

REPORT ON MACHINERY.

No. 35692
12 DEC 1924

Received at London Office

Date of writing Report 9.12.1924 When handed in at Local Office 9.12.1924 Port of Hull.
 No. in Survey held at Hull. Date, First Survey 14/8/24 Last Survey 1/12/1924
 Reg. Book. on the S. S. "LORD CHELMSFORD" (Number of Visits 18)
 Master Built at Selby By whom built Cochrane & Sons Ltd Tons { Gross 338
 Engines made at Hull. By whom made Castrolines & Co Ltd (No. 1271) when made 1924 Net 137
 Boilers made at Hull. By whom made Castrolines & Co Ltd when made 1924
 Registered Horse Power 4 Owners Pickering & Stoddard S.T. Co Ltd. Port belonging to Hull.
 Nom. Horse Power as per Section 28 96 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted Yes.

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 13. 23. 34 Length of Stroke 26 Revs. per minute 110 Dia. of Screw shaft as per rule 4.95 Material of screw shaft as fitted 84 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
 Is 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 If two
 liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 36"
 Dia. of Tunnel shaft as per rule 4.04 Dia. of Crank shaft journals as per rule 4.36 7.39 Dia. of Crank pin 4.2 Size of Crank webs 44 x 48 Dia. of thrust shaft under
 collars 4.2 Dia. of screw 9-9 Pitch of Screw 11-0 No. of Blades 4 State whether moveable No Total surface 34 sq. ft.
 No. of Feed pumps one Diameter of ditto 2 7/8 Stroke 14 3/4 Can one be overhauled while the other is at work
 No. of Bilge pumps one Diameter of ditto 2 7/8 Stroke 14 3/4 Can one be overhauled while the other is at work
 No. of Donkey Engines one Sizes of Pumps 6 x 4 1/2 x 6 1/2 1 Ejector No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 2 @ 2" + 1 3" Ejector In Holds, &c. one @ 2" in each compartment.

No. of Bilge Injections one sizes 3 1/2 Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes, 3"
 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 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 Forward Suctions How are they protected Wood casings.
 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
 OILERS, &c.—(Letter for record S.) Manufacturers of Steel Port Talbot Steel Co. Blueville Sons.
 Total Heating Surface of Boilers 16986 Is Forced Draft fitted No No. and Description of Boilers one single ended.
 Working Pressure 200 lbs sq. in. Tested by hydraulic pressure to 350 lbs sq. in. Date of test Oct. 22nd/24 No. of Certificate 3536.
 Can each boiler be worked separately Area of fire grate in each boiler 49.2 sq. ft. No. and Description of Safety Valves to
 each boiler 2 Spring loaded Area of each valve 4.9 sq. in. Pressure to which they are adjusted 200 lbs sq. in. Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 24" Mean dia. of boilers 14'-0" Length 10'-8" Material of shell plates Steel
 Thickness 1 1/32 Range of tensile strength 28/32 tons. Are the shell plates welded or flanged Descrip. of riveting: cir. seams BR
 long. seams T.R. 588. Diameter of rivet holes in long. seams 1 1/32 Pitch of rivets 8 7/16 Lap of plates or width of butt straps 18 1/16
 Per centages of strength of longitudinal joint rivets 70.8 Working pressure of shell by rules 201 lbs sq. in. Size of manhole in shell 16" x 12"
 plate 85.0
 Size of compensating ring 24 x 27 x 1 1/32 No. and Description of Furnaces in each boiler 3 Plain Material Steel Outside diameter 41"
 Length of plain part top 46 bottom 49 Thickness of plates crown 13 bottom 7/16 Description of longitudinal joint welded. No. of strengthening rings
 Working pressure of furnace by the rules 219 Combustion chamber plates: Material Steel Thickness: Sides 3/4 Back 23/32 Top 3/4 Bottom 3/4
 Pitch of stays to ditto: Sides 9 x 8 3/4 Back 9 x 8 1/2 Top 9 x 8 3/4 If stays are fitted with nuts or riveted heads hnts. Working pressure by rules 230.
 Material of stays Steel Area at smallest part 2.04 sq. in. Area supported by each stay 78 3/4 Working pressure by rules 230. End plates in steam space:
 Material Steel Thickness 13/16 Pitch of stays 18 How are stays secured SW. & W. Working pressure by rules 220 Material of stays Steel
 Area at smallest part 7.5 sq. in. Area supported by each stay 324 Working pressure by rules 275 Material of Front plates at bottom Steel
 Thickness 15/16 Material of Lower back plate Steel Thickness 29/32 Greatest pitch of stays 14 x 8 3/4 Working pressure of plate by rules 228
 Diameter of tubes 3 1/2 Pitch of tubes 4 7/8 Material of tube plates Steel Thickness: Front 15/16 Back 7/8 Mean pitch of stays 9 3/4
 Pitch across wide water spaces 13 3/4 Working pressures by rules 212 Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 10 1/2 x 13 1/4 Length as per rule 36 1/32 Distance apart 9 Number and pitch of stays in each 3 @ 8 3/4
 Working pressure by rules 210 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?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied: Two top end bolts & nuts. 2 Bottom end bolts & nuts. 2 main bearing bolts & nuts. Set of coupling bolts & nuts. Valves for air, fuel, bilge and donkey pumps. Main & donkey check valves. Safety valve spring. Circulating pump impeller & spindle. Fuel pump cam.

