

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 1925 Last Survey Aug 18 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 1/4" 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 oil gland See Feb ltr 6/9/26. 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 5/8" Dia. of Crank shaft journals 5" Dia. of Crank pin 5" Size of Crank webs 9 1/2" x 8 1/2" Dia. of thrust shaft under
collars 5" Dia. of screw 5'-3" Pitch of Screw 7'-3" 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 4x4x2 1/2" No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 2 @ 2" In Holds, &c. 1 for 7 1/2 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 1926 of Stern Tube July 1926 Screw shaft and Propeller June 22, 26th

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

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 one Horiz. Multitubular

Working Pressure 130 lbs Tested by hydraulic pressure to 245 lbs Date of test May 26 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 Mean dia. of boilers 8'-8" 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 width of butt straps 9 3/8"

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"
plate 76.6 Size of compensating ring 26" x 26" x 3/8" No. and Description of Furnaces in each boiler 2 plain Material Steel Outside diameter 2'-9"

Length of plain part top 5'-8" bottom Thickness of plates crown 2" Description of longitudinal joint weld No. of strengthening rings
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 2 1/32" Pitch of stays 12 x 12 How are stays secured D. Nuts Working pressure by rules 138 lbs Material of stays Steel

Diameter at smallest part 2.07 Area supported by each stay 186 Working pressure by rules 148 Material of Front plates at bottom Steel

Thickness 2 1/32" Material of Lower back plate Steel Thickness 2 1/32" Greatest pitch of stays 11 3/4" x 9" Working pressure of plate by rules 136 lbs

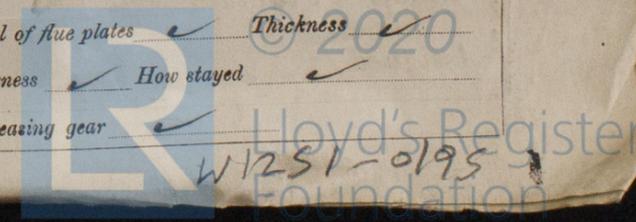
Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" x 4 1/8" Material of tube plates Steel Thickness: Front 2 1/32" Back 2 1/32" Mean pitch of stays 10 5/16"

Pitch across wide water spaces 13" Working pressures by rules 133 145 lbs Ridders 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 Can the superheater be shut off and the boiler worked
separately yes Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet
holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

Is stiffened with rings yes 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



W1251-0195

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 casing 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 _____ Plates _____
 Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____ Lap of plating _____ Per centage of strength of joint _____
 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. *W. H. M. D.*

Dates of Survey while building: 1925. *Oct. 1. 23 Nov 2. 6* 1926. *Jan 13. Feb 15. Mar 9. 23. Apr 9. 26. 30. May 3. 7. 20. 26*
 During progress of work in shops - -
 During erection on board vessel - -
 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* Pistons _____ Rods _____
 Connecting rods *Falmouth Report 6422* Piston shaft *June 22* Tunnel shafts *Apr 26. 30* Screw shaft *Apr 26. 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 Thrust shaft _____ 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 (Engines) 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 *1/5 of £15* }
 Donkey Boiler Fee £ : :
 Travelling Expenses (if any) £ : :
 When applied for, *25/8 1926*
 When received, *30.9.26*

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

Committee's Minute *3 SEP 1926*
 Assigned *+ LMC 8.26*



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