

Rpt. 4a.

# REPORT ON MACHINERY.

No. 16562  
MUNDO-NOV. 1919

Portland No. 561

Before Committee  
May 29-1919.

June 1919

Received at London Office

Date of writing Report REC'D NEW YORK May 17-1919 When handed in at Local Office 19 Port of New York N.Y.

No. in Survey held at Schenectady N.Y. Date, First Survey \_\_\_\_\_ Last Survey \_\_\_\_\_ 19  
Reg. Book \_\_\_\_\_ (Number of Visits \_\_\_\_\_)

on the "West Totant" Tons  $\left\{ \begin{array}{l} \text{Gross} \\ \text{Net} \end{array} \right.$  \_\_\_\_\_

Master \_\_\_\_\_ Built at \_\_\_\_\_ By whom built \_\_\_\_\_ When built \_\_\_\_\_

Engines made at Schenectady N.Y. By whom made General Electric Co. when made 1919.

Boilers made at \_\_\_\_\_ By whom made \_\_\_\_\_ when made \_\_\_\_\_

Registered Horse Power \_\_\_\_\_ Owners \_\_\_\_\_ Port belonging to \_\_\_\_\_

Shaft Horse Power at Full Power 2500. Is Refrigerating Machinery fitted for cargo purposes \_\_\_\_\_ Is Electric Light fitted \_\_\_\_\_

**TURBINE ENGINES, &c.**—Description of Engines Grand turbine gear 13558. No. of Turbines One.

Diameter of Rotor Shaft Journals, H.P. 8" L.P.  Diameter of Pinion Shaft 7"

Diameter of Journals H.S.P. 7" Distance between Centres of Bearings H.S.P. 27" Diameter of Pitch Circle H.S.P. 7-612

Diameter of Wheel Shaft 14" Distance between Centres of Bearings L.S.P. 63 1/4" Diameter of Pitch Circle of Wheel 2-5-7-11-442

Width of Face 20-44 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 Drum, H.P.  L.P.  Astern

Thickness at Bottom of Groove, H.P.  L.P.  Astern  Revs. per Minute at Full Power, Turbine 3234 Propeller 90.

## PARTICULARS OF BLADING.

	ACTIVE H.P.			L.P.			ACTIVE 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.
1ST EXPANSION	75-125	2-11 1/2"	2				81 1/2-115	3-3"	2
2ND "	62 1/2	3-9"	1				83 1/2	3-3"	1
3RD "	125	3-10 1/2"	1						
4TH "	2-5	4-0"	1						
5TH "	6-0	4-2"	1						
6TH "			*						
7TH "									
8TH "									

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 \_\_\_\_\_

**BOILERS, &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 \_\_\_\_\_ plates \_\_\_\_\_

Size of compensating ring \_\_\_\_\_ No. and Description of Furnaces in each Boiler \_\_\_\_\_ Material \_\_\_\_\_ Outside diameter \_\_\_\_\_

Length of plain part \_\_\_\_\_ top \_\_\_\_\_ 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 \_\_\_\_\_

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 \_\_\_\_\_

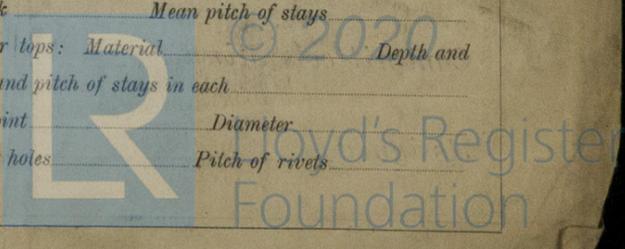
Working pressure of shell by rules \_\_\_\_\_ Crown plates: Thickness \_\_\_\_\_ How stayed \_\_\_\_\_

If not, state whether, and when, one will be sent?

Is a Report also sent on the Hull of the Ship?

Im. 918-T.

W242-0034



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,  
*General Electric Co.* Manufacturer.  
*per N. Berg*

Dates of Survey while building { During progress of work in shops -- } *1919 Jan. 8, 13, 15, 23, 28.*  
 { 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 *8.1.19* Rotors *15.1.19* Blading *15.1.19* Gearing *23.1.19*  
 Rotor shaft *8.1.19* 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 *Steel 80,000 lbs. 7" minimum* Identification Mark on Do. *T.G.D.*

Material and tensile strength of Pinion shaft *" 85,000 " "* Identification Mark on Do. *T.G.D.*

Material of Wheel shaft *Steel* Identification Mark on Do. *T.G.D.* 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 engines have been constructed under Special Survey in accordance with the approved plans. The materials and workmanship are sound and good. The engines have been forwarded to Columbia River P. & S. Co. to be fitted on board.*

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	£	:	:	When applied for,
Special	£	:	:	19
Donkey Boiler Fee	£	:	:	When received,
Travelling Expenses (if any)	£	:	:	19

*A. Pratt*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute \_\_\_\_\_

Assigned \_\_\_\_\_

*See Portland rpt 561*

