

REPORT ON MACHINERY.

No. 200574

Received at London Office MON. JAN. 3 1921

Date of writing Report 30th Dec, 1920 When handed in at Local Office 31st Dec, 1920 Port of NEWPORT, MON.
 Date, First Survey 14th Apr. Last Survey 30th Dec, 1920.
 Survey held at Shepetow (Number of Visits 8)
 Reg. By Shepetow
 on the S/S WAR FIG.

Tons { Gross 2567.96
 Net 1425.22

Master Turbini Built at Shepetow By whom built Monmouth S.B. & Co. Ltd. When built 1920
 Engines made at West Brighton By whom made Metropolitan Patent & Engineering Co. when made 1920.
 Boilers made at Glasgow By whom made Messrs Babcock & Wilcox. when made 1920.
 Registered Horse Power _____ Owners The Shipping Controller Port belonging to London
 Shaft Horse Power at Full Power 1000. Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

TURBINE ENGINES, &c.—Description of Engines Patent Impulse. H.P. & L.P. No. of Turbines 2.

Diameter of Rotor Shaft Journals, H.P. 4 L.P. 4 Diameter of Pinion Shaft 3 3/4
 Diameter of Journals 3 3/4 - 6 3/4 Distance between Centres of Bearings 22" - 48" Diameter of Pitch Circle 5.195 - 11.5
 Diameter of Wheel Shaft 1 1/2 Distance between Centres of Bearings 48" Diameter of Pitch Circle of Wheel 57.145 - 66.5
 Width of Face 13" Diameter of Thrust Shaft under Collars 1 1/2" Diameter of Tunnel Shaft as per rule 10
 as fitted 11
 No. of Screw Shafts one. Diameter of same as per rule 13 as fitted 11.97 Diameter of Propeller 15'9" Pitch of Propeller 15'6"
 No. of Blades Four State whether Moveable Yes Total Surface 77 1/2 Diameter of Rotor Drum, H.P. L.P. Astern
 Thickness at Bottom of Groove, H.P. L.P. Astern Revs. per Minute at Full Power, Turbine 4500 Propeller 70

PARTICULARS OF BLADING.

	H. P.			L. P.			ASTERN.		
	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
1ST EXPANSION	<u>2 + 1/2</u>	<u>27 1/2 - 28 1/2</u>	<u>2</u>	<u>1 1/2</u>	<u>28 1/2</u>	<u>1</u>	<u>HP</u>		
2ND "	<u>5/8</u>	<u>27 5/8</u>	<u>1</u>	<u>1 5/8</u>	<u>28 5/8</u>	<u>1</u>	<u>1 1/2 - 12 3/4</u>	<u>28 1/2 - 29 3/4</u>	<u>2</u>
3RD "	<u>5/8</u>	<u>27 5/8</u>	<u>1</u>	<u>2 5/8</u>	<u>29 5/8</u>	<u>1</u>			
4TH "	<u>5/8</u>	<u>27 5/8</u>	<u>1</u>	<u>4 3/8</u>	<u>31 3/8</u>	<u>1</u>	<u>L.P.</u>		
5TH "				<u>6 3/4</u>	<u>33 3/4</u>	<u>1</u>	<u>1 1/2</u>	<u>28 1/2</u>	<u>1</u>
6TH "							<u>3 1/2</u>	<u>30 1/2</u>	<u>1</u>
7TH "									
8TH "									

No. and size of Feed pumps 2 8x6x18"
 No. and size of Bilge pumps 1 10x12 1/2 x 18"
 No. and size of Bilge suction in Engine Room 4-3 1/2
 In Holds, &c. N 1 1 P 1 3" N 2 1 P 1 3" N 3 1 P 1 3"

No. of Bilge Injections 1 sizes 9 Connected to condensers or to circulating pump Yes Is a separate Donkey Suction fitted in Engine Room & size Yes 3 1/2
 Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes
 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 Below
 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 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
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Engine room top

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Shepetow & Glasgow.

