

Hull 540

3408

Rpt. 4a.

REPORT ON MACHINERY

No. 17023
TUE 7-OCT 1919

RECEIVED NEW YORK
Date of writing Report 11th Sept. 1919 When handed in at Local Office 13th Sept. 1919 Port of New York N.Y. and Philadelphia
No. in Survey held at Philadelphia Date, First Survey 28th March '19 Last Survey 11th Sept. 1919
Reg. Book. Philadelphia (Number of Visits 36)
on the STEEL SCREW STEAMER "LAFCOMO" Tons { Gross 5562
Net 434

Master Lafone Built at Philadelphia By whom built American International Corp. When built 1919
Engines made at Philadelphia N.Y. By whom made General Electric Co. when made 1919
Boilers made at Bayonne N.J. By whom made Babcock & Wilcox Co., MB605 when made 1918
Registered Horse Power 600 Owners United States Shipping Board 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 gear 347 No. of Turbines One
Diameter of Rotor Shaft Journals, H.P. 8" L.P. Y Diameter of Pinion Shaft 7"
Diameter of Journals 6.10" Distance between Centres of Bearings 6.38" Diameter of Pitch Circle 6.57.888
Diameter of Wheel Shaft 14" Distance between Centres of Bearings 6.31" Diameter of Pitch Circle of Wheel 6.54.058
Width of Face 20.44 Diameter of Thrust Shaft under Collars 13.25" Diameter of Tunnel Shaft as per rule 13.48"
No. of Screw Shafts one Diameter of same as per rule 14" Diameter of Propeller 17' 0" Pitch of Propeller 13' 9"
No. of Blades 4 State whether Moveable no Total Surface 98.8 f 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 HEIGHT OF BLADES.	H.P. PITCH. DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	L.P. DIAMETER AT TIP.	NO. OF ROWS.	ACTIVE HEIGHT OF BLADES.	ASTERN. PITCH. DIAMETER AT TIP.	NO. OF ROWS.
1ST EXPANSION	7.5-1.25	2'-11 1/2"	2				8.125-1.5	3'-2"	2
2ND	6.25	3'-9"	1				3.375	3'-3"	1
3RD	1.25	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 Two 10" x 6" x 24"
No. and size of Bilge pumps Two 12" x 8 1/2" x 12" and 10" x 12" x 12"
No. and size of Bilge suction in Engine Room Two-3 1/2" dia, must recess 1-2 1/2", Fire room 2-3 1/2"
In Holds, &c. N°1 Two-3 1/2", No-2 2 1/2", N°2 Two-3 1/2", N°3 Two-3 1/2"
N°4 one-3 1/2", N°5 one-3 1/2", Tunnel well one-3 1/2"
No. of Bilge Injections one sizes 10" Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine Room & size yes-3 1/2"
Are all the bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible yes
Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks both
Are 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
Are 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
What pipes are carried through the bunkers none How are they protected
Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes
Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yes
Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from upper engine platform
SEE REPORT 5

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

Total Heating Surface of Boilers 8700 Is Forced Draft fitted yes No. and Description of Boilers 3. Watertube Boilers
Working Pressure 200 Tested by hydraulic pressure to yes Date of test yes No. of Certificate
Can each boiler be worked separately yes Area of fire grate in each boiler yes No. and Description of Safety Valves to each boiler yes
Area of each valve yes Pressure to which they are adjusted yes Are they fitted with easing gear yes
Smallest distance between boilers or uptakes and bunkers or woodwork yes Mean dia. of boilers yes Length yes Material of shell plates yes
Thickness yes Range of tensile strength yes Are the shell plates welded or flanged yes Descrip. of riveting: cir. seams yes
long. seams yes Diameter of rivet holes in long. seams yes Pitch of rivets yes Lap of plates or width of butt straps yes
Per centages of strength of longitudinal joint yes Working pressure of shell by rules yes Size of manhole in shell yes
Size of compensating ring yes No. and Description of Furnaces in each Boiler yes Material yes Outside diameter yes
Length of plain part yes Thickness of plates yes Description of longitudinal joint yes No. of strengthening rings yes
Working pressure of furnace by the rules yes Combustion chamber plates: Material yes Thickness: Sides yes Back yes Top yes Bottom yes
Pitch of stays to ditto: Sides yes Back yes Top yes If stays are fitted with nuts or riveted heads yes Working pressure by rules yes
Material of stays yes Diameter at smallest part yes Area supported by each stay yes Working pressure by rules yes End plates in steam space yes
Material yes Thickness yes Pitch of stays yes How are stays secured yes Working pressure by rules yes Material of stays yes
Diameter at smallest part yes Area supported by each stay yes Working pressure by rules yes Material of Front plates at bottom yes
Thickness yes Material of Lower back plate yes Thickness yes Greatest pitch of stays yes Working pressure of plate by rules yes
Diameter of tubes yes Pitch of tubes yes Material of tube plates yes Thickness: Front yes Back yes Mean pitch of stays yes
Pitch across wide water spaces yes Working pressures by rules yes Girders to Chamber tops: Material yes Depth and yes
thickness of girder at centre yes Length as per rule yes Distance apart yes Number and pitch of stays in each yes
Working pressure by rules yes Steam dome: description of joint to shell yes % of strength of joint yes Diameter yes
Thickness of shell plates yes Material yes Description of longitudinal joint yes Diameter of rivet holes yes Pitch of rivets yes
Working pressure of shell by rules yes Crown plates: Thickness yes How stayed yes

