

# REPORT ON MACHINERY.

3069

No. 15622

REC'D NEW YORK Oct. 8-1918

Received at London Office

Date of writing Report 19 When handed in at Local Office 31<sup>st</sup> Dec 1918 Port of Philadelphia Pa. Date, First Survey 2<sup>nd</sup> July 1918. Last Survey 30<sup>th</sup> Dec 1918  
No. in Survey held at Admiralty 74 Reg. Book. on the STEEL SCREW STEAMER "SACCARAPPA" (Number of Visits 60)

Master R. T. L. Allen Built at Philadelphia Pa. By whom built American International Corp. When built 1918.  
Engines made at Schmitz & Co. By whom made General Electric Company when made 1918  
Boilers made at Bayonne N.J. By whom made Babcock & Wilcox Co. when made 1918.  
Registered Horse Power 600. Owners Emergency Fleet Corporation. Port belonging to Philadelphia  
Shaft Horse Power at Full Power 2500 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

TURBINE ENGINES, &c.—Description of Engines Grand Turbine (Turbin. 13501) No. of Turbines One  
Diameter of Rotor Shaft Journals, H.P. 8" L.P. Diameter of Pinion Shaft 7"  
Diameter of Journals H.S. PINION 4" Distance between Centres of Bearings "GEAR 38" Diameter of Pitch Circle "GEAR 37.888"  
Diameter of Wheel Shaft 14" Distance between Centres of Bearings L.S. PINION 62 1/4" Diameter of Pitch Circle of Wheel "GEAR 34.058"  
Diameter of Face 20.44" Diameter of Thrust Shaft under Collars 13.25" Diameter of Tunnel Shaft as per rule 12.48" as fitted 12.625"  
Diameter of Screw Shafts as per rule 14.5" Diameter of Propeller 17.0" Pitch of Propeller 13.9"  
State whether Moveable no. Total Surface 98.86 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 2234 Propeller 90

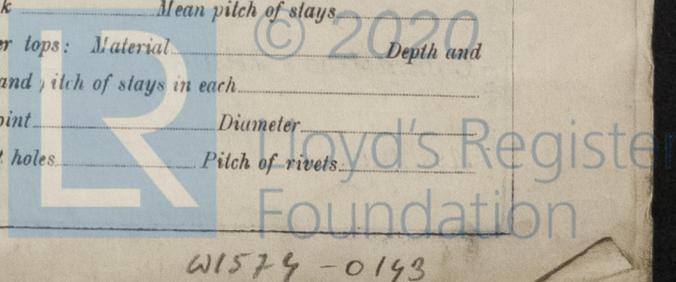
## PARTICULARS OF BLADING.

	ACTIVE H.P.			L.P.			ACTIVE ASTERN.		
	HEIGHT OF BLADES.	PITCH DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	PITCH DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	PITCH DIAMETER AT TIP.	NO. OF ROWS.
EXPANSION	7.5-12.5	2'-11 1/2"	2				8.125-1.5	2'-3"	2
"	6.25	3'-9"	1				3.375	2'-3"	1
"	1.25	3'-10 1/2"	1						
"	2.5	4'-0"	1						
"	6.0	4'-2"	1						

and size of Feed pumps Two 10" x 6" x 24"  
and size of Bilge pumps Two 12" x 8 1/2" x 12" and 10" x 12" x 12"  
and size of Bilge suction in Engine Room Two - 3 1/2" Dia. Thrust room 1-23" Fire room Two - 3 1/2" Dia  
one - 3 1/2", 7" 5 one - 3 1/2" Tunnel well one - 3 1/2" In Holds, &c. 7" 1 - Two - 3 1/2", one - 2 1/2", 7" 2 - Two - 3 1/2", 7" 3 - Two - 3 1/2"  
of Bilge Injections one sizes 10" Connected to condenser, or to circulating pump pump. Is a separate Donkey Suction fitted in Engine Room & size yes - 3 1/2"  
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.  
they fixed 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 below  
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  
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 upper engine platform.

## BOILERS, &c.—(Letter for record (S) Manufacturers of Steel

Heating Surface of Boilers 8706 Is Forced Draft fitted yes No. and Description of Boilers  
Working Pressure 200 lb Tested by hydraulic pressure to Date of test No. of Certificate  
each boiler be worked separately Area of fire grate in each boiler No. and Description of Safety Valves to  
boiler Area of each valve Pressure to which they are adjusted Are they fitted with easing gear  
least distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates  
Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams  
Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps  
Advantages of strength of longitudinal joint Working pressure of shell by rules Size of manhole in shell  
No. and Description of Furnaces in each Boiler Material Outside diameter  
87% of plain part Thickness of plates Description of longitudinal joint No. of strengthening rings  
Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom  
of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules  
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  
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  
Working pressures by rules Girders to Chamber tops: Material Depth and  
Length as per rule Distance apart Number and pitch of stays in each  
Steam dome: description of joint to shell % of strength of joint Diameter  
Description of longitudinal joint Diameter of rivet holes Pitch of rivets  
Crown plates: Thickness How stayed



