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REPORT ON MACHINERY

No. 2221

REC'D 12 DEC 1917

Received at London Office

Writing Report *22nd Nov 1917* When handed in at Local Office *22nd Nov 1917* Port of *Baltimore Md*
 in Survey held at *Baltimore Md.* Date, First Survey *Dec 29/1917* Last Survey *Nov 12th 1917*
 g. Book. *2* on the Steamer *"William Loon"* (Number of Visits *31*) Tons } Gross *3321*
 Net *2032*
 Built at *Baltimore Md* By whom built *Baltimore D. D. & S. B. Co.* When built *1917*
 Engines made at *Hoboken* By whom made *W. & A. Fletcher Co.* when made *1917*
 Movers made at *"* By whom made *"* when made *1917*
 Registered Horse Power *1300* Owners *United States Shipping Board* Port belonging to *New York*
 Is Refrigerating Machinery fitted for cargo purposes *No* Is Electric Light fitted *Yes*

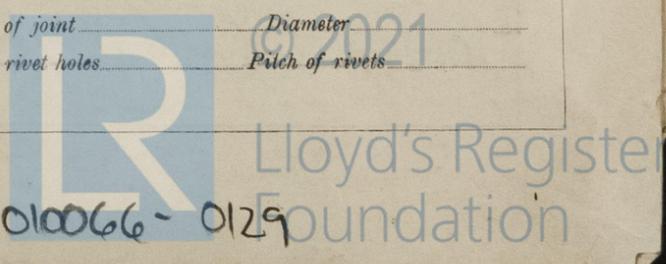
TURBINE ENGINES, &c.—Description of Engines *Please see New York Report No 14353 Attached hereto* No. of Turbines
 Diameter of Rotor Shaft Journals, H.P. L.P. Diameter of Pinion Shaft
 Diameter of Journals Distance between Centres of Bearings Diameter of Pitch Circle
 Diameter of Wheel Shaft Distance between Centres of Bearings Diameter of Pitch Circle of Wheel
 Diameter of Face Diameter of Thrust Shaft under Collars Diameter of Tunnel Shaft as per rule as fitted
 No. of Screw Shafts *One* Diameter of same as per rule *10.96 11.35* as fitted *11.5* Diameter of Propeller *14'-2"* Pitch of Propeller *13-6"*
 No. of Blades *4* State whether Moveable *No* Total Surface *66.2 sq ft* 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 Propeller

PARTICULARS OF BLADING. *Please see New York Report No 14353*

EXPANSION	H.P.			L.P.			ASTERN.		
	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.

and size of Feed pumps *2 - 6" x 12" ✓*
 and size of Bilge pumps *3 - 2-6" x 10" 1- 8 1/2" x 12" ✓*
 and size of Bilge suction in Engine Room *3 - 3 1/2" ✓*
Wing cargo spaces each 1-3 1/2" In Holds, &c. *Forehold 2- 3 1/2" Pump Room 2-3 1/2"*
Wing cargo spaces each 1-3 1/2"
 of Bilge Injections. / sizes *8"* Connected to condenser, or to circulating pump *Pump Is a separate Donkey Suction fitted in Engine Room & size 1-3 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 *Both ✓*
 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 ✓*
 Are oil pipes carried through the bunkers *None Oil fuel ✓* 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 *None ✓* Is it fitted with a watertight door *Engines aft - worked from ✓*

MANUFACTURERS, &c.—(Letter for record) *Please see N. Yk Report no 14353* 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
 Is each boiler worked separately *Yes ✓* Area of fire grate in each boiler No. and Description of Safety Valves to
 on boiler *2 O.S. ✓* Area of each valve *9.621 sq ft* Pressure to which they are adjusted *155 lbs ✓* Are they fitted with easing gear *Yes ✓*
 Smallest distance between boilers or uptakes and bunkers or woodwork *None ✓* 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
 Rivet 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
 Material of compensating ring No. and Description of Furnaces in each Boiler Material Outside diameter
 Length of plain part top 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



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? *No* If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 2 Bolts & nuts each size of rotor bearing; 2 bolts & nuts gear wheel bearing; 2 bolts & nuts pinion bearing; 1 set of coupling bolts each size, total number bolts & nuts each gear case joint; 1/20 total number each Turbine case joint; 2 thermometers for oil circulating system; 1 set bushes for:— gear wheel shaft, & pinion shafts; 1/2 set segments each gland rotor shafts & half number of springs; 5 bushes thrust pads, Turbine thrust & adjusting bushes; set of liners for adjusting block valves each feed pump; 1 set belt pump valves; 1 set valves lubricating pump & pump complete escape valves each size Assorted bolts & nuts. Bars & plates assorted, 1 propeller, 1 propeller shaft
 The foregoing is a correct description,

Manufacturer. _____

Dates of Survey while building { During progress of work in shops -- } Dec 29. 1916. May 7. 21. June 1. 4. 6. 7
 { During erection on board vessel --- } June 1. 4. 6. 7. 9. 13. 14. 22. July 12. 16. 28. 30. Aug 4. 11. Sept. 12. 19. 27. Oct. 5. 17. 24. 27
 Total No. of visits *31* Is the approved plan of main boiler forwarded herewith _____

Dates of Examination of principal parts—Casings *Please see N.Y.K. Report No 14353* Rotors _____ Blading _____ Gearing _____
 Rotor shaft _____ Thrust shaft _____ Tunnel shafts _____ Screw shaft *21/5/17* Propeller *29/11*
 Stern tube *1/6/17* Steam pipes tested *29/10/17* Engine and boiler seatings *16/7/17* Engines holding down bolts *29/11*
 Completion of pumping arrangements *3/11/17* Boilers fixed *4/8/17* Engines tried under steam *3/11/17*
 Main boiler safety valves adjusted *3/11/17* Thickness of adjusting washers *P. P. 4 S 1/8 S P. 1/8 S 3/16*
 Material and tensile strength of Rotor shaft _____ Identification Mark on Do. _____
 Material and tensile strength of Pinion shaft _____ Identification Mark on Do. _____
 Material of Wheel shaft _____ Identification Mark on Do. _____ Material of Thrust shaft _____ Identification Mark on Do. _____
 Material of Tunnel shafts _____ Identification Marks on Do. _____ Material of Screw shafts *Steel* Identification Marks on Do. *Working spare*
 Material of Steam Pipes *Copper* Test pressure *400 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 *"Albert Watts" "Joseph C"*

General Remarks (State quality of workmanship, opinions as to class, &c. *The Turbines and boiler have now been efficiently installed in this vessel and tried under steam and found satisfactory rendering the machinery of this vessel eligible, in my opinion, to notation + L.M.C. 11.17 Fitted for oil fuel 11.17 flash point at 150° F. Electric Light*
It is submitted that this vessel is eligible for THE RECORD. + LMC 11.17.
Fitted for oil fuel 5.17. F.P. above 150°F.
2 Steam Turbines geared to 1 Screw Shaft.

The amount of Entry Fee ... £ \$15.00: When applied for, 6/11/1917
 Donkey Boiler Fee ... £ \$156.00: When received, 22/11/1917
 Travelling Expenses (if any) *Baltimore 52.00*

J.M. Stewart
 Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute *New York NOV 27 1917*
 Assigned *+ L.M.C. 11.17 Fitted for oil fuel 11.17 F.P. above 150°F. Elec. Light*

Certificate (if required) to be sent to _____