

REPORT ON MACHINERY

No. 18023
WED. SEP. 13 1922

Received at London Office

Date of writing Report 2nd Sept 1922 When handed in at Local Office 2/11/1922 Port of Grunwick
 No. in Survey held at Grunwick Date, First Survey 16th January, 1920 Last Survey 1st Sept 1922
 Reg. Book. 78716 on the Screw Steamer 'DUNSTAFFNAGE' (Number of Visits 120)
 Master _____ Built at Mt. Glasgow By whom built Lithgown Limited Tons { Gross 4525
 Engines made at Grunwick By whom made Rankin and Blackmore Ltd. when made 1922 Net 2867
 Boilers made at Grunwick By whom made Rankin and Blackmore Ltd. when made 1922 When built 1922-8
 Registered Horse Power _____ Owners Glen and Co Port belonging to Glasgow
 Nom. Horse Power as per Section 28 488 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 26-42-70 Length of Stroke 48 Revs. per minute 75 Dia. of Screw shaft as per rule 14.56 Material of I.S.
as fitted 15.00 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 no 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 no If two
 liners are fitted, is the shaft lapped or protected between the liners no Length of stern bush 60
 Dia. of Tunnel shaft as per rule 12.97 Dia. of Crank shaft journals as per rule 13.62 Dia. of Crank pin 13 3/4 Size of Crank webs 25 1/2 x 8 1/2 Dia. of thrust shaft under
as fitted 13 1/8 as fitted 13 3/4 collars 13 3/4 Dia. of screw 17-9 Pitch of Screw 17-6 No. of Blades 4 State whether moveable no Total surface 100
 No. of Feed pumps 1 MAIN Diameter of ditto 4 Stroke 21 Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 4 Stroke 27 Can one be overhauled while the other is at work yes
 No. of Donkey Engines 3 Duplex Sizes of Pumps 4 1/2 x 6, 5 1/2 x 8, 9 x 12 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 3-3 1/2 In Holds, &c. Att Hold 2-3 1/2 Deep Tank 2-3 1/2
Day Bk. Room D.B.T. 2-3 1/2 Forward Hold 4-3 1/2
 No. of Bilge Injections 1 sizes 7 Connected to condenser, or to circulating pump C.P. 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 in Engine room bulkheads always accessible no
 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 no
 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 no How are they protected no
 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

BOILERS, &c.—(Letter for Record S.) Manufacturers of Steel The Steel Co of Scotland Ltd.
 Total Heating Surface of Boilers 7345 Is Forced Draft fitted yes No. and Description of Boilers 3. G.L. Mult. Single End.
 Working Pressure 180 lb Tested by hydraulic pressure to 320 lb Date of test 30-12-20 No. of Certificate 4525.1529
 Can each boiler be worked separately yes Area of fire grate in each boiler 56.75 No. and Description of Safety Valves to
 each boiler Two Spring Area of each valve 11.04 Pressure to which they are adjusted 185 lb Are they fitted with easing gear yes
 Smallest distance between boiler uptakes and bunkers 12 Mean dia. of boilers 15-0 Length 11-6 Material of shell plates S.
 Thickness 1 3/16 Range of tensile strength 28 1/2 / 32 1/2 T. Are the shell plates welded or flanged no Descrip. of riveting: cir. seams L.O.R.
 long. seams D.B.S. / 7A. Diameter of rivet holes in long. seams 1 5/16 Pitch of rivets 9/8 Lap of plates or width of butt straps 18 1/2
 Per centages of strength of longitudinal joint 91.7 Working pressure of shell by rules 182 lb Size of manhole in shell 16 x 12
 plate 85.6
 Size of compensating ring 30 1/2 x 26 1/2 x 1 3/8 No. and Description of Furnaces in each boiler 3. Doughton Material S. Outside diameter 47 1/4
 Length of plain part top Thickness of plates crown Description of longitudinal joint Weld. No. of strengthening rings no
bottom bottom 3 9/16
 Working pressure of furnace by the rules 186 lb Combustion chamber plates: Material S. Thickness: Sides 4/64 Back 4/64 Top 4/64 Bottom 3/4
 Pitch of stays to ditto: Sides 9/8 x 8 1/2 Back 9/4 x 8 1/2 Top 9/4 x 8 1/2 stays are fitted with nuts or riveted heads nuts Working pressure by rules 183 lb
 Material of stays S. Area at smallest part 1.77 Area supported by each stay 77.4 Working pressure by rules 183 lb End plates in steam space:
 Material S. Thickness 1 5/16 Pitch of stays 22 x 18 1/8 How are stays secured D.N. Working pressure by rules 186 lb Material of stays S.
 Area at smallest part 7.24 Area supported by each stay 415 Working pressure by rules 182 lb Material of Front plates at bottom S.
 Thickness 1 3/16 Material of Lower back plate S. Thickness 1 3/16 Greatest pitch of stays 1 3/4 x 8 1/2 Working pressure of plate by rules 186 lb
 Diameter of tubes 2 3/4 Pitch of tubes 4 x 3 7/8 Material of tube plates S. Thickness: Front 1 3/16 Back 3/4 Mean pitch of stays 9 13/16
 Pitch across wide water spaces 13 1/2 Working pressures by rules 221 lb Girders to Chamber tops: Material S Depth and
 thickness of girder at centre 9 3/4 x 1 1/2 Length as per rule 34 39/64 Distance apart 9 1/4 Number and pitch of stays in each 3 @ 8 1/8
 Working pressure by rules 182 lb Steam dome: description of joint to shell no % of strength of joint no
 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 no 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 bottom end bolts, two main bearing diths, tender coupling dith, spare valves for air circulating feed and bilge pumps, one feed or bilge pump plunger, one propeller.*

