

REPORT ON MACHINERY.

No. 19252
TUE NOV. 24 1920

Date of writing Report Oct. 1st 1920 When handed in at Local Office Oct 2nd 1920 Port of New York
No. in Survey held at Hoboken N.J. & New London Date, First Survey _____ Last Survey _____
Reg. Book. _____ on the Machinery for the S.S. Providence Province town _____
Master Slafford Built at Groton Conn. By whom built Groton Iron Works
Engines made at Hoboken N.J. By whom made N.Y. & F. Fletcher Co. When built 1920-9
Boilers made at Phorumville Pa. By whom made Heque Safety Boiler Company when made 1920-9
Registered Horse Power 654.7 Owners U.S. Shipping Board when made 1920-9
Shaft Horse Power at Full Power 2800 Is Refrigerating Machinery fitted for cargo purposes No Port belonging to Groton Conn.
Is Electric Light fitted Yes

URBINE ENGINES, &c.—Description of Engines Parsons Reaction Gear No. of Turbines 2
Diameter of Rotor Shaft Journals, H.P. 4" L.P. 4" Diameter of Pinion Shaft 7 3/4"
Diameter of Journals 1 1/2" pin 5 1/2" 12" Distance between Centres of Bearings 2-4" 4-4" 9" Diameter of Pitch Circle 1 1/2" pin 7 3/4" 2 1/2" pin 15 1/4"
Diameter of Wheel Shaft 16 1/4" Distance between Centres of Bearings 3-7" Diameter of Pitch Circle of Wheel 7-9 1/2"
Width of Face 2-2" Diameter of Thrust Shaft under Collars 23 Kingdon Truck Diameter of Tunnel Shaft as per rule 12-9 1/2"
No. of Screw Shafts One Diameter of same as per rule 14-10 Diameter of Propeller 16-6" Pitch of Propeller 12-1/4" mean
No. of Blades 4 State whether Movable Yes Total Surface 81-8 Diameter of Rotor Drum, H.P. 16" L.P. 22" astern
Thickness at Bottom of Groove, H.P. Solid L.P. Solid Astern Solid Revs. per Minute at Full Power, Turbine 3600 Propeller 90

ARTICULARS OF BLADING.

	H.P.			L.P.			H.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	5 1/2"	14 1/4"	6"	2 1/4"	2-2 1/2"	2	1 1/2"	2-3 3/16"	1
"	1 3/16"	14 5/8"	6	2 13/16"	2-3 3/8"	2	2 5/16"	2-3 15/16"	1
"	1 1/16"	15 1/8"	5	3 1/2"	2-5"	2	3 1/16"	2-4 1/16"	1
"	1 3/8"	15 3/4"	5	4 3/8"	2-6 3/4"	2	L.P. ASTERN.		
"	1 1/8"	16 1/4"	3	5"	2-8"	1	2 5/8"	2-4"	1 1/2" exp.
"	1 7/16"	16 7/8"	3	5"	2-8"	1	4 1/4"	2-5 3/8"	1-2
"	1 7/8"	16 3/4"	3	5"	2-8"	1	5 7/8"	2-7 1/4"	1-3
"	2 3/8"	20 3/4"	3	5"	2-8"	1			

and size of Feed pumps 2. Vertical. Flotal Control 12"x8"x24"
and size of Bilge pumps 3. (1) 12"x10 1/4"x12" (1) 6"x5 3/4"x6" (1) 12"x8 1/2"x12"
and size of Bilge suction in Engine Room 4 - 3 1/2"

4 Hold 2 - 3 1/2" No. 5 Hold 2 3 1/2" After Valve 7 - 2 1/2" No. 1 Hold 2 - 3 1/2" No. 2 Hold 2 - 3 1/2" No. 3 Hold 2 - 3 1/2"

of Bilge Injections 1 sizes 10" Connected to condenser or to circulating pump Yes Is a separate Donkey Suction fitted in Engine Room & size Yes 4"
all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes
all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both Yes
they sized 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 Above
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
pipes are carried through the bunkers None How are they protected Yes
all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
the 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 Top Platform

ERS, &c.—(Letter for record 2) Manufacturers of Steel Midvale Steel & Ordnance Co.
Heating Surface of Boilers 9510 Is Forced Draft fitted Induced No. and Description of Boilers 3 Water tube, Heque patent
ing Pressure 225 lbs. Tested by hydraulic pressure to 450 lbs. Date of test 21/7/20 No. of Certificate A.B. Certificate
each boiler be worked separately Yes Area of fire grate in each boiler 102 No. and Description of Safety Valves to 195 lbs.
2 Spring loaded Area of each valve 9.62 Pressure to which they are adjusted 195 lbs. Are they fitted with easing gear Yes
distance between boilers or uptakes and bunkers or woodwork See Mean dia. of boilers _____ Length _____ Material of shell plates _____
less _____ Range of tensile strength Report Are the shell plates welded or flanged Attached Descrip. of riveting: cir. seams _____
ams Boilers Diameter of rivet holes in long. seams built to Pitch of rivets A.B. Survey Lap of plates or width of butt straps _____

