch of stays 25" x 22" How are stays secured Sn & W Working pressure by rules 185 lbs Material of stays Steel  
Diameter at smallest part 11.04" Area supported by each stay 55.0 sq in Working pressure by rules 208 lbs Material of Front plates at bottom Steel  
Thickness 1" Material of Lower back plate Steel Thickness 15/16" Greatest pitch of stays 14" Working pressure of plate by rules 183 lbs  
Diameter of tubes 2 1/2" Pitch of tubes 3 3/4" Material of tube plates Steel Thickness: Front 1" Back 7/8" Mean pitch of stays 7 1/2"  
Pitch across wide water spaces 14" Working pressures by rules 183 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 9 1/2" x 2" Length as per rule 36" Distance apart 11" Number and pitch of stays in each 3-8 1/2"  
Working pressure by rules 180 lbs Superheater or Steam chest; how connected to boiler None Can the superheater be shut off, and the boiler worked separately Yes Diameter Yes Length Yes Thickness of shell plates Yes Material Yes Description of longitudinal joint Yes Diam. of rivet holes Yes Pitch of rivets Yes Working pressure of shell by rules Yes Diameter of flue Yes Material of flue plates Yes Thickness Yes  
If stiffened with rings Yes Distance between rings Yes Working pressure by rules Yes End plates: Thickness Yes How stayed Yes  
Working pressure of end plates Yes Area of safety valves to superheater Yes Are they fitted with easing gear Yes



# IS A DONKEY BOILER FITTED?

SPARE GEAR. State the articles supplied:— 2 Top end 2 bottom end + 2 main bearing bolts + nuts, a set of coupling bolts, a set of feed + bidge pump valves, a quantity of assorted bolts nuts + washers, H.P. + L.P. piston rings + springs, a screw shaft, 2 propeller blades, 9 check valves, 50 boiler tubes + 50 condenser tubes, an air pump bucket rod + headvalve, a slide valve spindle, 1 eccentric rod, 1/3rd crankshaft a pair of bottom-end bushes

The foregoing is a correct description,

per. DR NORTH EASTERN MARINE ENGINEERING CO., LTD.

Secretary

Manufacturer

Dates of Survey while building  
During progress of work in shops --  
During erection on board vessel --  
Total No. of visits

1916  
Aug. 11-15-23 Sep. 19-20-25-28-29 Oct. 3-6-10-20-23-27 Nov. 2-9-13-15-20-22 Dec. 6-7-12-13  
27-1917 Jan. 3-11-19-22-26-29 Feb. 2-5-8-13 Apr. 6-7-28 May 8-11 Jun. 19-25 Jul. 2-11-23-24  
1918 Jan. 2-23 Mar. 13-15-20-26-28 Apr. 11-15-22-30

Is the approved plan of main boiler forwarded herewith yes

Dates of Examination of principal parts—Cylinders 22-6-17 Slides 2-7-16 Covers 19-6-17 Pistons 22-11-16 Rods 7-3-17  
Connecting rods 7-3-17 Crank shaft 19-1-17 Thrust shaft 12-12-16 Tunnel shaft 3-8-17 Screw shaft 8-2-17 Propeller 28-9-16  
Stern tube 19-6-17 Steam pipes tested fls. 15-6-17 Engine and boiler seatings 13-3-18 Engines holding down bolts 26-3-18  
Completion of pumping arrangements 11-4-18 Boilers fixed 26-3-18 Engines tried under steam 11-4-18  
Main boiler safety valves adjusted 11-4-18 Thickness of adjusting washers PB. P $\frac{3}{8}$  S $\frac{3}{8}$  CB. P $\frac{13}{32}$  S $\frac{5}{16}$  SB. P $\frac{15}{32}$  S $\frac{7}{16}$   
Material of Crank shaft Steel Identification Mark on Do. YX 1-17 Material of Thrust shaft Steel Identification Mark on Do. YX 12-1  
Material of Tunnel shafts Iron Identification Marks on Do. YX 8-17 Material of Screw shafts Iron Identification Marks on Do. YX 2-17  
Material of Steam Pipes Steel Test pressure 540 lbs

Is an installation fitted for burning oil fuel no

Is the flash point of the oil to be used over 150°F. ✓

Have the requirements of Section 49 of the Rules been complied with ✓

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 and workmanship are found to be good. The engines have been tried under steam & the boiler safety valves adjusted at the working pressure. The machinery is now in good & safe working condition & eligible in my opinion to have the notation of + LMC 4-18. A report on the electric installation will be forwarded when received from the Electricians.

The amount of Entry Fee ... £ 3 : 0 : 0

Special ... £ 44 : 15 : 0

Donkey Boiler Fee ... £

Travelling Expenses (if any) £

When applied for,

3 - MAY 1918

When received,

9 - MAY 1918

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

Committee's Minute

Assigned

+ LMC 4-18 J.D.

BY CERTIFICATE  
WRITTEN 10-5-18



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Lloyd's Register  
Foundation

Rigging, Material and Size, Shrouds 3/2, 25W.

Sails. Suit of

Sails, and the following spars