

# REPORT ON MACHINERY.

No. 1326.

Date of writing Report 13 Aug. 1923 When handed in at Local Office 13 Aug. 1923 Port of Nantes  
No. in Survey held at St. Nazaire Date, First Survey 19 May 1922 Last Survey 3 August 1923  
Reg. Book. 66951 on the Steel Screw Steamer Maryland (ex. War Noble) (Number of Visits 36)  
Master                      Built at Vancouver B.C. By whom built J. Coughlan & Sons Tons { Gross 5446  
Engines made at Wellsville N.Y. By whom made Kerr Turbine Co. Net 3367  
Boilers made at                      By whom made                      When built 1919-3  
Registered Horse Power 577 N.H.P. Owners Co. Gen. Transatlantique when made 1919  
Shaft Horse Power at Full Power 2650 Is Refrigerating Machinery fitted for cargo purposes No when made 1919  
Is Electric Light fitted Y. Port belonging to Havre

TURBINE ENGINES, &c.—Description of Engines Parsons Impulse Reaction - to original gearing No. of Turbines one  
Diameter of Rotor Shaft Journals, H.P. 125 3/4 in. L.P.                      Diameter of Pinion Shaft original shaft refitted  
Diameter of Journals                      Distance between Centres of Bearings                      Diameter of Pitch Circle                       
Diameter of Wheel Shaft                      Distance between Centres of Bearings                      Diameter of Pitch Circle of Wheel                       
Width of Face                      Diameter of Thrust Shaft under Collars                      Diameter of Tunnel Shaft                      as per rule                       
No. of Screw Shafts                      Diameter of same                      as fitted                      Diameter of Propeller Original propeller Pitch of Propeller                       
No. of Blades                      State whether Moveable                      Total Surface                      Diameter of Rotor Drum, H.P. 495 to 590 astern whub.  
Thickness at Bottom of Groove, H.P.                      L.P.                      Astern whub. Revs. per Minute at Full Power, Turbine 3600 Propeller 100

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>Imp.</u>		<u>860 (mean)</u>	<u>2</u>				<u>Imp. whub.</u>	<u>920 (mean)</u>	<u>2</u>
2ND <u>reactive</u>	<u>25</u>	<u>545</u>	<u>4</u>						
3RD <u>                    </u>	<u>35</u>	<u>565</u>	<u>4</u>						
4TH <u>                    </u>	<u>51</u>	<u>597</u>	<u>3</u>						
5TH <u>                    </u>	<u>54</u>	<u>698</u>	<u>2</u>						
6TH <u>                    </u>	<u>76</u>	<u>742</u>	<u>2</u>						
7TH <u>                    </u>	<u>110</u>	<u>810</u>	<u>2</u>						
8TH <u>                    </u>	<u>150</u>	<u>890</u>	<u>2</u>						
9TH <u>                    </u>	<u>150</u>	<u>890</u>	<u>1</u>						
No. and size of Feed pumps									
No. and size of Bilge pumps									
No. and size of Bilge suction in Engine Room									

In Holds, &c.

No. of Bilge Injections                      sizes                      Connected to condenser, or to circulating pump                      Is a separate Donkey Suction fitted in Engine Room & size                       
Are all the bilge suction pipes fitted with roses                      Are the roses in Engine room always accessible                       
Are all connections with the sea direct on the skin of the ship                      Are they Valves or Cocks                       
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates                      Are the Discharge Pipes above or below the deep water line                       
Are they each fitted with a Discharge Valve always accessible on the plating of the vessel                      Are the Blow Off Cocks fitted with a spigot and brass covering plate                       
What pipes are carried through the bunkers                      How are they protected                       
Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times                       
Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges                       
Is the Screw Shaft Tunnel watertight                      Is it fitted with a watertight door                      worked from                     

