

# REPORT ON MACHINERY.

No. 10896

Received at London Office

THU 13 JAN 1921

Date of writing Report 8<sup>th</sup> Jan 1921 when handed in at Local Office 10<sup>th</sup> Jan 1921 Port of MIDDLEBRUGH  
 No. in Survey held at Middlebrugh Date, First Survey 2<sup>nd</sup> Nov. 1920 Last Survey 22<sup>nd</sup> Dec. 1920  
 Reg. Book 1044 on the SS. PENTEIFI (Number of Plates 15) Gross 1048 Tons Net 1158  
 Master J. Howe Built at London By whom built Horseshoe & Co. Ltd. when made 1908  
 Engines made at Yonning By whom made Eidewert - A.G. when made 1908  
 Boilers made at \_\_\_\_\_ By whom made \_\_\_\_\_ when made \_\_\_\_\_  
 Registered Horse Power 149 Owners Pentwyn S.S. Co. Ltd. Port belonging to London  
 Nom. Horse Power as per Section 28 192 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

**ENGINES, &c.**—Description of Engines Triple Expansion Vertical No. of Cylinders 3 No. of Cranks 3  
 Dia. of Cylinders 18 3/4 3 1/8 2 0/8 Length of Stroke 2-11 1/2 Revs. per minute \_\_\_\_\_ Dia. of Screw shaft 10 1/2 Material of screw shaft \_\_\_\_\_  
 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 \_\_\_\_\_ 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 \_\_\_\_\_ Length of stern bush 5-1 1/2  
 Dia. of Tunnel shaft 9-5/8 Dia. of Crank shaft journals 9-9/16 Dia. of Crank pin 10 Size of Crank webs 5-10 1/2 Dia. of thrust shaft under collars 10 Dia. of screw 13-0 Pitch of Screw 14-3 No. of Blades 4 State whether moveable no Total surface \_\_\_\_\_  
 No. of Feed pumps 2 Diameter of ditto 2 3/4 Stroke \_\_\_\_\_ Can one be overhauled while the other is at work yes  
 No. of Bilge pumps 2 Diameter of ditto 2 3/4 Stroke \_\_\_\_\_ Can one be overhauled while the other is at work yes  
 No. of Donkey Engines 2 Sizes of Pumps \_\_\_\_\_ No. and size of Suctions connected to both Bilge and Donkey pumps \_\_\_\_\_  
 In Engine Room 4-2 1/2 In Holds, &c. 2-2 1/2 in ea hold  
 No. of Bilge Injections 1 sizes 4 Connected to condenser, or to circulating pump circumvent Is a separate Donkey Suction fitted in Engine room & size yes  
 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 \_\_\_\_\_  
 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 no 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 bilge suction How are they protected 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 \_\_\_\_\_ of Stern Tube \_\_\_\_\_ Screw shaft and Propeller \_\_\_\_\_  
 Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from top platform

**BOILERS, &c.**—(Letter for record \_\_\_\_\_) Manufacturers of Steel \_\_\_\_\_  
 Total Heating Surface of Boilers 3358 Is Forced Draft fitted no No. and Description of Boilers 2 Single ended  
 Working Pressure 185 lbs Tested by hydraulic pressure to \_\_\_\_\_ Date of test \_\_\_\_\_ No. of Certificate \_\_\_\_\_  
 Can each boiler be worked separately yes Area of fire grate in each boiler 54 No. and Description of Safety Valves to each boiler 2 Spring loaded Area of each valve 12.56 Pressure to which they are adjusted 190 lbs Are they fitted with easing gear yes  
 Smallest distance between boilers or uptakes and bunkers or woodwork \_\_\_\_\_ Mean dia. of boilers 12-11 1/2 Length 9-10 Material of shell plates \_\_\_\_\_  
 Thickness 1.02 Range of tensile strength \_\_\_\_\_ Are the shell plates welded or flanged no Descrip. of riveting: cir. seams 2 R laps  
 long. seams blt 11 R Diameter of rivet holes in long. seams \_\_\_\_\_ Pitch of rivets 14.96 Lap of plates or width of butt straps 9.84  
 Per centages of strength of longitudinal joint \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_ Size of manhole in shell 20 1/2 x 14  
 Size of compensating ring 4 No. and Description of Furnaces in each boiler 3 - horizontal Material \_\_\_\_\_ Outside diameter 39.37  
 Length of plain part \_\_\_\_\_ Thickness of plates \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_ No. of strengthening rings \_\_\_\_\_  
 Working pressure of furnace by the rules \_\_\_\_\_ Combustion chamber plates: Material \_\_\_\_\_ Thickness: Sides 59 Back 61 Top 59 Bottom 59  
 Pitch of stays to ditto: Sides 4.08 x .08 Back 4.08 x .08 Top 4.08 x .28 If stays are fitted with nuts or riveted heads nuts Working pressure by rules \_\_\_\_\_  
 Material of stays \_\_\_\_\_ Diameter at smallest part 1 1/2 Area supported by each stay \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ End plates in steam space \_\_\_\_\_  
 Material \_\_\_\_\_ Thickness 9.8 x .98 Pitch of stays 13.58 x 4.56 How are stays secured nut washer Working pressure by rules \_\_\_\_\_ Material of stays \_\_\_\_\_  
 Diameter at smallest part 3 Area supported by each stay \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ Material of Front plates at bottom \_\_\_\_\_  
 Thickness 8.6 Material of Lower back plate \_\_\_\_\_ Thickness 9 Greatest pitch of stays \_\_\_\_\_ Working pressure of plate by rules \_\_\_\_\_  
 Diameter of tubes 3.5 Pitch of tubes 4.52 + 4.52 Material of tube plates \_\_\_\_\_ Thickness: Front 9.8 Back 9.0 Mean pitch of stays \_\_\_\_\_  
 Pitch across wide water spaces 14.14 Working pressures by rules \_\_\_\_\_ Girders to Chamber tops: Material \_\_\_\_\_ Depth and thickness of girder at centre 4.18 x 1.4 Length as per rule 26.44 Distance apart 4.28 Number and pitch of stays in each 3 @ 7.08  
 Working pressure by rules \_\_\_\_\_ Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked separately \_\_\_\_\_  
 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 \_\_\_\_\_  
 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 \_\_\_\_\_

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THE MARGIN.

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IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:-

Two top-end bolts. 2 bottom-end bolts 2 main bearing bolts, 1 set coupling bolts, 1 set of feed and ledge valves. Set of piston rings for each engine, quantity of assorted bolts and nuts and iron of various sizes.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - }  
{ During erection on board vessel - - - }  
Total No. of visits

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts - Cylinders Slides Covers Pistons Rods  
Connecting rods Crank shaft Thrust shaft Tunnel shafts Screw shaft Propeller  
Stern tube Steam pipes tested Engine and boiler seatings Engines holding down bolts  
Completion of pumping arrangements Boilers fixed Engines tried under steam  
Main boiler safety valves adjusted Thickness of adjusting washers  
Material of Crank shaft Identification Mark on Do. Material of Thrust shaft Identification Mark on Do.  
Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Identification Marks on Do.  
Material of Steam Pipes Copper Test pressure 360 lbs.  
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 If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.)

The machinery of this vessel is now in a safe working condition and eligible in my opinion to be classed with record of L.M.C. 12-20

The amount of Entry Fee £ : : When applied for.  
Special ... £ : : 31.12.1920  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ : : 5.1.1921

Y.P. Thomas Miller  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

FRI. JAN. 14 1921

Assigned

L.M.C. 12.20

CERTIFICATE WRITTEN



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