Total Heating Surface of Boilers 5526 Is Forced Draft fitted No No. and Description of Boilers 2. Babcock & Wilcox.
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 Date of test Sept 2nd No. of Certificate 17
 Can each boiler be worked separately Yes Area of fire grate in each boiler 84.5 sq ft No. and Description of Safety Valves to each boiler 2 Spring loaded Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 8'-0" Mean dia. of boilers 4'-0" Length 13'-3 1/2" Material of shell plates Steel
 Thickness 1 1/2" Range of tensile strength 28-32 ksi Are the shell plates welded or flanged No Descrip. of riveting: cir. seams SR Rap
 long. seams T.R. S.B.S Diameter of rivet holes in long. seams 27/32 Pitch of rivets 3 3/4 Lap of plates or width of butt straps 7"
 Per centages of strength of longitudinal joint rivets 77.5 plates 75.8 Working pressure of shell by rules 210 lbs Size of manhole in shell 15x11"
 Size of compensating ring 2 1/2 x 22 x 7/8 No. and Description of Furnaces in each Boiler _____ Material _____ Outside diameter _____
 Length of plain part top _____ crown _____ bottom _____ Thickness of plates _____ Description of longitudinal joint _____ No. of strengthening rings _____
 Working pressure of furnace by the rules _____ Combustion chamber plates: Material _____ Thickness: Sides _____ Back _____ Top _____ Bottom _____
 Pitch of stays to ditto: Sides _____ Back _____ Top _____ If stays are fitted with nuts or riveted heads _____ Working pressure by rules _____
 Material of stays _____ Diameter at smallest part _____ Area supported by each stay _____ Working pressure by rules _____ End plates in steam space _____
 Material Steel Thickness 3/8 Pitch of stays _____ How are stays secured _____ Working pressure by rules _____ Material of stays _____
 Diameter at smallest part _____ Area supported by each stay _____ Working pressure by rules _____ Material of Front plates at bottom _____
 Thickness _____ Material of lower back plate Steel Thickness 1 1/2 Greatest pitch of stays _____ Working pressure of plate by rules _____
 Diameter of tubes 1 3/8 - 3 1/4 Pitch of tubes 2 5/8 x 2 3/4 Material of tube plates Steel Thickness: Front 3/4 Back _____ Mean pitch of stays _____
 Pitch across wide water spaces _____ Working pressures by rules _____ Girders to Chamber tops: Material _____ Depth and thickness of girder at centre _____ Length as per rule _____ Distance apart _____ Number and pitch of stays in each _____
 Working pressure by rules _____ Steam dome: description of joint to shell None % of strength of joint _____ Diameter _____
 Thickness of shell plates _____ Material _____ Description of longitudinal joint _____ Diameter 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? Yes. If so, is a report now forwarded? Yes. Glasgow Rep. N^o 39

SPARE GEAR. State the articles supplied: One set of pins each for Michel & turbine thrust blocks. One set of bearing bushes each for turbine rotor. Low speed wheel shaft. Intermediate gear shaft also for pinion. One pinion with flexible coupling. One rotor pump plunger. One set of valves for lubricating pump. One bucket & rod for lubricating pump. One escape valve of each size. 570 condenser tubes & ferrules. One impeller shaft one air pump rod, bucket & valves. One set of coupling bolts, assorted bolts & nuts.
 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 Apr 14. June 10. 28. Sept 2. 27. Nov 15. Dec 30

Is the approved plan of main boiler forwarded herewith No.

Dates of Examination of principal parts - Casings Sept 2 Rotors Sept 2 Blading Sept 2 Gearing Sept 2
 Rotor shaft Sept 2 Thrust shaft 27/9/20 Tunnel shafts 27/9/20 Screw shaft 10/6/20 Propeller 10/6/20
 Stern tube 10/6/20 Steam pipes tested 27/9/20 Engine and boiler seatings June 2 Engines holding down bolts 15/11/20
 Completion of pumping arrangements 30.12.20 Boilers fixed 27.9.20 Engines tried under steam 15.11.20
 Main boiler safety valves adjusted 12.11.20 Thickness of adjusting washers P.Bhr 1 1/2 S S.P.Bhr. 1 1/2 P. 1 3/2 S
 Material and tensile strength of Rotor shafts Mild steel 32.8 + 30.7 tm² Identification Mark on Do. U 401 + U 414
 Material and tensile strength of Pinion shaft Mild steel 40 tm² Identification Mark on Do. 1 HPC. 4.12.19
 Material of Wheel shaft Steel Identification Mark on Do. 1647 Material of Thrust shaft Steel Identification Mark on Do. 1647
 Material of Tunnel shafts Steel Identification Marks on Do. 368 Material of Screw shafts Steel Identification Marks on Do. 368
 Material of Steam Pipes Cap welded steel Test pressure 600 lb Identification Marks on Do. 9.12.19

Is an installation fitted for burning oil fuel No 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 a duplicate of a previous case Yes If so, state name of vessel Nash Light

General Remarks (State quality of workmanship, opinions as to class, &c.) The boiler (see Glasgow Report N^o 3978) machinery (see Manchester & Lman Reports 4572 + 82456 respectively) have been fitted & secured on board & the boiler tested under hydraulic pressure to 360 lb. A donkey boiler (Glasgow Report N^o 39955) has also been fitted & secured on board & its safety valves adjusted. The machinery & boiler have been tested under full working conditions & found satisfactory & are now eligible in our opinion to have records of T.L.M.C. 12.20.

The amount of Entry Fee ... £ : :
 Special 14 : 5 : 4 When applied for, 11.1.19.21
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :
 When received, 11.1.19.21

John W. Gwynne Thos. M. Gibson
 Engineer Surveyor to Lloyd's Register of Shipping.

Certificate (if required) to be sent to
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

Committee's Minute FRI. JAN. 7 1921
+ L.M.C. 12.20
 Assigned Subject.

