

# REPORT ON MACHINERY.

No. 28888

Received at London Office WFO. 13 AUG. 1924

Date of writing Report 12 AUG. 1924 When handed in at Local Office 12 AUG. 1924 Port of Sunderland  
 No. in Survey held at Sunderland Date, First Survey June 23 Last Survey 6<sup>th</sup> Aug 1924  
 Reg. Book. on the new steel S/S "MATCHING" (Number of Visits 29) Gross 1321 Tons Net 715

Master Built at Sunderland By whom built J. Brown & Sons Ltd (S/S No. 175) When built 1924  
 Engines made at Sunderland By whom made J. Dickinson & Sons Ltd (No. 874) when made 1924  
 Boilers made at Sunderland By whom made J. Dickinson & Sons Ltd (No. 874) when made 1924  
 Registered Horse Power Owners Stephenson Clarke & Co. Port belonging to London  
 Nom. Horse Power as per Section 28 180 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 19"-31"-51" Length of Stroke 36 Revs. per minute 75 Dia. of Screw shaft 10.98" Material of 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  
 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 3'-9"  
 Body of Thrust as per rule 9.58" Dia. of Crank shaft journals as per rule 10.06" Dia. of Crank pin 10 1/8" Size of Crank webs Patent Dia. of thrust shaft under  
 collars 10 1/8" Dia. of screw 13'-9" Pitch of Screw 14'-0" No. of Blades 4 State whether moveable no Total surface 58.0 sq ft  
 No. of Feed pumps 2 Diameter of ditto 2 3/4" Stroke 18" Can one be overhauled while the other is at work yes  
 No. of Bilge pumps 2 Diameter of ditto 3 1/2" Stroke 18" Can one be overhauled while the other is at work yes  
 No. of Donkey Engines 2 Sizes of Pumps 9 & 10 x 10. 5 1/2 x 3 1/2 x 5 No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room 3 @ 2 1/2" In Holds, &c. Fore hold - 2 @ 2 1/2" After hold - 2 @ 2 1/2"  
 No. of Bilge Injections 1 sizes 4" Connected to condenser, or to circulating pump no Is a separate Donkey Suction fitted in Engine room & size yes 3 1/2"  
 Are all the bilge suction pipes fitted with 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 yes  
 What pipes are carried through the bunkers Hold suction How are they protected under wood 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  
 Dates of examination of completion of fitting of Sea Connections 17-7-24 of Stern Tube 21-7-24 Screw shaft and Propeller 21-7-24  
 Is the Screw Shaft Tunnel watertight none Is it fitted with a watertight door no worked from no

**BOILERS, &c.**—(Letter for record (5)) Manufacturers of Steel John Spence & Sons Ltd  
 Total Heating Surface of Boiler 29200 sq ft Forced Draft fitted no No. and Description of Boilers one single ended marine  
 Working Pressure 180 Tested by hydraulic pressure to 320 Date of test 26-5-24 No. of Certificate 3882  
 Can each boiler be worked separately no Area of fire grate in each boiler 77 sq ft No. and Description of Safety Valves to  
 each boiler two direct spring Area of each valve 110" Pressure to which they are adjusted 185 Are they fitted with easing gear yes  
 Smallest distance between boilers or uptakes and bunkers or woodwork 2'-6" Mean dia. of boilers 17'-6" Length 11'-0" Material of shell plates steel  
 Thickness 1 1/2" Range of tensile strength 29 1/2-33 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams DR  
 long. seams DBS. TR Diameter of rivet holes in long. seams 1 7/16" Pitch of rivets 9 1/16" Lap of plates or width of butt straps 2 1/8"  
 Per centages of strength of longitudinal joint 91.18 Working pressure of shell by rules 180 Size of manhole in shell 16' x 12"  
 Size of compensating ring flanged No. and Description of Furnaces in each boiler 4 Deighton Material steel Outside diameter 3'-11"  
 Length of plain part top 9 1/16" Thickness of plates bottom 7 1/16" Description of longitudinal joint welded No. of strengthening rings no  
 Working pressure of furnace by the rules 185 Combustion chamber plates: Material steel Thickness: Sides 1 1/16" Back 1 1/16" Top 1 1/16" Bottom 1 1/16"  
 Pitch of stays to ditto: Sides 10 1/4" x 8 3/4" Back 10 x 9" Top 10 x 9" If stays are fitted with nuts or riveted heads nut in case Working pressure by rules 182  
 Material of stays steel Diameter at smallest part 2.030" Area supported by each stay 900" Working pressure by rules 201 End plates in steam space  
 Material steel Thickness 1 3/16" Pitch of stays 22 1/2" x 17 1/4" How are stays secured NT&W Working pressure by rules 180 Material of stays steel  
 Diameter at smallest part 6.70" Area supported by each stay 403 Working pressure by rules 183 Material of Front plates at bottom steel  
 Thickness 7/8" Material of Lower back plate steel Thickness 7/8" Greatest pitch of stays 3 3/4" x 9" Working pressure of plate by rules 232  
 Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates steel Thickness: Front 1 5/8" Back 1 1/8" Mean pitch of stays 9 x 11 1/2"  
 Pitch across wide water spaces 13 1/4" x 5 1/8" Working pressures by rules 229 Girders to Chamber tops: Material steel Depth and  
 thickness of girder at centre 2 @ 7 1/2" x 1 1/8" Length as per rule 2-8 1/8" Distance apart 10" Number and pitch of stays in each 3 @ 9"  
 Working pressure by rules 190 Superheater or Steam chest; how connected to boiler none Can the superheater, &c. shut off and the boiler worked  
 separately no Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivets  
 holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness  
 If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed  
 Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

