

REPORT ON MACHINERY.

No. 571
AUG. 1919

Received at London Office.....

REC'D NEW YORK Aug. 14 1919

When writing Report July 10 1919 When handed in at Local Office July 10 1919 Port of Portland, Oregon.

Survey held at Spokane, Wash. Date, First Survey Jan 6, 1919. Last Survey May 27, 1919

Book. on the S. S. "WAR COLUMN" (J. Coughlan & Sons No. 9 Hull) (Number of Visits 4)

Tons } Gross 5757.44
Net 4247.28

Builder D. Gillies Built at Vancouver, B.C. By whom built J. Coughlan & Sons When built 1919.

Machinery made at Spokane, Wash. By whom made Hallidie Co. when made 1919.

Boilers made at Vancouver. By whom made Vulcan Iron Works. when made 1919

Registered Horse Power 577 Owners Imperial Mercantile Board Port belonging to London

Net Horse Power at Full Power 2500 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

L.P. Turbine of Shop No. 6. CABINE ENGINES, &c.—Description of Engines Gross Compound Geared Parson's No. of Turbines One

Diameter of Rotor Shaft Journals, H.P. L.P. 4" Diameter of Pinion Shaft 4 7/8" & 12 5/8"

Diameter of Journals 5" & 10" Distance between Centres of Bearings 2'6" & 5'1 1/2" Diameter of Pitch Circle 7.75" & 13.2"

Diameter of Wheel Shaft 13 1/2" Distance between Centres of Bearings Diameter of Pitch Circle of Wheel 46" & 78.8"

Thickness of Face 15" & 14" Diameter of Thrust Shaft under Collars Diameter of Tunnel Shaft as per rule as fitted

Diameter of Screw Shafts Diameter of same as per rule as fitted Diameter of Propeller Pitch of Propeller

Number of Blades State whether Moveable Total Surface Diameter of Rotor Drum, H.P. L.P. 26" Astern 2'5" mean

Thickness at Bottom of Groove, H.P. L.P. Astern Revs. per Minute at Full Power, Turbine 3200 Propeller 90

PARTICULARS OF BLADING.

EXPANSION	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.
.....				1 7/8"	2'5 3/4"	2			
"				2 1/2"	2'7"	2	L.P. Turbine astern unit		
"				3 5/16"	2' 8 5/8"	2	Impulse Nozzles on a mean		
"				4 3/8"	2'10 3/4"	2	diameter of 2'5".		
"				5"	3'0"	1	L.P. 1 1/2" Nozzle. 3 rows of		
"				5"	3'0"	1	buckets.		
"				5"	3'0"	1			
"				5"	3'0"	1			

and size of Feed pumps

and size of Bilge pumps

and size of Bilge suction in Engine Room

In Holds, &c.

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

How are pipes 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

MANUFACTURERS, &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

Per centages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell

Size 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

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 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

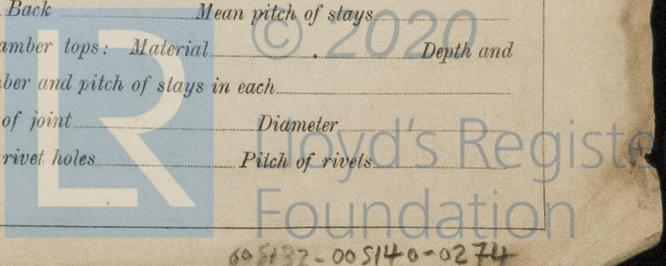
Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and

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



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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?

SPARE GEAR. State the articles supplied:— If so, is a report now forwarded?

The foregoing is a correct description,
HALLIDIE COMPANY,

Per J. H. Blakely Manufacturer.

Dates of Survey while building { During progress of work in shops - - } 1919. Jan 6. Mar. 10. April 10. May 27.
 { During erection on board vessel - - - }
 Total No. of visits **Four**

Is the approved plan of main boiler forwarded herewith
 Dates of Examination of principal parts—Casings **Jan 6.** " " " donkey " " "
 Rotor shaft **May 27** Thrust shaft **Apr. 10** Rotors **May 27** Blading **May 27** Gearing
 Stern tube _____ Tunnel shafts _____ Screw shaft _____ Propeller _____
 Steam pipes tested _____ Engine and boiler seatings _____ Engines holding down bolts _____
 Completion of pumping arrangements _____ Boilers fixed _____ Engines tried under steam **on testing station May 27.**
 Main boiler safety valves adjusted _____ Thickness of adjusting washers _____
 Material and tensile strength of Rotor shaft **L.P.O.H. Steel 63,200 lbs.** Identification Mark on Do. **123 A.W.L.**
 Material and tensile strength of Pinion shaft _____ Identification Mark on Do. _____
 Material of Wheel shaft _____ Identification Marks on Do. _____
 Material of Tunnel shafts _____ Material of Thrust shaft _____ Identification Mark on Do. _____
 Material of Steam Pipes _____ Material of Screw shafts _____ Identification Marks on Do. _____
 Is an installation fitted for burning oil fuel _____ Test pressure _____
 Have the requirements of Section 49 of the Rules been complied with _____ Is the flash point of the oil to be used over 150°F. _____
 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.)
 The L.P. half of Hallidie Company's No. 6 Turbine has now been installed in the S.S. "War Coloumn", J. Coughlan & Sons' No. 9 Hull, in place of damaged L.P. half of Turbine No. 10 removed for repairs.
 The Turbine has been constructed under special survey in accordance with the Rules and to the approved plans. The material and workmanship are sound and good.

The amount of Entry Fee	£	:	:	When applied for,
Special	\$ 20	:	36	June 11 1919
Donkey Boiler Fee	£	:	:	When received,
Travelling Expenses (if any)	\$ 58	:	50	June 14 1919

J. H. Blakely
 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. AUG. 20. 1919**
 Assigned see Minute on Ver. Rpt 7 & 6