W1579-0193

**SUPERHEATER.** Type Foster Date of Approval of Plan In New York office. Tested by Hydraulic Pressure to 2100 lbs.  
 Date of Test 9/10/18. Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler yes  
 Diameter of Safety Valve 1" Pressure to which each is adjusted 200 lbs. Is Easing Gear fitted yes

IS A DONKEY BOILER FITTED? no. If so, is a report now forwarded? ✓

**SPARE GEAR.** State the articles supplied:— Two studs for each rotor bearing, gear & pinion bearing, set of coupling bolts for each size used, 1/20 of total number of bolts & nuts for each gear case joint & turbine casing joint, two thermometers for oil circulating system, 1 complete set of bearing bushes for rotor, pinion and gear shafts, complete set of packing sleeves for turbine head & diaphragm, two main thrust shoes, 1 set of thrust rings for turbine, 1 set of feed pump valves, 1 set of bilge pump valves, 1 set of valves for lubricating oil pump, 1 bucket & rod for lubricating oil pump, 1 emergency governor complete, Quantity of assorted bolts, studs & nuts, bars & plates of mild steel, 1 High speed pinion shaft, 1 Propeller, 10 boiler tubes, 15 nipples, 15 hand hole doors, 38 condenser tubes and one set of boiler feed check valves.

The foregoing is a correct description,  
General Electric Co. Manufacturer.  
per S. Berg.

1918  
 Dates of Survey while building  
 During progress of work in shops -- July 2, 10, 16, 23, 25, Aug 7, 14, 19, 16, 21, 23, 28, 29, Sept 3, 6, 7, 10, 13, 17, 20, 23, 26, 30, Oct 2, 4, 7, 10, 13, 16, 19, 22, 25, 29 Aug 2, 7, 9, 12, 14, 19, 16, 21, 23, 28, 29, Sept 3, 6, 7, 10, 13, 17, 20, 23, 26, 30, Oct 2, 4, 7, 10, 13, 16, 19, 22, 25, 29, Nov 1, 4, 6, 11, 13, 16, 18, 21, 25, 27, Dec 3, 4, 13, 16, 21, 22, 23, 30  
 During erection on board vessel --- no.  
 Total No. of visits 60.  
 Is the approved plan of main boiler forwarded herewith no  
 " " " donkey " " " ✓

Dates of Examination of principal parts—	Casings	Rotors	Blading	Gearing
Rotor shaft	Thrust shaft <u>7/9/18</u>	Tunnel shafts <u>7/9/18</u>	Screw shaft <u>16/8/18</u>	Propeller <u>16/8/18</u>
Stern tube <u>23/8/18</u>	Steam pipes tested <u>16/11/18</u>	Engine and boiler seatings <u>21/10/18, 16/8/18</u>	Engines holding down bolts <u>6/11/18</u>	
Completion of pumping arrangements <u>2/12/18</u>	Boilers fixed <u>9/10/18</u>	Engines tried under steam <u>22/12/18</u>		
Main boiler safety valves adjusted <u>21/12/18</u>	Thickness of adjusting washers <u>lock nuts.</u>			
Material and tensile strength of Rotor shaft <u>STEEL 80,000 LBS. MINIMUM.</u>	Identification Mark on Do. <u>T.G.D.</u>			
Material and tensile strength of Pinion shaft <u>85,000 " "</u>	Identification Mark on Do. <u>T.G.D.</u>			
Material of Wheel shaft <u>STEEL</u>	Identification Mark on Do. <u>T.G.D.</u>	Material of Thrust shaft <u>steel</u>	Identification Mark on Do. <u>T.H.</u>	
Material of Tunnel shafts <u>steel</u>	Identification Marks on Do. <u>T.H.</u>	Material of Screw shafts <u>steel</u>	Identification Marks on Do. <u>T.H.</u>	
Material of Steam Pipes <u>steel</u>	Test pressure <u>600 lbs. ✓</u>			
Is an installation fitted for burning oil fuel <u>yes</u>	Is the flash point of the oil to be used over 150°F. <u>yes.</u>			
Have the requirements of Section 49 of the Rules been complied with <u>yes.</u>				

Is this machinery a duplicate of a previous case yes. If so, state name of vessel "QUISTCONCK"

**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 material and workmanship are sound and good. The engines have been forwarded to Philadelphia Pa. to be fitted on board. Philadelphia:— The boilers and machinery of this vessel have been securely fitted aboard and satisfactorily tried under steam. It is submitted that the vessel be eligible for a record of + L.M.C 12-18 fitted for oil fuel 12-18, flash point above 150°F, in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. + LMC 12-18 F.D. FITTED FOR OIL FUEL 12-18 F.P. ABOVE 150°F.

The amount of Entry Fee ... £ ✓  
 Special Philadelphia } £ 250.00  
New York }  
 Donkey Boiler Fee ... £ :  
 Travelling Expenses (if any) £ :

1 Geared Steam Turbine.  
 Subject to the Watertube boilers being surveyed Annually  
 J.H. Dodd, J.W.D. 30/1/19  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute New York JAN. 7 1919

Assigned + Lmc 12.18  
Fitted for oil fuel 12.18 fl. above 150°F  
 MACHINERY CERTIFICATE  
 WRITTEN 28/1/19.

