

REPORT ON MACHINERY

No. 549

TUE. 7-OCT. 1919

Received at London Office

of writing Report *Spokane, Wash.* 10 When handed in at Local Office *Spokane, Wash.* 10 Port of *Portland, Oregon*
 in Survey held at *Spokane, Wash.* Date, First Survey *Nov. 24 '18* Last Survey *Jan 17 1919*
 on the *Single Screw Steel S.S. War Company* (Number of Vessels *6*)

Gross *5752.05*
 Net *4247.40*

Tons
 When built *1919*

By whom made *Hallidie Co.* when made *1919*

By whom made *Vulcan Iron Works* when made *1919*

Registered Horse Power *577* Owners *Imperial Munition Board* Port belonging to *London*

Is Refrigerating Machinery fitted for cargo purposes *No* Is Electric Light fitted *Yes*

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COMBINE ENGINES, &c.

Description of Engines *Cross Compound, Geared Parsons Type* No. of Turbines *2*
 Diameter of Rotor Shaft Journals, H.P. *4"* L.P. *4"* Diameter of Pinion Shaft *4 1/8" + 12 5/8"*
 Diameter of Journals *5" + 10"* Distance between Centres of Bearings *2' 6" + 5' 1 1/2"* Diameter of Pitch Circle *4' 4 1/2" + 13' 2"*
 Diameter of Wheel Shaft *13 1/2"* Distance between Centres of Bearings *5' 1 1/2"* Diameter of Pitch Circle of Wheels *46' + 78' 8"*
 Diameter of Face *15" + 14"* Diameter of Thrust Shaft under Collars
 Diameter of Tunnel Shaft as per rule
 as fitted
 Diameter of Propeller Pitch of Propeller
 Diameter of Rotor Drum, H.P. *13' 19"* L.P. *26"* astern *2' 5" mean*
 Revs. per Minute at Full Power, Turbine *3200* Propeller *90*

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.
EXPANSION	<i>1 1/8"</i>	<i>1' 2 3/8"</i>	<i>4</i>	<i>1 1/8"</i>	<i>2' 5 3/4"</i>	<i>2</i>	<i>HP & LP Turbines fitted with astern units impulse nozzles on a mean dia. of 2' 5" HP 5" nozzle, LP 1 1/4" nozzle. 3 rows of buckets in each case.</i>		
"	<i>1 1/8"</i>	<i>1' 2 3/8"</i>	<i>4</i>	<i>2 1/2"</i>	<i>2' 7"</i>	<i>2</i>			
"	<i>1 1/8"</i>	<i>1' 3 1/4"</i>	<i>6</i>	<i>3 5/8"</i>	<i>2' 8 5/8"</i>	<i>2</i>			
"	<i>1 1/8"</i>	<i>1' 3 3/8"</i>	<i>6</i>	<i>4 3/8"</i>	<i>2' 10 3/4"</i>	<i>2</i>			
"	<i>1 1/8"</i>	<i>1' 9"</i>	<i>3</i>	<i>5"</i>	<i>3' 0"</i>	<i>1</i>			
"	<i>1 1/8"</i>	<i>1' 9 5/8"</i>	<i>3</i>	<i>5"</i>	<i>3' 0"</i>	<i>1</i>			
"	<i>1 1/8"</i>	<i>1' 10 3/8"</i>	<i>3</i>	<i>5"</i>	<i>3' 0"</i>	<i>1</i>			
"	<i>2 1/8"</i>	<i>1' 11 1/4"</i>	<i>3</i>	<i>5"</i>	<i>3' 0"</i>	<i>1</i>			

size of Feed pumps
 size of Bilge pumps
 size of Bilge suction in Engine Room
 In Holds, &c.

Bilge Injections sizes Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine Room & size
 the bilge suction pipes fitted with roses Are the roses in Engine room always accessible
 connections with the sea direct on the skin of the ship Are they Valves or Cocks
 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
 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
 pipes are carried through the bunkers How are they protected
 Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times
 Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges
 Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

MANUFACTURERS, &c.—(Letter for record) Manufacturers of Steel
 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
 each boiler be worked separately Area of fire grate in each boiler No. and Description of Safety Valves to
 boiler Area of each valve Pressure to which they are adjusted Are they fitted with easing gear
 least 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.
 seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps
 rivets
 percentages of strength of longitudinal joint Working pressure of shell by rules Size of manhole in shell
 plates

of compensating ring No. and Description of Furnaces in each Boiler Material Outside diameter
 length of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings
 bottom bottom
 working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom
 ch 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
 thickness 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,

Jno. J. Blakey

Manufacturer.

Dates of Survey while building { During progress of work in shops - - Nov. 24, Dec. 10, 19, 23, 1918. Jan. 16, 17, 1919.
During erection on board vessel - -
Total No. of visits 6

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Casings _____ Rotors _____ Blading _____ Gearing _____
Rotor 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 fired _____ Engines tried under steam _____
Main boiler safety valves adjusted _____ Thickness of adjusting washers _____
Material and tensile strength of Rotor shaft C.H. Steel 73560 lbs per sq in Identification Mark on Do. 164-C
Material and tensile strength of Thrust shaft O.H. Steel 69000 Identification Mark on Do. 164-E
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.)

These Turbines have been constructed under special survey in accordance with the Rules and to the approved plans. The materials and workmanship are sound and good. The Turbines have been forwarded to Vancouver B.C. to be fitted onboard Messrs John Goughlan's etc. Vessel. The O.H. Steel Rotor Shafts, Impulse Wheels and Flexible Couplings were tested and certified by the American Bureau of Shipping

The amount of Entry Fee ... £ : : When applied for, Feb. 14 1919
Special ... \$ 89.00
Donkey Boiler Fee ... £ : : When received, June 1919
Travelling Expenses (if any) £ 150.00

J. H. Yates
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 14 OCT. 1919

Assigned



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Foundation