

REPORT ON MACHINERY.

No. 43837

Received at London Office WED. JUL 16 1924

Date of writing Report 10 When handed in at Local Office 14. 7. 1924 Port of Glasgow.
 No. in Survey held at Coatbridge, Glasgow & Dundee. Date, First Survey 25th January Last Survey 1st July 1924
 Reg. Book. Hull N^o 289. (Number of Visits 33)
 on the _____ Tons } Gross
 Net
 Master _____ Built at Dundee. By whom built Caledon S B & E. Co. Ltd. When built 1924
 Engines made at Coatbridge By whom made W^m Beardmore & Co. Ltd N^o 604/5 when made 1924
 Boilers made at Parkhead By whom made " " " " 140/1 when made 1924.
 Registered Horse Power _____ Owners _____ Port belonging to _____
 Nom. Horse Power as per Section 28 139 Is Refrigerating Machinery fitted for cargo purposes _____ Is Electric Light fitted _____

ENGINES, &c.—Description of Engines Twin screw Triple expansion. No. of Cylinders 6 No. of Cranks 6
 Dia. of Cylinders 12. 20. 33. Length of Stroke 23. Revs. per minute _____ Dia. of Screw shaft 7.05 Material of screw shaft Steel.
 as per rule 4.35 as fitted 4 1/2
 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
 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 Yes. If two
 liners are fitted, is the shaft lapped or protected between the liners Yes (3 lines see London letter 16-8-24) Length of stern bush 31"
 Dia. of Tunnel shaft 6.24 Dia. of Crank shaft journals 6.58 Dia. of Crank pin 6.33 Size of Crank webs 4 1/2 x 3 Dia. of thrust shaft under
 as fitted 6 3/8 as fitted 6 3/4
 collars 6 3/4 Dia. of screw 8-6 Pitch of Screw 9'-9" No. of Blades 4 State whether moveable No Total surface 28 sq'
 No. of Feed pumps 4 Diameter of ditto 2 1/2 Stroke 11 1/2 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 4 Diameter of ditto 2 1/2 Stroke 11 1/2 Can one be overhauled while the other is at work Yes.
 No. of Donkey Engines _____ Sizes of Pumps _____ No. and size of Suctions connected to both Bilge and Donkey pumps _____
 In Engine Room _____ In Holds, &c. _____

No. of Bilge Injections _____ sizes _____ Connected to condenser, or to circulating pump _____ Is a separate Donkey Suction fitted in Engine room & size _____
 Are all the bilge suction pipes fitted with roses _____ Are the roses in Engine room always accessible _____ Are the sluices on Engine room bulkheads always accessible _____
 Are all connections with the sea direct on the skin of the ship _____ Are they Valves or Cocks _____
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates _____ Are the Discharge Pipes above or below the deep water line _____
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel _____ Are the Blow Off Cocks fitted with a spigot and brass covering plate _____
 What pipes are carried through the bunkers _____ How are they protected _____
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times _____
 Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges _____
 Is the Screw Shaft Tunnel watertight _____ Is it fitted with a watertight door _____ worked from _____