The foregoing is a correct description,

RANKIN & BLACKMORE, LTD.,

H. Brown

Director.

Manufacturer.

Dates of Survey while building	During progress of work in shops --	1920 Jan 16, 21, 24, 26 Feb 9, 9, 17, 23, 26 Mar 2, 5, 11, 16 Apr 8, 15, 22, 29, 30 May 7, 15, 18, 21, 26, 31 Jun 4, 9, 14, 18, 25
		28, 30 Aug 3, 6, 10, 13, 17, 20, 24, 27 Sept 1, 6, 8, 13, 17, 23, 29, 29 Oct 2, 5, 8, 12, 14, 20, 22, 27, 29 Nov 2, 5, 10, 15, 19, 24, 29
		Dec 1, 2, 6, 9, 14, 20, 24, 27, 29, 30 (1921) Jan 12, 17, 19, 21, 22, 26, 28 Feb 1, 4, 8, 11, 14, 16, 17, 22, 23 Mar 3, 4, 8, 14, 17, 21 (1922) Mar 8, Apr 12, 19, 25 May 11, 23, 24, 31 Jun 6, 15, 16, 22, 28 July 14, 21, 26, 28 Aug 3, 7, 9, 11, 14, 17 Sept 1
Total No. of visits		120

Is the approved plan of main boiler forwarded herewith *Yes*
" " " donkey " " "

Dates of Examination of principal parts—Cylinders *27.12.20* Slides *28.1.21* Covers *27.12.20* Pistons *18.6.20* Rods *28.1.21*
 Connecting rods *30.4.20* Crank shaft *15.11.20* Thrust shaft *27.10.20* Tunnel shafts *27.10.20* Screw shaft *24.12.20* Propeller *24.12.20*
 Stern tube *4.2.21* Steam pipes tested *14.8.22* Engine and boiler seatings *28.7.22* Engines holding down bolts *14.8.22*
 Completion of pumping arrangements *14.8.22* Boilers fixed *14.8.22* Engines tried under steam *1.9.22*
 Completion of fitting sea connections *16.2.21* Stern tube *4.3.21* Screw shaft and propeller *28.7.22*
 Main boiler safety valves adjusted *17.8.22* Thickness of adjusting washers *P. B.L.R. 25/64 527/64 C. B.L.R. 27/64 527/64 S. B.L.R. 25/64 525/64*
 Material of Crank shaft *I.S.* Identification Mark on Do. *507. W.L.* Material of Thrust shaft *I.S.* Identification Mark on Do. *507. W.L.*
 Material of Tunnel shafts *I.S.* Identification Marks on Do. *507. W.L.* Material of Screw shafts Identification Marks on Do. *507. W.L.*
 Material of Steam Pipes *Wrought iron* Test pressure *600 lb.*

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 above Engines and Boilers have been constructed under Special Survey and have been fitted on board the Vessel in accordance with the Society's Rules. The Vessel is eligible, in my opinion, to have been + L.M.C. 9.22 in the Register Book*

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 9.22. F.D. C.L.

A.M.B. 15/9/22 *Am.*

The amount of Entry Fee ...	£ 5 : 0 :	When applied for,
Special ...	£ 98 : 4 :	2/9/1922
Donkey Boiler Fee ...	£ - : :	When received,
Travelling Expenses (if any) £	- : :	5/9/1922

W. Lane

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 12 SEP 1922

Assigned + L.M.C. 9.22 Certificate written 13/9/22



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GREENOCK

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