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REPORT ON MACHINERY

N.Y. No. 14118

REC'D NEW YORK

Jan 24 1918

Received at London Office

SAT. 23 FEB 1918

Survey held at Schenectady N.Y.

Port of New York, N.Y.

on the Union Iron No 143

Date, First Survey May 5th

Last Survey

19

Engines made at Schenectady N.Y.

By whom built

General Electric Co.

Motors made at

By whom made

When made

Registered Horse Power

Owners

When made

Shaft Horse Power at Full Power 2600

Is Refrigerating Machinery fitted for cargo purposes

Port belonging to

Is Electric Light fitted

TURBINE ENGINES, &c.

Description of Engines GEARED TURBINE (TURBINE 12407 GEAR 2542)

No. of Turbines ONE

Diameter of Rotor Shaft Journals, H.P. 8"

L.P.

Diameter of Pinion Shaft 4"

Diameter of Journals H.S. PINION 7"

Distance between Centres of Bearings H.S. GEAR 10"

Diameter of Pitch Circle H.S. PINION 4.833"

Diameter of Wheel Shaft 14"

Distance between Centres of Bearings H.S. GEAR 38 1/2"

Diameter of Pitch Circle of Wheel H.S. PINION 10.75"

Thickness of Face 14.35"

Diameter of Thrust Shaft under Collars

Diameter of Tunnel Shaft H.S. WHEEL 54 1/2"

Diameter of Screw Shafts

Diameter of same as per rule

Diameter of Propeller

Diameter of Tunnel Shaft as fitted

Number of Blades

State whether Moveable

Total Surface

Pitch of Propeller

Thickness at Bottom of Groove, H.P.

L.P.

Astern

Revs. per Minute at Full Power, Turbine 3374.5

Diameter of Rotor Drum, H.P.

L.P.

Astern

Propeller 90

PARTICULARS OF BLADING.

EXPANSION	ACTIVE. H.P.			L.P.			ACTIVE. ASTERN.		
	HEIGHT OF BLADES.	PITCH DIAMETER	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	PITCH DIAMETER	NO. OF ROWS.
.....	1.25	2'-11 1/2"	2				8 1/2	2'-3"	2
.....	1.25	3'-9"	1				3'-3 1/2"	2'-3"	1
.....	2.5	3'-10 1/2"	1						
.....	6	4'-0"	1						
.....		4'-2"	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 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
 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 Thickness of plates crown Description of longitudinal joint No. of strengthening rings 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

5155-0155



Lloyd's Register Foundation

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,

J. J. Sullivan
General Electric Co Manufacturer.

Dates of Survey while building { During progress of work in shops - - } *May 5-10-15-23-31*
 { 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 _____ Rotors _____ donkey _____
 Rotor shaft _____ Thrust shaft _____ Tunnel shafts _____ Blading _____ Gearing _____
 Stern tube _____ Steam pipes tested _____ Engine and boiler seatings _____ Screw shaft _____ Propeller _____
 Completion of pumping arrangements _____ Boilers fixed _____ Engines holding down bolts _____
 Main boiler safety valves adjusted _____ Thickness of adjusting washers _____ Engines tried under steam _____
 Material and tensile strength of Rotor shaft *STEEL 80,000 LBS. 1" MIN.* Identification Mark on Do. *T.G.D.*
 Material and tensile strength of Pinion shaft *" 100,000 " " "* 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 San Francisco to be fitted on board.*

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

The amount of Entry Fee ... £ *1/3 machine to be paid credited to this part* : :
 Special ... £ : :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :
 N.Y. \$20.⁰⁰ *Included in S 70 Rpt. 264.*

H. P. Bond
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *New York* JAN 29 1918

Assigned *See other report*