EIGHT UP  
 RATE DECK  
 R. Q. D. K.  
 R. Q. D. K.  
 AS IN TOP  
 R. Q. D. K.  
 UPPER D.  
 25.4  
 to be given as  
 lar system  
 Water Capacity  
 Tons  
 46  
 56  
 174  
 29. May 6  
 7  
 of Visits 45

IS A DONKEY BOILER FITTED? yes

If so, is a report now forwarded? yes

SPARE GEAR. State the articles supplied: - Two connecting rod top and bottom end bolts and nuts. Two main bearing bolts. one set of coupling bolts. one set of feed and bilge pump valves. iron and bolts of various size. one propeller

The foregoing is a correct description,

For John Dickinson & Sons, Limited

Manufacturer.

Dates of Survey while building: During progress of work in shops - 1923. June 15 July 6 2221 24 Feb 6 18 29 Mar 4 28 Apr 15 May 7 20 23 26 28  
During erection on board vessel - June 12, 16, 15, 17, 21, 22, 25, 28 Aug 5, 6  
Total No. of visits 29

Is the approved plan of main boiler forwarded herewith yes  
" " " donkey " " " yes

Dates of Examination of principal parts - Cylinders 28-3-24 Slides 28-5-24 Covers 15-4-24 Pistons 7-5-24 Rods 7-5-24  
Connecting rods 7-5-24 Crank shaft 21-3-24 Thrust shaft 12-6-24 Tunnel shafts none Screw shaft 12-7-24 Propeller 12-6-24  
Stern tube 12-7-24 Steam pipes tested 15 & 22-7-24 Engines and boiler seatings 17-7-24 Engines holding down bolts 28-7-24  
Completion of pumping arrangements 6-8-24 Boilers fixed 25-7-24 Engines tried under steam 28-7-24

Main boiler safety valves adjusted 28-7-24 Thickness of adjusting washers both 7/16"  
Material of Crank shaft Cast steel Identification Mark on Do. LLOYD'S NO 6633 L.C.D. 21-3-24  
Material of Thrust shaft Steel Identification Mark on Do. LLOYD'S NO 6813 L.C.D. Date in store  
Material of Tunnel shafts steel Identification Marks on Do. LLOYD'S NO 6633 L.C.D. 21-3-24  
Material of Screw shafts Steel Identification Marks on Do. LLOYD'S NO 6813 L.C.D. Date in store

Material of Steam Pipes Solid drawn copper Test pressure 400 lbs per sq"  
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 no If so, state name of vessel -

General Remarks (State quality of workmanship, opinions as to class, &c.)  
The materials and workmanship are good.  
The machinery has been constructed under special survey and is eligible in my opinion for classification and the record + L.M.C. 8.24.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 8.24 C.L.

14/8/24

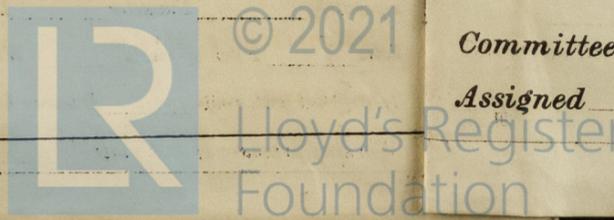
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The amount of Entry Fee ... £ 3 : When applied for, 7 AUG 1924  
Special ... £ 45 :  
Donkey Boiler Fee ... £ :  
Travelling Expenses (if any). £ : When received, 8 AUG 1924

S. Davis  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute FRI 15 AUG 1924

Assigned + L.M.C. 8.24 C.L.



Rpt. 5b.  
Date of writing  
No. in Sur Reg. Book.  
Master  
Boiler made at  
Owners

VERTICAL  
Made at  
tested by hydraulic  
No. of safety valves  
enter the donkey  
strength  
Lap of plating  
Radius of do.  
Thickness of furnace plates  
Thickness of water

Dates of Survey while building  
During work on board  
Total

GENERAL  
This boiler  
Approved

SUNDE  
and its

Survey Fee  
Travelling Exp

Committee's  
Assigned

SUNDERLAND.

Classification (if registered) to be sent to  
The Registrar is requested not to write on or below the space for Classification's (if any.)

VERIFIED WRITING