

REPORT ON MACHINERY.

No. 17015

Received at London Office

Date of writing Report 26 Aug 1919 When handed in at Local Office 28 Aug 1919 Port of New York N.Y. and Philadelphia
No. in Survey held at Schuylkill N.Y. Philadelphia Date, First Survey 13 Jan 1919 Last Survey 26 Aug 1919
Reg. Book. "LIBERTY LAND" (Number of Visits 39)
on the STEEL SCREW STEAMER "LIBERTY LAND" Gross 5753 Tons Net 3562

Master A.L. Cornwall Built at Philadelphia By whom built American International Corp. When built 1919
Engines made at Schuylkill N.Y. By whom made General Electric Company when made 1919
Boilers made at Bayonne N.J. By whom made Babcock & Wilcox Co. N.B. 597 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 Is Electric Light fitted yes

TURBINE ENGINES, &c.—Description of Engines Grand turbine gear 13257 No. of Turbines One
Diameter of Rotor Shaft Journals, H.P. 8" L.P. 7" Diameter of Pinion Shaft 7" H.S.P. 7.012
Diameter of Journals "4-10" Distance between Centres of Bearings "5-28" Diameter of Pitch Circle "4-57.888" L.S.P. 11.442
Diameter of Wheel Shaft "14" Distance between Centres of Bearings "2-5.634" Diameter of Pitch Circle of Wheel "9-54.258"
Width of Face 20.44 Diameter of Thrust Shaft under Collars 13.35" Diameter of Tunnel Shaft as per rule 12.48" as fitted 12.625"
No. of Screw Shafts (continuous) 1 Diameter of same as per rule 12" as fitted 14.5" Diameter of Propeller 17'0" Pitch of Propeller 13'9"
No. of Blades 4 State whether Moveable no Total Surface 98.85 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.	L.P. 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'-3"	2
2ND	6.25	3'-9"	1				3.275	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"x6"x24"
No. and size of Bilge pumps Two 12"x8 1/2"x12" and 10"x12"x12"
No. and size of Bilge suction in Engine Room Two 3 1/2" dia, thrust pieces 1-2 1/2", fire room 2-3 1/2"
In Holds, &c. No 1 Two 3 1/2", No 2 2 1/2", No 2 Two 3 1/2", No 3 Two 3 1/2"
No 4 one 3 1/2", No 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 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 250 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 Material Outside diameter
Size of compensating ring No. and Description of Furnaces in each Boiler No. of strengthening rings
Length of plain part top Thickness of plates crown Description of longitudinal joint bottom No. of strengthening rings
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 Working pressure of plate by rules
Thickness Material of Lower back plate Thickness Greatest pitch of stays Mean pitch of stays
Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back
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

