

REPORT ON MACHINERY.

No. 31174

Received at London Office

Date of writing Report 19 When handed in at Local Office 26/6/19 Port of Hull.
 No. in Survey held at Hull. Date, First Survey Oct 9/18 Last Survey 20/6/1919
 Reg. Book. on the S.T. DANIEL MUNRO (Number of Visits 32)

Master Built at Selby By whom built Buchanan & Co Ltd
 Engines made at Hull By whom made Messrs J. Palmer & Co Ltd when made 1919
 Boilers made at Hull By whom made Do Co when made 1919

Registered Horse Power Owners Messrs A.V. Cole R.A.F. Port belonging to
 Nom. Horse Power as per Section 28 87 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Triple expansion. No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 13-23-37 Length of Stroke 20 Revs. per minute 115 Dia. of Screw shaft as per rule 5.29 Material of screw shaft Steel
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube No Is the after end of the liner made water tight
 Is the propeller boss If the liner is in more than one length are the joints burned 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 If two
 liners are fitted, is the shaft lapped or protected between the liners Yes (Vickers tape) Length of stern bush 36"

Dia. of Tunnel shaft as per rule 7.04 Dia. of Crank shaft journals as per rule 7.30 Dia. of Crank pin 7 1/2 Size of Crank webs 4 1/2 x 11 Dia. of thrust shaft under
 collars 7 1/2 Dia. of screw 9-7 1/2 Pitch of Screw 11-0 No. of Blades 4 State whether moveable No Total surface 33 sq ft
 No. of Feed pumps one Diameter of ditto 2 1/2 Stroke 14 1/2 Can one be overhauled while the other is at work -
 No. of Bilge pumps one Diameter of ditto 2 1/2 Stroke 14 1/2 Can one be overhauled while the other is at work -

No. of Donkey Engines one Sizes of Pumps 6" 4 1/2 x 6" duplex No. and size of Suctions connected to both Bilge and Donkey pumps
 in Engine Room two 2" dia In Holds, &c. one 2" dia in each compartment
 all motions also connected to ejectors

No. of Bilge Injections one sizes 3 1/2 Connected to condenser or circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size 3" ejector
 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 Fuel motion & drain steam How are they protected Flange 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
 Is the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

ROLLERS, &c.—(Letter for record 5.) Manufacturers of Steel Pat Talbot & J. Spencer & Sons

Total Heating Surface of Boilers 1440 sq ft Is Forced Draft fitted No No. and Description of Boilers one triple ended multi
 Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 25/3/19 No. of Certificate 3346

Can each boiler be worked separately Area of fire grate in each boiler 48 sq ft No. and Description of Safety Valves to
 each boiler Two spring loaded Area of each valve 4.9 sq in Pressure to which they are adjusted 205 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers on woodwork 8" Material of shell plates Steel

Thickness 1 1/2 Range of tensile strength 28-32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams double
 lap. seams TR.D.B.S. Diameter of rivet holes in long. seams 1 1/4 Pitch of rivets 8 5/8 Lap of plates or width of butt straps 18"
 Percentages of strength of longitudinal joint rivets 85.90% plate 88.50% Working pressure of shell by rules 202 lbs Size of manhole in shell 16" x 12"

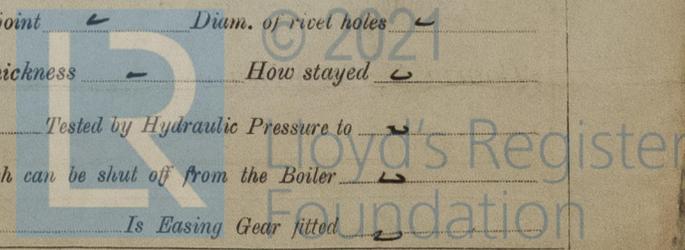
Size of compensating ring 7 x 1 1/2 No. and Description of Furnaces in each boiler Three plain Material Steel Outside diameter 40"
 Length of plain part top 18" bottom 19" Thickness of plates crown 3/16 bottom 3/16 Description of longitudinal joint welded No. of strengthening rings -
 Working pressure of furnace by the rules 200 Combustion chamber plates: Material Steel Thickness: Sides 3/4 Back 3/2 Top 3/4 Bottom 3/4