BOILERS, &c.—(Letter for record S.) Manufacturers of Steel W^m Beardmore & Co. Ltd.
 Total Heating Surface of Boilers 2492 Is Forced Draft fitted No. No. and Description of Boilers Two Single ended.
 Working Pressure 180 lbs. Tested by hydraulic pressure to 320 Date of test 15-5-24 PORT No. of Certificate 16512.
 Can each boiler be worked separately _____ Area of fire grate in each boiler 39.4 sq' No. and Description of Safety Valves to
 each boiler _____ Area of each valve _____ Pressure to which they are adjusted _____ Are they fitted with easing gear _____
 Smallest distance between boilers or uptakes and bunkers or woodwork _____ Mean dia. of boilers 12'-0" Length 10'-0" Material of shell plates Steel
 Thickness 1" Range of tensile strength 28/32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D.R.L.
 long. seams T.R.D.B.S. Diameter of rivet holes in long. seams 1 5/32 Pitch of rivets 4 7/8 Top of plates or width of butt straps 16 7/8"
 Per centages of strength of longitudinal joint _____ rivets 95.5 Working pressure of shell by rules 190 Size of manhole in shell 19' x 15"
 plate 84.83 2CF. _____
 Size of compensating ring 10' x 1 7/8" No. and Description of Furnaces in each boiler 2 Deighton. Material S. Outside diameter 3'-5 1/8"
 Length of plain part _____ Thickness of plates _____ crown 14/32 Description of longitudinal joint Weld No. of strengthening rings _____
 bottom _____
 Working pressure of furnace by the rules 184. Combustion chamber plates: Material S. Thickness: Sides 3/4 Back 23/32 Top 3/4 Bottom 3/4
 Pitch of stays to ditto: Sides 9' x 9 1/4" Back 9' x 9" Top 9' x 9 1/4" If stays are fitted with nuts or riveted heads nuts. Working pressure by rules 218.
 Material of stays S. DIA. OVERTHEADS 1 5/8 Area supported by each stay 83.25 Working pressure by rules 182 End plates in steam space: _____
 Area at smallest part 1 7/8 _____
 Material S. Thickness 1 1/32 Pitch of stays 14' x 15 1/2" How are stays secured Double nuts Working pressure by rules 200 Material of stays Steel.
 DIA. OVERTHEADS _____
 Area at smallest part 2 5/8 Area supported by each stay 263.5 Working pressure by rules 209 Material of Front plates at bottom Steel.
 Thickness 1 1/2 Material of Lower back plate Steel Thickness 1 1/32 Greatest pitch of stays 14 1/2' x 9" Working pressure of plate by rules 241.
 Diameter of tubes 3 1/2 Pitch of tubes 4 5/8' x 4 5/8 Material of tube plates Steel Thickness: Front 1 1/32 Back 23/32 Mean pitch of stays 11 1/8"
 Pitch across wide water spaces 14 1/2 Working pressures by rules 219 Girders to Chamber tops: Material S. Depth and
 thickness of girder at centre 2-4 1/8' x 3/4 Length as per rule 2-4 1/8 Distance apart 9" Number and pitch of stays in each 2-9 1/4"
 Working pressure by rules 201 Steam dome: description of joint to shell None fitted % 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?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

WILLIAM BEARDMORE & CO., LIMITED Glasgow Manufacturer.

Dates of Survey while building: During progress of work in shops -- 1/9/24 Jan 25. 31 Feb 12. 15. 18. 19. 26 Mar 7. 10. 13. 20. 26 Apr 2. 4. 7. 12. 14. 17. 29 May 1. 15. 20. 23. 26. 29 Jun 2. 4. 6. 14. 19. 26 July 1. 7. Total No. of visits 33 Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts: Cylinders 29/4/24 Slides 26/5/24 Covers 29/4/24 Pistons 26/5/24 Rods 6/6/24 Connecting rods 26/5/24 Crank shaft 14/4/24 Thrust shaft 6/6/24 Tunnel shafts 26/5/24 Screw shaft 14/6/24 Propeller 14/6/24 Stern tube 6/6/24 Steam pipes tested Engine and boiler seatings Engines holding down bolts

Completion of pumping arrangements Boilers fixed Engines tried under steam Completion of fitting sea connections Stern tube Screw shaft and propeller Main boiler safety valves adjusted Thickness of adjusting washers

Material of Crank shaft Steel Identification Mark on Do. 343 JD Material of Thrust shaft Steel Identification Mark on Do. 344 JA Material of Tunnel shafts Steel Identification Marks on Do. 343/4 JD Material of Screw shafts Steel Identification Marks on Do. 343/4 JA

Material of Steam Pipes Test pressure Is an installation fitted for burning oil fuel 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 If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery has been built under special survey in accordance with the approved plans and the rules of this society.

The materials and workmanship are good. The machinery has been shipped to Dundee for fitting on board the vessel. Dundee Surveyor notified.

In my opinion this vessel will be eligible for second of + TMC (with date) when the machinery has been fitted on board the vessel and tried under steam with satisfactory results.

Glasgow

The amount of Entry Fee ... £ 3 : 0 : 0 When applied for, Special 3/5 ... £ 13 : 18 : 0 15/7/24 BOILERS ... £ 16 : 12 : 0 Donkey Boiler Fee ... £ : : : Travelling Expenses (if any) £ : : : 14/10/24

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute Assigned Deferred

FRI. 26 SEP 1924 FRI. 3 OCT 1924 © 2020 Lloyd's Register Foundation