

REPORT ON MACHINERY.

No. 6571

Received at London Office

Date of writing Report Aug 24 1926 When handed in at Local Office Aug 26 1926 Port of Falmouth
 No. in Survey held at Falmouth Date, First Survey Oct 1st 1925 Last Survey Aug. 18th 1926
 Reg. Book. on the Steel Screw Tug "THEYDON" (Number of Visits 19)

Master Built at Falmouth By whom built Cox & Co (Engineers) Ltd When built 1926
 Engines made at Falmouth By whom made Cox & Co (Engineers) Ltd when made 1926
 Boilers made at Falmouth By whom made Cox & Co (Engineers) Ltd when made 1926
 Registered Horse Power Owners Falmouth Dock & Engineering Co. Port belonging to Falmouth
 Nom. Horse Power as per Section 28 30 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Inverted Comp. Surface Condens No. of Cylinders 2 No. of Cranks 2
 Dia. of Cylinders 11" & 24" Length of Stroke 16 Revs. per minute 180 Dia. of Screw shaft 5" Material of Steel
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube no 2 liners 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 no Length of stern bush 21 1/2"
 Dia. of Tunnel shaft 4 1/2" Dia. of Crank shaft journals 5" Dia. of Crank pin 5" Size of Crank webs 9 1/2" x 3 1/2" Dia. of thrust shaft under
 collars 5" Dia. of screw 5 1/2" Pitch of Screw 7 1/2" No. of Blades 4 State whether moveable no Total surface 11.7 sq. ft.
 No. of Feed pumps 1 Diameter of ditto 2" Stroke 8" Can one be overhauled while the other is at work yes
 No. of Bilge pumps 1 Diameter of ditto 2" Stroke 8" Can one be overhauled while the other is at work yes
 No. of Donkey Engines 1 Sizes of Pumps 4 1/2" x 2 1/2" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 2 @ 2" In Holds, &c. 1 for 1 ft @ 2"

No. of Bilge Injections 1 sizes 2" Connected to condenser, or to circulating pump C 7 Is a separate Donkey Suction fitted in Engine room & size yes 2"
 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 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 none How are they protected yes

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 July 1st 1926 of Stern Tube July 1st 1926 Screw shaft and Propeller June 22nd 1926

Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from yes

BOILERS, &c.—(Letter for record 8) Manufacturers of Steel The Steel Company of Scotland Ltd

Total Heating Surface of Boilers 611 sq. ft. Is Forced Draft fitted no No. and Description of Boilers 6 one Horiz. Multitubular
 Working Pressure 130 lbs. Tested by hydraulic pressure to 245 lbs. Date of test May 26th 1926 No. of Certificate 166

Can each boiler be worked separately yes Area of fire grate in each boiler 2.6 sq. ft. No. and Description of Safety Valves to
 each boiler 2 Spring loaded Area of each valve 3.476 sq. in. Pressure to which they are adjusted 130 lbs. Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork yes Mean dia. of boilers 8 1/2" Length 8'-2" Material of shell plates Steel
 Thickness 5/8" Range of tensile strength 28-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams Double

Long. seams D Butt D Riv Diameter of rivet holes in long. seams 15/16" Pitch of rivets 3 3/4" Top of plates no width of butt straps 9 1/2"
 Per centages of strength of longitudinal joint rivets 76.4 Working pressure of shell by rules 131.6 lbs. Size of manhole in shell 16" x 12"

Size of compensating ring 26" x 26" x 7/8" No. and Description of Furnaces in each boiler 2 plain Material Steel Outside diameter 2'-9"
 Length of plain part top 5'-8" Thickness of plates bottom 16 Description of longitudinal joint weld No. of strengthening rings yes

Working pressure of furnace by the rules 135 lbs. Combustion chamber plates: Material Steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 9/16"
 Pitch of stays to ditto: Sides 9" x 9" Back 9" x 9" Top 10 1/4" x 7" If stays are fitted with nuts or riveted heads nuts in CCs Working pressure by rules 135 lbs.

Material of stays Steel Area at smallest part 1.45 sq. in. Area supported by each stay 81" Working pressure by rules 135 lbs. End plates in steam space:
 Material Steel Thickness 23/32" Pitch of stays 12 1/2" x 12" How are stays secured D. Nuts Working pressure by rules 138 lbs. Material of stays Steel

Diameter at smallest part 2.65 Area supported by each stay 186 Working pressure by rules 148 Material of Front plates at bottom Steel
 Thickness 23/32" Material of Lower back plate Steel Thickness 23/32" Greatest pitch of stays 11 3/4" x 9" Working pressure of plate by rules 136 lbs.

Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" x 4 1/8" Material of tube plates Steel Thickness: Front 23/32" Back 21/32" Mean pitch of stays 10 5/16"
 Pitch across wide water spaces 13" Working pressures by rules 133 145 lbs. Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 6 1/2" x 1" Length as per rule 20.5" Distance apart 10 3/4" Number and pitch of stays in each two 7"
 Working pressure by rules 139 Superheater or Steam chest; how connected to boiler yes Can the superheater be shut off and the boiler worked

separately yes Diameter yes Length yes Thickness of shell plates yes Material yes Description of longitudinal joint yes Diam. of rivet

holes yes Pitch of rivets yes Working pressure of shell by rules yes Diameter of flue yes Material of flue plates yes Thickness yes
 If stiffened with rings yes Distance between rings yes Working pressure by rules yes End plates: Thickness yes How stayed yes

Working pressure of end plates yes Area of safety valves to superheater yes Are they fitted with easing gear yes

VERTICAL DONKEY BOILER—

Manufacturers of Steel

No. Description When made Where fixed
Made at By whom made
Working pressure tested by hydraulic pressure to Date of test No. of Certificate Fire grate area Description of Safety
Valves No. of Safety Valves Area of each Pressure to which they are adjusted Date of adjustment
If fitted with easing gear If steam from main boilers enter the donkey boiler Dia. of donkey boiler Length
Material of shell plates Thickness Range of tensile strength Descrip. of riveting long. seams Rivets
Dia. of rivet holes Whether punched or drilled Pitch of rivets Lap of plating Per centage of strength of joint Plates
Working pressure of shell by rules Thickness of shell crown plates Radius of do. No. of stays to do. Dia. of stays
Diameter of furnace Top Bottom Length of furnace Thickness of furnace plates Description of joint
Working pressure of furnace by rules Thickness of furnace crown plates Radius of do. Stayed by
Diameter of uptake Thickness of uptake plates Thickness of water tubes Dates of survey

SPARE GEAR. State the articles supplied:— Two bolts & nuts for Crosshead. Bottom End & Main Bearings
1 set of Coupling bolts & nuts 1 set of feed & bilge pump valves, Assorted Bolts
& nuts & iron of various sizes. 1 set of HP piston rings & LP piston ring

The foregoing is a correct description,

FOR AND ON BEHALF OF
COX & CO. (ENGINEERS) LTD.

Manufacturer.

Dates of Survey while building
During progress of work in shops— 1925. 6th. 1. 23 Nov 2. 6 1926 Jan 13. Feb 5. 15 Mar 9. 23 Apr 9. 26. 30 May 3. 7. 20. 26
During erection on board vessel — June 22. 23. July 12
Total No. of visits
Is the approved plan of main boiler forwarded herewith yes

Dates of Examination of principal parts—Cylinders See Falmouth Report 6422. Rods
Connecting rods Falmouth Report 6422. Tunnel shafts June 22. 30 Screw shaft June 22. 30 Propeller June 25th.
Stern tube Apr. 26 June 5th. Steam pipes tested July 12th. Engine and boiler seatings June 22nd. Engines holding down bolts July 19th
Completion of pumping arrangements July 19th 23. Boilers fixed July 19th. Engines tried under steam Aug 18th
Main boiler safety valves adjusted Aug 18th 1926. Thickness of adjusting washers
Material of Crank shaft See Falmouth Report No 6422. Identification Mark on Do.
Material of Tunnel shafts Steel Identification Marks on Do. Material of Screw shafts Steel Identification Marks on Do.
Material of Steam Pipes Copper. Test pressure 260 lbs.

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery of this vessel. 6422, has been examined & found in good condition. The boiler No 178 has been surveyed during construction in Shop. The material & workmanship being good. & the boiler found sound & tight under hydraulic pressure.

The machinery & boiler have been installed on board under Special Survey & examined under working conditions & found satisfactory. and are eligible in my opinion to have the Record + LMC 8.26.

It is submitted that
this vessel is eligible for
THE RECORD. + LMC 8.26.

The amount of Entry Fee Feb. Rpt 6422.
Boiler fee 2/5 of £15 } £ 9 : 0 : 0
Special
Installation on board 1/5 of £15 }
Donkey Boiler Fee £
Travelling Expenses (if any) £

When applied for,
25/8 1926

When received,
30.9.26

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

Committee's Minute

Assigned

3 SEP 1926

+ LMC 8.26

CERTIFICATE WRITTEN



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Foundation