Pitch of stays to ditto: Sides 10 x 8 Back 9 1/2 x 8 1/2 Top 11 x 8 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 208
 Material of stays Steel Area at smallest part 2.07 Area supported by each stay 88 Working pressure by rules 211 End plates in steam space:
 Material Steel Thickness 1 1/2 Pitch of stays 19 x 17 1/2 How are stays secured JN JN Working pressure by rules 210 Material of stays Steel
 Area at smallest part 7.5 Area supported by each stay 335 Working pressure by rules 233 Material of Front plates at bottom Steel

Thickness 4/8 Material of Lower back plate Steel Thickness 4/8 Greatest pitch of stays 13 1/2 x 9 1/2 Working pressure of plate by rules 216
 Diameter of tubes 3 1/2 Pitch of tubes 4 1/2 Material of tube plates Steel Thickness: Front 4 1/2 Back 5 Mean pitch of stays 10"
 Pitch across wide water spaces 14 Working pressures by rules 270 Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 11 1/2 Length as per rule 36.2 Distance apart 11 Number and pitch of stays in each 32 8"
 Working pressure by rules 207 Steam dome: description of joint to shell % 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 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



IS A DONKEY BOILER FITTED?

No.

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— Two top end bolts & nuts, two main bearing bolts & nuts, two bottom end bolts & nuts, one set coupling bolts & nuts, one set air feed & bilge pump valves, 1 junk ring studs & nuts, one main & one donkey check valve, two valves for donkey pump, one safety valve spring, three condenser tubes, one set fuelbed, & a quantity of bolts & nuts & wire of various sizes.

The foregoing is a correct description,

CHARLES D. HOLMES & CO. LTD.

J. D. Cooper

Manufacturer.

Dates of Survey while building: During progress of work in shops -- 1918 Oct 9, 24, 26, 28, 29, 31, Nov 8, 15, 22, 26, 30, Dec 6, 10, 18, 24, 30, 31, 1919 Jan 3
During erection on board vessel --- 15, 16, 20, 30, Feb 6, Mar 6, 10, 25, Apr 5, 10, Jun 5, 11, 18, 20
Total No. of visits 32.

Is the approved plan of main boiler forwarded herewith?

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 24/12/18 Slides 24/12/18 Covers 10/4/19 Pistons 16/1/19 Rods 3/1/19
Connecting rods 3/1/19 Crank shaft 15/1/19 Thrust shaft 6/2/19 Tunnel shafts Screw shaft 26/10/18 Propeller 26/10/18
Stern tube 26/10/18 Steam pipes tested 11/8/19 Engine and boiler seatings 28/10/18 Engines holding down bolts 5/4/19
Completion of pumping arrangements 20/6/19 Boilers fixed 18/6/19 Engines tried under steam 20/6/19
Completion of fitting sea connections 31-10-18 Stern tube 31/10/18 Screw shaft and propeller 31/10/18
Main boiler safety valves adjusted 18/6/19 Thickness of adjusting washers 5 3/8" 9 3/8"
Material of Crank shaft Steel Identification Mark on Do. 2199 Material of Thrust shaft Steel Identification Mark on Do. 2302
Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Steel Identification Marks on Do. 2177
Material of Steam Pipes Copper Test pressure 400 lbs/sq in.

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?

Yes

If so, state name of vessel & class.

General Remarks (State quality of workmanship, opinions as to class, &c.) The engines & boiler of this vessel have been built under special survey, and the materials & workmanship are good. On completion they were examined while running full power trials in the Dumber and found satisfactory. The machinery throughout is now in good & efficient condition & eligible in my opinion to have the record L.M.C.-6.19 marked in red in the Society's Register Book.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 6.19

H. 27/6/19 *J.P.R.*

J. D. Cooper
Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 2-0-0
Special ... £ 26-2-0
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 26/6/19
When received, 18/7/19

Committee's Minute TUE. JUL. 1-1919

Assigned + L.M.C. 6.19

Null

Certificate (if required) to be sent to the Surveyors are requested not to write on or below the space for Committee's Minute.