stages of strength of longitudinal joint _____ rivets _____ plates _____ Working pressure of shell by rules _____ Size of manhole in shell _____
compensating ring _____ No. and Description of Furnaces in each Boiler _____ Material _____ Outside diameter _____
of plain part _____ top _____ crown _____ Description of longitudinal joint _____ No. of strengthening rings _____
bottom _____ Thickness of plates _____ bottom _____
g pressure of furnace by the rules _____ Combustion chamber plates: Material _____ Thickness: Sides _____ Back _____ Top _____ Bottom _____
stays to ditto: Sides _____ Back _____ Top _____ If stays are fitted with nuts or riveted heads _____ Working pressure by rules _____
of stays _____ Diameter at smallest part _____ Area supported by each stay _____ Working pressure by rules _____ End plates in steam space _____
Thickness _____ Pitch of stays _____ How are stays secured _____ Working pressure by rules _____ Material of stays _____
at smallest part _____ Area supported by each stay _____ Working pressure by rules _____ Material of Front plates at bottom _____
Material of Lower back plate _____ Thickness _____ Greatest pitch of stays _____ Working pressure of plate by rules _____
Pitch of tubes _____ Material of tube plates _____ Thickness: Front _____ Back _____ Mean pitch of stays _____
ross wide water spaces _____ Working pressures by rules _____ Girders to Chamber tops: Material _____ Depth and _____
of girder at centre _____ Length as per rule _____ Distance apart _____ Number and pitch of stays in each _____
pressure by rules _____ 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 _____
pressure of shell by rules _____ Crown plates: Thickness _____ How stayed _____

W1563-0094

SUPERHEATER Type *See* Date of Approval of Plan *Boiler* Tested by Hydraulic Pressure to
Date of Test *Report* 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 *Attached* Is Easing Gear fitted

IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded? ☒

SPARE GEAR. State the articles supplied: *2 Bolt & nuts for each size of rotor bearing: 2 bolt & nuts for main gear wheel bearing: 2 bolt & nuts for pinion bearings: 1 set of coupling bolts of each size used: 1/20" total number of bolt & nuts for each gear case joint: ditto for each turbine case joint: 2 Thermometers for oil circulating system: one lubricating pump: 1 set of brushes for gear wheel shaft: one set of bearing bushes for rotor shaft: one set of bearing bushes for pinion shaft: one high speed pinion shaft: white metal pads for H.P. & L.P. turbine thrust: pads for Kingston Thrust block: one half set of packing rings for each end of rotor shaft and pinion for same: 20 boiler tubes: 2 propeller blades: 1 escape valve springs: 10% of oil cooler tubes and ferrules: 1 raw iron & plunger: 2 sets of valves for main feed: 1 large ballast: 1 large pump: lubricating oil transfer pumps: Packing for steam & water pistons: 1 set of hand tools: spare tubes & ferrules for main & aux. condensers: 1 boiler bolt & nut: mild steel flats & rounds.*

The foregoing is a correct description.

Manufacturer.

Dates of Survey while building
During progress of work in shops
During erection on board vessel
Total No. of visits

1919 Feb 11, 21, 26 Mar 3, 5, 11, 13, 19, 31 Apr 4, 7, 14, 16, 23, 25, 29 May 10, 17, 24, 27
1919 Dec 17 1920 Jan 2 Mar 16 Apr 6, 13 May 4, 5, 18 Jun 22, 29 Jul 20, 27 Aug 11, 18 Sep 22, 29

Is the approved plan of main boiler forwarded herewith? *No*

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 fixed

Engines fired under steam

Main boiler safety valves adjusted

Thickness of adjusting washers

Lock nuts fitted

Material and tensile strength of Rotor shaft *G. H. Steel*

Identification Mark on Do.

Material and tensile strength of Pinion shaft *G. H. Steel*

Identification Mark on Do.

Material of Wheel shaft *G. H. Steel*

Identification Mark on Do.

Material of Tunnel shafts *G. H. Steel*

Identification Marks on Do.

Material of Steam Pipes *Steamers Steel tubing & copper*

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.)

The Turbines, reduction gear & all shafting has been constructed under Special Survey and in accordance with the Rules & approved plans. The Boilers have been constructed under the inspection of the American Bureau of Shipping. The materials & workmanship are good & efficient. The steam trial of turbines and boilers proved satisfactory, and the case is respectfully submitted for the notation L.M.C. 9-20: Fitted for oil fuel 9-20 F.P. above 150°F. and electric light in the Register Book. The main tube boilers to be surveyed annually. (See also N.Y. reg. no 18853)

The amount of Entry Fee ... £ *\$15.00* :
Special ... £ *\$263.50* :
Donkey Boiler Fee ... £ *126.86* :
Travelling Expenses (if any) £ : :
When applied for, *22/10/1920*
When received, *24/10/1920*

J. Hudson
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *New York* OCT 19 1920

Assigned

L.M.C. 9.20 Subscribed



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