SUPERHEATER. Type Foster Date of Approval of Plan In New York Office Tested by Hydraulic Pressure to 1100

Date of Test 27-6-19 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 bolts and nuts or studs for each rotor bearing, gear a pinion bearings; one set of coupling bolts for each size used; 50 of total number of bolts and nuts for each gear case joint and turbine casing joint; two thermometers for oil circulating system; one complete set of bearing bushes for rotor, pinion and gear shafts; complete set of packing sleeves for turbine head and diaphragm; two main thrust shoes; one set of thrust rings for turbine; one set of feed pump valves; one set of bilge pump valves; one set of valves for lubricating oil pump; one bucket rod for lubricating oil pump; one emergency governor complete; quantity of assor bolts studs and nuts, bars and plates of mild steel; one high speed pinion shaft; one propeller; 14 boiler tubes, 15 rippers, 15 hand hole doors, 38 condenser tubes; one set of boiler feed check valves and two safety valve springs

The foregoing is a correct description,

General Electric Co.
per S.A.Burg.

Manufacturer.

Dates of Survey while building
During progress of work in shops -- 2.5.19: 6.5.19: 12.5.19: 13.5.19: 23.5.19: 17.5.19: 4.6.19
During erection on board vessel -- 1919. Mar 28. April 2, 16, 30. May 6, 16, 21, 22. June 4, 11, 13, 16, 17, 20, 24, 26, 27.
Total No. of visits 36
Is the approved plan of main boiler forwarded herewith no

Dates of Examination of principal parts—Casings 13.5.19 Rotors 2.5.19 Blading 17.5.19 Gearing 6.5.19

Rotor shaft 17.5.19 Thrust shaft 30-7-19 Tunnel shafts 30-7-19 Screw shaft 17-6-19 Propeller 17-6-19

Stern tube 11-6-19 Steam pipes tested 13-8-19 Engine and boiler seatings 16-5-19 Engines holding down bolts 7-8-19

Completion of pumping arrangements 4-9-19 Boilers fixed 27-6-19 Engines tried under steam 4-9-19

Main boiler safety valves adjusted 4-9-19 Thickness of adjusting washers lock nuts

Material and tensile strength of Rotor shaft Steel 80,000 lbs. 1" minimum Identification Mark on Do. W.S.

Material and tensile strength of Pinion shaft " 85,000 " " " Identification Mark on Do. W.S.

Material of Wheel shaft Steel Identification Mark on Do. W.S. Material of Thrust shaft steel Identification Mark on Do. J.S.

Material of Tunnel shafts steel Identification Marks on Do. J.S. Material of Screw shafts steel Identification Marks on Do. J.S.

Material of Steam Pipes steel Test pressure 600 lbs ✓

Is an installation fitted for burning oil fuel yes Is the flash point of the oil to be used over 150°F. yes

Have the requirements of Section 49 of the Rules been complied with yes

Is this machinery a duplicate of a previous case yes If so, state name of vessel S/S. LEBANON

General Remarks (State quality of workmanship, opinions as to class, etc. 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 Hog Island to be fitted on board.

Philadelphia

The boilers and machinery of this vessel have been securely fitted on board and satisfactorily tried under steam. It is submitted that the vessel be eligible for a record of + LMC 7-19; Fitted for oil fuel 7-19; Flash point above 150°F in the Register Book.

The amount of Entry Fee ... £ : :
Special 3 Philadelphia \$ 250 00
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 19
When received, 9/10/19

Wm. Stewart & J. Blalock
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

+ LMC 9.19

7/10/19



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Foundation