BOILERS, &c.—(Letter for record                     ) Manufacturers of Steel                       
Total Heating Surface of Boilers                      Is Forced Draft fitted                      No. and Description of Boilers                       
Working Pressure                      Tested by hydraulic pressure to                      Date of test                      No. of Certificate                       
Can each boiler be worked separately                      Area of fire grate in each boiler                      No. and Description of Safety Valves to                       
Each boiler                      Area of each valve                      Pressure to which they are adjusted                      Are they fitted with easing gear                       
Smallest distance between boilers or uptakes and bunkers or woodwork                      Mean dia. of boilers                      Length                      Material of shell plates                       
Thickness                      Range of tensile strength                      Are the shell plates welded or flanged                      Descrip. of riveting: cir. seams                       
Long. seams                      Diameter of rivet holes in long. seams                      Pitch of rivets                      Lap of plates or width of butt straps                       
Percentage of strength of longitudinal joint                      rivets                      Working pressure of shell by rules                      Size of manhole in shell                       
Size of compensating ring                      plates                      No. and Description of Furnaces in each Boiler                      Material                      Outside diameter                       
Length of plain part                      top                      crown                      Description of longitudinal joint                      No. of strengthening rings                       
Working pressure of furnace by the rules                      bottom                      bottom                      Thickness of plates                      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                      Thickness                      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                      Thickness                      Greatest pitch of stays                      Working pressure of plate by rules                       
Diameter of tubes                      Pitch of tubes                      Material of tube plates                      Thickness: Front                      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                      % 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? \_\_\_\_\_ If so, is a report now forwarded? \_\_\_\_\_  
SPARE GEAR. State the articles supplied:— \_\_\_\_\_

The foregoing is a correct description,

Manufacturer. \_\_\_\_\_

Dates of Survey while building { During progress of work in shops - - 1922 May 19 - June 16 - Nov. 28 - Dec. 19-27 - 1923 Jan. 10-16-24-31 - Feb. 9-19 - March, 7-9-12-16 - April, 3-5-17-26 - May, 14-22-28  
During erection on board vessel - - 1923 June, 12-13 - July, 12-13-26-31 - August, 1-3  
Total No. of visits 36.

Is the approved plan of main boiler forwarded herewith \_\_\_\_\_

" " " donkey " " " \_\_\_\_\_

Dates of Examination of principal parts—Casings 14-5-23 Rotors 8-6-23 Blading 8-9-5-6-23 Gearing \_\_\_\_\_

Rotor shaft 28-5-23 Thrust shaft \_\_\_\_\_ Tunnel shafts \_\_\_\_\_ Screw shaft \_\_\_\_\_ Propeller \_\_\_\_\_

Stern tube \_\_\_\_\_ Steam pipes tested \_\_\_\_\_ Engine and boiler seatings \_\_\_\_\_ Engines holding down bolts 1-8-23

Completion of pumping arrangements \_\_\_\_\_ Boilers fixed \_\_\_\_\_ Engines tried under steam 3-8-23

Main boiler safety valves adjusted \_\_\_\_\_ Thickness of adjusting washers \_\_\_\_\_

Material and tensile strength of Rotor shaft Ingot steel 60/52 Kg. per cm<sup>2</sup> Identification Mark on Do. 1614.

Material and tensile strength of Pinion shaft \_\_\_\_\_ Identification Mark on Do. \_\_\_\_\_

Material of Wheel 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 \_\_\_\_\_ Test pressure \_\_\_\_\_

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 a duplicate of a previous case \_\_\_\_\_ If so, state name of vessel \_\_\_\_\_

General Remarks (State quality of workmanship, opinions as to class, &c. Workmanship good. This new turbine has been specially surveyed during construction. It has been built in accordance with the approved plan, fitted onboard in accordance with the Rules. It is eligible in my opinion for the record of (new Turbine 8-23 in the Register Book. (see Report form 9. attached)

The amount of Entry Fee ... £ :  
Special ... £ :  
Donkey Boiler Fee ... £ :  
Travelling Expenses (if any) £ :  
When applied for, 19 :  
When received, 19 :

Geo. A. Pang  
Engineer Surveyor to Lloyd's Register of Shipping.

TUES. 9 JUN 1925

TUE AUG. 21 1924

FRI 14 DEC. 1923  
TUES. 29 APR 1924

FRI 30 MAY 1924

TUES. 18 DEC 1924  
TUES. 23 DEC 1924

Committee's Minute

Assigned



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Foundation