

REC'D NEW YORK MAR 17 1921

MON. JUN 17 1921
No. 401921

4a.

REPORT ON MACHINERY.

Received at London Office

of writing Report 19 When handed in at Local Office 19 Port of Philadelphia & New York
 in Survey held Yuxton N.J. Date, First Survey May 14th Last Survey 19
 Book. D. S. Herbert L. Pratt (Number of Visits 1)
 24 on the W. Muller Built at Alameda By whom built Bethlehem S.B. Corp. When built 1918
 made at Yuxton N.J. By whom made De Laval Steam Turbine Coy when made 1920
 made at San Francisco Cal. By whom made Union Iron Works when made 1918
 Registered Horse Power 763 Owners The Atlantic Refining Coy Port belonging to Philadelphia
 Net Horse Power at Full Power 3300 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

TURBINE ENGINES, &c.—Description of Engines Double reduction geared turbines No. of Turbines Two
 Diameter of Rotor Shaft Journals, H.P. 6" L.P. 6" Diameter of Pinion Shaft 1st red 6" 2nd red 10"
 Diameter of Journals 1st red 6" 2nd red 10" Distance between Centres of Bearings 1st red 21 3/4" 2nd red 36 3/4" Diameter of Pitch Circle 1st red 6.8" 2nd red 11.221"
 Diameter of Wheel Shaft 1st red 10" 2nd red 16" Distance between Centres of Bearings 1st red 48 3/4" 2nd red 83 3/4" Diameter of Pitch Circle of Wheel 1st red 36.6" 2nd red 43.498"
 Diameter of Face 1st red 26 3/4" 2nd red 48" Diameter of Thrust Shaft under Collars 1 1/4" Diameter of Tunnel Shaft as per rule 13.95" as fitted
 Diameter of Screw Shafts as per rule 14.95" as fitted Diameter of Propeller 17'-0" Pitch of Propeller 14'-3"
 Number of Blades 4 State whether Moveable Yes Total Surface 8500 projected 7600 Diameter of Rotor Drum, H.P. L.P. astern
 Revs. per Minute at Full Power, Turbine 3130 Propeller 90

DETAILS OF BLADING.

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.
.....	1.50 to 1.320	28.569	2	1.470	41.260	1	2.025 to 3.241	36.041	2
"	1.788	30.110	1	1.470	41.260	1	3.241 to 3.400	34.205	2
"	1.988	30.110	1	2.450	40.220	1			
"	1.988	30.444	1	4.000	43.450	1			
"	1.180	30.836	1	5.510	45.000	1			
"	1.460	31.240	1	5.510 & 6.200	45.020	1			
"	1.440	31.960	1						
"	2.166	32.616	1						

and size of Feed pumps
 and size of Bilge pumps
 and size of Bilge suction in Engine Room

In Holds, &c.

Bilge Injections sizes Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine Room & size
 All the bilge suction pipes fitted with roses Are the roses in Engine room always accessible
 All connections with the sea direct on the skin of the ship Are they Valves or Cocks
 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.
 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
 Bilge pipes are carried through the bunkers How are they protected
 All Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times.
 The Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges
 Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record) Manufacturers of Steel
 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
 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
 Greatest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates
 Tensile strength 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
 Stages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell plates
 Diameter of compensating ring No. and Description of Furnaces in each Boiler Material Outside diameter
 Thickness of plates top crown Description of longitudinal joint bottom bottom No. of strengthening rings
 Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom
 Working pressure 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
 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
 Material Description of longitudinal joint Diameter of rivet holes Pitch of rivets
 Crown plates: Thickness How stayed

THE SURVIVORS ARE REQUESTED NOT TO WRITE ACROSS THE MARGIN.

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? _____

If so, is a report now forwarded? _____

SPARE GEAR. State the articles supplied:— Two HP & Two LP Turbine bearings. Two turbine thrust bearings. Four high speed & Two low speed gear bearings. Four high speed & Four low speed outer pinion bearings. Two high speed & Two low speed centre pinion bearings. Two high speed pinions one complete set carbon packing for turbines. Twenty high & Twenty low speed coupling bolts with washers. Bolts studs nuts as required by the Rules.

The foregoing is a correct description,

DeLond Steam Turbine Co.
by L. Waller & Co.

Manufacturer.

Dates of Survey while building: During progress of work in shops -- May 17, June 4, 9, 25 July 9-16, 26 Aug 3, 12, 20 Sep 11, 14, 21 Oct 5, 12, 19, 24. During erection on board vessel -- Total No. of visits 16.

Is the approved plan of main boiler forwarded herewith _____

Dates of Examination of principal parts—Casings 20-8-20. Rotors 9-4-20. Blading 21-9-20. Gearing 5-10-20.

Rotor shaft 11-9-20 Thrust shaft 30-3-21 Tunnel shafts _____ Screw shaft _____ Propeller _____

Stern tube _____ Steam vipes tested 10-5-21 Engine and boiler seatings 20-4-21 Engines holding down bolts 14-5-21.

Completion of pumping arrangements _____ Boilers fixed _____ Engines tried under steam 16-5-21

Main boiler safety valves adjusted _____ Thickness of adjusting washers _____

Material and tensile strength of Rotor shafts Nickel steel 49600 lbs. 2nd red 49600 lbs. 2nd red Identification Mark on Do. 2120 WB, 266 WB.

Material and tensile strength of Pinion shafts Nickel steel 94000 lbs. 2nd red 94500 lbs. 2nd red Identification Mark on Do. 650 WB, 1328A, 2407A.

Material of Wheel shafts Steel Identification Mark on Do. 311 WB Material of Thrust shaft O.H.S. Identification Mark on Do. 2931, 274-20.

Material of Tunnel shafts _____ Identification Marks on Do. _____ Material of Screw shafts _____ Identification Marks on Do. _____

Material of Steam Pipes Steel Lap welded. Test pressure 750 lbs. per sq. in.

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 _____

Is this machinery a duplicate of a previous case Yes. If so, state name of vessel J. E. O'Neill.

General Remarks (State quality of workmanship, opinions as to class, &c.)

This machinery has been built under special survey. Materials & workmanship good. Ship fitting satisfactory. This machinery has been installed on board the vessel in a satisfactory manner. The material & workmanship employed in the installing of same, so far as can be seen, are sound & good & proved satisfactory under test. The machinery is eligible in my opinion to the notation in the Register Book. + L.M.C. 5-21 fitted for oil fuel.

Certificate (if required) to be sent to Committee's Minute. (The Surveyors are requested not to write on or below the space for Committee's Minute.)

	When applied for,	When received,
The amount of Entry Fee ... £	19%	19%
Special ... \$ 90.00		
Donkey Boiler Fee ... £		
Travelling Expenses (if any) \$ 10.00		

William Dutton J. Flockhart.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute New York MAY 31 1921

Assigned M.S. + L.M.C. 5.21 + N.E. 5.21



© 2020

Lloyd's Register Foundation