

REPORT ON MACHINERY

No. 493

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REC'D NEW YORK June 12-1918

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of writing Report June 3 1918 When handed in at Local Office June 3 1918 Port of Portland, Oregon
 in Survey held at Portland, Oregon Date, First Survey Dec. 21, 1917 Last Survey May 20 1918
 eg. Book. on the S. S. "West Indian" (Number of Visits 14)
 Tons Gross 5828 Net 3571
 Master O. P. Rankin Built at Portland, Oreg. By whom built Columbia Riv. Shipbldg. Corp. When built 1917-18
 Engines made at Wellesville, N.Y. By whom made Kerr Turbine Company (No. 50003) when made 1917-18
 Makers made at Portland, Oregon By whom made Columbia River Ship Bldg. Corporation when made 1917-18
 Nominal Horse Power 417 Owners U. S. Emergency Fleet Corp. Port belonging to Portland, Oreg.
 Shaft Horse Power at Full Power 2500 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

TURBINE ENGINES, &c.—Description of Engines Double Gear Reduction Type No. of Turbines One
 Diameter of Rotor Shaft Journals, H.P. 5" L.P. Diameter of Pinion Shaft 5 3/4" internal 9 1/2" external Shaft
 Diameter of Journals 9 1/2" Distance between Centres of Bearings Abt. 2' 6 3/4" Diameter of Pinion 10.395" O.D.
 Diameter of Wheel Shaft 15" Distance between Centres of Bearings 2' 8 1/2" Diameter of Pinion of Wheel 55.79" O.D.
 Diameter of Face 16" Diameter of Thrust Shaft under Collar 13 3/4" Diameter of Tunnel Shaft as per rule 12.49" as fitted 12-5/8"
 Number of Screw Shafts One Diameter of same as per rule 13.74" as fitted 14 1/2" Diameter of Propeller 17' 0" Pitch of Propeller 14 Ft.
 Number of Blades 4 State whether Moveable Moveable Total Surface 80 3/4 sq. ft. 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 3585 Propeller 90

DETAILS 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.
EXPANSION	6 x 1"	33 1/2"	2				6" x 1"	33 1/2"	2
"	6 x 1"	33 1/2"	2				3"	35-5/8"	1
"	2	35-1/8"	1						
"	3	35-1/8"	1						
"	4	35-5/8"	1						
"	5	36-5/8"	1						
"	6	38-1/4"	1						
"	6-7/8	38-1/2"	1						

and size of Feed pumps Two 14" x 9" x 16" Vert. Simplex
 and size of Bilge pumps One 6"x6"x6" Hor. Duplex; One 12"x8 1/2"x12" Hor. Dup. One 12" x 10 1/4" x 12 Hor. Dup.
 and size of Bilge suction in Engine Room Three 3 1/2" Eng. Room - One 4" Eng. Room Two 3 1/2" Fire Room
 In Holds, &c. Two 3 1/2" Tunnel 2-3 1/2" in Hold No. 1 - 2 3/4" Hold.
 2 - 2-3 1/2" Hold 3. - 4-3 1/2" Hold 4. - 2-3 1/2" Hold 5.
 Bilge Injections 1 sizes 10" Connected to main tank, and circulating pump Is a separate Donkey Suction fitted in Engine Room & size Yes 4"
 Are the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes
 Are connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Valves
 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
 Are pipes carried through the bunkers Sanitary - Telemotor in Reserve Bunker How are they protected All boxed in
 Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
 Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes
 Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Platform in Eng. Room above water line

BOILERS, &c.—(Letter for record (7) Manufacturers of Steel Lukens Iron & Steel Works
 Heating Surface of Boilers 7404 Is Forced Draft fitted Yes No. and Description of Boilers 3-Scotch Marines
 Working Pressure 210 Lloyd's Tested by hydraulic pressure to 315 Date of test Apr. 17, 1918 No. of Certificate 43, 45, 46
 Is boiler to be worked separately Yes Area of fire grate in each boiler 60.3 No. and Description of Safety Valves to
 Boiler 1-3 1/2"x3 1/2"x5 Duplex Area of each valve 9.6 Pressure to which they are adjusted 203 U.S. Are they fitted with easing gear Yes
 Distance between boilers or uptakes and bunkers or woodwork 2 ft. Mean dia. of boilers 14' 9" Length 11' 0" Material of shell plates Steel
 Thickness 1 1/2" Range of tensile strength 60,000 to 71,680 Are the shell plates welded or flanged X Descrip. of riveting: cir. seams D.R. Lap
 Rivets Treble Rivet Diameter of rivet holes in long. seams 1-9/16" Pitch of rivets 10" Lap of plates or width of butt straps 22 1/2"
 Tensile strength of longitudinal joint rivets 98.1 Working pressure of shell by rules 228.8# Size of manhole in shell backhead 16"x12"
 plates 84.37
 Compensating ring No. and Description of Furnaces in each Boiler 3-Morison Material Steel Outside diameter 48-1/8"
 of plain part top crown Thickness of plates Description of longitudinal joint X No. of strengthening rings 9
 bottom bottom 21/32"
 Working pressure of furnace by the rules 222 Combustion chamber plates: Material Steel Thickness: Sides 11/16" Back 11/16" Top 11/16" Bottom 15/16"
 Stays to ditto: Sides 7 1/2"x7 1/2" Back 7 1/2"x7 1/2" Top 7"x8 1/2" If stays are fitted with nuts or riveted heads both Working pressure by rules 214-251
 of stays W.I. Diameter at smallest part 1.49" Dia. Area supported by each stay 57.3 Working pressure by rules 225 End plates in steam space 269
 Steel Thickness 1 1/4" Pitch of stays 17"x17" How are stays secured Nuts Working pressure by rules 242 Material of stays Steel
 at smallest part 3.034" Area supported by each stay 289 Sq. in Working pressure by rules 259.7 Material of Front plates at bottom Steel
 of tubes 13/16" Material of Lower back plate Steel Thickness 13/16" Greatest pitch of stays 7 1/4"x7 3/4" Working pressure of plate by rules 221
 of tubes 3" Pitch of tubes 4"x4-1/8" Material of tube plates Steel Thickness: Front 13/16" Back 13/16" Mean pitch of stays 8-1/8"
 Gross wide water spaces 13 1/2" Working pressures by rules 248.5 Girders to Chamber tops: Material Steel Depth and
 of girder at centre 11" x 3/4" Length as per rule 3' 0" Distance apart 1-5/8" Number and pitch of stays in each 4 x 7"
 Working pressure by rules 214 Steam dome: description of joint to shell % of strength of joint Diameter
 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

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