

REPORT ON MACHINERY.

No. 178

TUE. 31 DEC. 1918

REC'D NEW YORK Dec 11 1918

Date of writing Report 19 When handed in at Local Office 19 Port of Cleveland, Ohio
No. in Survey held at Wellsville, N.Y. Date, First Survey May 7th Last Survey June 22nd 1918
Reg. Book. 176 on the S. Sea Steamship "War Charger" (Number of Visits 4)
Master A.S. Walker Built at Vancouver, B.C. By whom built J. Coughlan & Son
Engines made at Wellsville, N.Y. By whom made The Aero Turbine Co. (50006-2) 50010. When built 1918
Boilers made at Vancouver, B.C. By whom made The Vulcan S. Works when made 1918
Registered Horse Power 442 Owners Messrs. Ralston & Verel. Port belonging to Vancouver, B.C.
Shaft Horse Power at Full Power 2650 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Tons { Gross 5787.33
Net 4229.24
When built 1918

URBINE ENGINES, &c.—Description of Engines Curtis Rotor, Double Reduction—No. of Turbines One
Diameter of Rotor Shaft Journals, H.P. 4.992 L.P. — Diameter of Pinion Shaft High speed 5.992 Low speed 9.487
Diameter of Journals H.S. 5.992 L.S. 9.487 Distance between Centres of Bearings H.S. 27.8 L.S. 62 Diameter of Pitch Circle H.S. 74.02 L.S. 10.878
Diameter of Wheel Shaft 14 Distance between Centres of Bearings L.S. 66.5 Diameter of Pitch Circle of Wheel H.S. 55.59 L.S. 52.11
Width of Face 16" Diameter of Thrust Shaft under Collars Diameter of Tunnel Shaft as per rule as fitted
No. of Screw Shafts Diameter of same as per rule as fitted Diameter of Propeller Pitch of Propeller
No. of Blades State whether Moveable Total Surface Diameter of Rotor H.P. 31.2 L.P. — Astern 31.2
Thickness at Bottom of Groove, H.P. — L.P. — Astern — Revs. per Minute at Full Power, Turbine 3600 Propeller 100

ARTICULARS 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.
1 ST EXPANSION	6" 8 1"	33 1/2"	2				6" 8 1"	33 1/2"	2
2 ND	6" 8 1"	33 1/2"	2				6" 8 3"	35 5/8"	1
3 RD	2"	35 1/8"	1						
4 TH	3"	35 7/8"	1						
5 TH	4"	36 5/8"	1						
6 TH	5"	39 7/8"	1						
7 TH	6"	41 3/4"	1						

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

OILERS, &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
Percentages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell plates
Size of compensating ring No. and Description of Furnaces in each Boiler Material Outside diameter
Length of plain part top crown Thickness of plates 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
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,

Kerr Turbine Co. Wellsville N.Y.
H.J. Hargrave & Co. E.

Dates of Survey while building

During progress of work in shops --
During erection on board vessel ---
Total No. of visits

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Casings

May 7th 1918

Rotors

May 7th 1918

Blading

May 7th 1918

Gearing

May 7th 1918

Rotor shaft

May 7th 1918

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 fixed

Engines tried under steam

Main boiler safety valves adjusted

Thickness of adjusting washers

Material and tensile strength of Rotor shaft

O.H.S. 102200 lbs

Identification Mark on Do. 974-5-218 W

Material and tensile strength of Pinion shaft

O.H.S. 95000 lbs

Identification Mark on Do. 319

Material of Wheel shaft

O.H.S.

Identification Mark on Do. 235 C.H.T

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 Yes

If so, state name of vessel Turbine No 50009 (50006-1)

General Remarks

(State quality of workmanship, opinions as to class, etc. The above machinery has been constructed

under Special Survey. The material and workmanship employed in its construction are sound and good. It has been forwarded to Vancouver B.C. to be fitted on board J. Couglan & Sons' vessel No 4

Certificate (if required) to be sent to

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

The amount of Entry Fee

1/3 Special

\$70.00

Donkey Boiler Fee

Buffet

\$51.40

Travelling Expenses (if any)

Chambers

lit.

When applied for,

19

When received,

22/1/19

M. Lunn. J.W. Swadlow

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 10 JAN. 1919

Assigned



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