The foregoing is a correct description,

FOR CHARLES D. HOLMES & CO. LTD

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1924: Aug 14, 21, 25. Sep 2, 5, 15, Oct 15, 22, 30. Nov 4, 7, 12, 13, 18, 22.
During erection on board vessel - - - Dec. 1
Total No. of visits 18

Is the approved plan of main boiler forwarded herewith

Yes

" " " donkey " " " "

Yes

Dates of Examination of principal parts—Cylinders 30.10.24 Slides 4.11.24 Covers 30.10.24 Pistons 4.11.24. Rods 30.10.24

Connecting rods 30.10.24 Crank shaft 30.10.24 Thrust shaft 30.10.24 Tunnel shafts ✓ Screw shaft 14.8.24 Propeller 14.8.24

Stern tube 14.8.24. Steam pipes tested 12.11.24 Engine and boiler seatings 21.8.24 Engines holding down bolts 13.11.24

Completion of pumping arrangements 1.12.24 Boilers fixed 7.11.24 Engines tried under steam 28.11.24

Completion of fitting sea connections 21.8.24 Stern tube 21.8.24 Screw shaft and propeller 21.8.24

Main boiler safety valves adjusted 28.11.24. Thickness of adjusting washers A. 9/16" F. 3/8"

Material of Crank shaft Steel Identification Mark on Do. 121 J.H.M. Material of Thrust shaft Steel Identification Mark on Do. 121 J.H.

Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts do. Identification Marks on Do. 121 J.H.

Material of Steam Pipes S.D. Copper, 4" Rose x 609 ✓ Test pressure 350 Lbs per sq. in. ✓

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 ✓

Is this machinery duplicate of a previous case Yes. ✓ If so, state name of vessel "Lord Derby" ✓

General Remarks (State quality of workmanship, opinions as to class, &c. The engines & boilers of this vessel

have been built under special survey & in accordance with the approved

plans & the Society's Rules. They have been satisfactorily fitted on board,

tried under working conditions & found good. Safety valves adjusted

under steam & pumping arrangements found in order.

The machinery is eligible in my opinion to have record of

+ L.M.C 12.24 and C.L.

The boiler plate invoices already sent with the first entry reports

upon sister vessels.

Please return the enclosed approved plan of boiler, for dealing

with sister vessels.

It is submitted that this vessel is eligible for THE RECORD. + LMC 12.24. CL.

The amount of Entry Fee ... £ 2 : 0

Special ... £ 24 : 0

Donkey Boiler Fee ... £ :

Travelling Expenses (if any) £ :

When applied for,

4/12/1924

When received,

12/12/24

Committee's Minute

Assigned

TUES. 16 DEC 1924

+ L.M.C 12.24

C.L.

John H. Mackenzie
Engineer Surveyor to Lloyd's Register of Shipping.



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Foundation