

## REPORT ON MACHINERY.

No. 13728

REC'D NEW YORK

August 16, 1917

Received at London Office

Port of New York  
Date, First Survey Mar. 2<sup>nd</sup> Last Survey 1917  
Survey held at Schenectady N.Y.  
on the Union Iron Works 717  
Master Built at San Francisco By whom built Union Iron Works When built 1917  
Engines made at Schenectady N.Y. By whom made General Electric Co. when made 1917  
Boilers made at  By whom made  when made   
Registered Horse Power  Owners  Port belonging to   
Shaft Horse Power at Full Power 2400 Is Refrigerating Machinery fitted for cargo purposes  Is Electric Light fitted

URBINE ENGINES, &c.—Description of Engines Grand Turbine No. of Turbines One  
Diameter of Rotor Shaft Journals, H.P. 8" L.P. 4" Diameter of Pinion Shaft 4"  
Diameter of Journals H.S. PINION 10" Distance between Centres of Bearings H.S. GEAR 38" Diameter of Pitch Circle H.S. GEAR 57-666  
Diameter of Wheel Shaft 14" Distance between Centres of Bearings L.S. PINION 84" Diameter of Pitch Circle of Wheel L.S. WHEEL 1075"  
Width of Face 14-35 Diameter of Thrust Shaft under Collars  Diameter of Tunnel Shaft   
No. of Screw Shafts 4 Diameter of same as per rule 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 2280 Propeller 90

## PARTICULARS OF BLADING.

	H. P.			L. P.			ASTERN.		
	ACTIVE HEIGHT OF BLADES.	PITCH. DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	ACTIVE HEIGHT OF BLADES.	PITCH. DIAMETER AT TIP.	NO. OF ROWS.
1ST EXPANSION	75-126"	2'-11 1/2"	2				8126-15"	2'-2"	2
2ND	626"	3'-9"	1				8276"	3'-2"	1
3RD	126"	3'-10 1/2"	1						
4TH	2-6"	4'-0"	1						
5TH	6"	4'-2"	1						
6TH									
7TH									
8TH									

No. and size of Feed pumps

No. and size of Bilge pumps

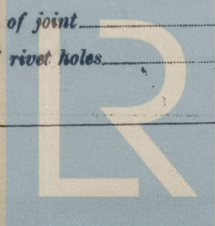
No. and size of Bilge suction in Engine Room

In Holds, &amp;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  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  End plates in steam space   
Material of stays  Diameter at smallest part  Area supported by each stay  Working pressure by rules  Material of stays   
Material  Thickness  Pitch of stays  How are stays secured  Working pressure by rules  Material of Front plates at bottom   
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.**

Ty. e

Date of Approval of Plan

Date of Test

Tested by Hydraulic Pressure to

Diameter of Safety Valve

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

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,

*E. H. Johnson*

Manufacturer.

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

*Mar. 2-7-15*

Is the approved plan of main boiler forwarded herewith

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 tried under steam

Main boiler safety valves adjusted

Thickness of adjusting washers

Material and tensile strength of Rotor shaft

*STEEL 80,000 LBS. PER SQ. INCH 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, Cal. to be fitted on board.*

The amount of Entry Fee ... £

Special ... £

Donkey Boiler Fee ... £

Travelling Expenses (if any) £

When applied for,

*S.F. Aug 6, 1917*

When received,

*15/10/17*

*H. J. Reed*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

*New York AUG 21 1917*

Assigned

*See other report*



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