

REPORT ON STEAM TURBINE MACHINERY. No. 6863

pt. 4a.

Received at London Office

Date of writing Report JAN 31 1933 When handed in at Local Office 10 Port of San Francisco Calif
 No. in Survey held at QUINCY & SAN FRANCISCO Date, First Survey 4 Feb 1932 Last Survey Jan 27 1933
 Reg. Book. 674 on the Tw. Sc. S/S LURLINE (Number of Visits 9) Tons { Gross 18021 Net 10559
 Built at Quincy, Mass. By whom built Bethlehem S. B. Corp. Yard No. 1447 When built 1932
 Engines made at d^o By whom made d^o Engine No. 1447 When made 1932
 Boilers made at Bayonne N. J. By whom made Babcock & Wilcox Co. Boiler No. ✓ When made 1932
 Shaft Horse Power at Full Power 22000 Owners Oceanic S. S. Co. Port belonging to San Francisco
 Nom. Horse Power as per Rule 5363 Is Refrigerating Machinery fitted for cargo purposes. YES Is Electric Light fitted YES
 Trade for which Vessel is intended SAN FRANCISCO - HAWAII

STEAM TURBINE ENGINES, &c.—Description of Engines

No. of Turbines 6 Ahead 2 Direct coupled, single reduction geared to 2 propelling shafts. No. of primary pinions to each set of reduction gearing 3
 Astern 2 Double reduction geared
 Direct coupled to { Alternating Current Generator ✓ phase ✓ periods per second ✓ rated ✓ Kilowatts ✓ Volts at ✓ revolutions per minute;
 or supplying power for driving ✓ Propelling Motors, Type ✓

rated ✓ Kilowatts ✓ Volts at ✓ revolutions per minute. Direct coupled, single or double reduction geared to ✓ propelling shafts.

TURBINE ONE	LOADING. IMPULSE	H. P.			I. P.			L. P. FLOW			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.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
ST EXPANSION WHEEL		1 1/2"	52" PD	2	1 1/2"	3 1/4"	6	2 1/2"	4 1/2"	4	1 1/2" 2 1/2" 3 1/2"	55" PD	3
ND "		1 5/8"	2 1/2 6 1/2"	10	2 3/4"	3 1/2"	6	3 1/8"	4 3/4"	4	5 1/2" 7"	55"	2
RD "		1 7/8"	2 1/2 6 3/4"	10	2 3/4"	3 1/2"	6	3 3/8"	4 1/2"	4			
TH "		2 1/4"	2 1/2 7 1/2"	10	3 1/8"	3 1/2"	6	4 3/4"	4 1/2"	4			
TH "		"	"	10	4	3 1/2"	6	5 1/8"	4 1/2"	4			
TH "					5 1/8"	3 1/2"	5	7 1/2"	4 1/2"	4			
TH "					6	3 1/2"	5	10	5 1/2"	2			
TH "										2			
TH "										2			
TH "													
TH "													

Shaft Horse Power at each turbine { H.P. 3666 I.P. 3666 L.P. 3666 } Revolutions per minute, at full power, of each Turbine Shaft { H.P. 1500 I.P. 1500 L.P. 1500 } 1st reduction wheel { 118 } main shaft { 118 }

Motor Shaft diameter at journals { H.P. 8" I.P. 8" L.P. 9" } Pitch Circle Diameter { 1st pinion 12 1/4" 2nd pinion ✓ } 1st reduction wheel { 156" } main wheel { 19 1/2" x 21" } 1st reduction wheel { 7'-5" }

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st pinion 8" 2nd pinion ✓ } diameter at bottom of pinion teeth { 1st 11 3/4" 2nd ✓ }

Pinion Shafts, diameter at bearings { 1st ✓ 2nd ✓ } Generator Shaft, diameter at bearings { 18.2 } Propelling Motor Shaft, diameter at bearings { 21" }

Wheel Shafts, diameter at bearings { main 21" } diameter at wheel shroud, { main 2'-0 1/2" } Thrust Shaft, diameter at collars { 17.3 } Tube Shaft, diameter { 18.8 }

Intermediate Shafts, diameter { as per rule 18.8 as fitted 18 1/2" 0.0 5 1/2" } shaft fitted with a continuous liner { YES } Bronze Liners, thickness in way of bushes { 1 3/16" }

Crew Shaft, diameter { as per rule 18.8 as fitted 20 1/2" 0.0 5 1/2" } Is the after end of the liner made watertight in the propeller boss YES If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner YES If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ✓ If two liners are fitted, is the shaft lapped or protected between the liners ✓ Is an approved Oil Gland

other appliance fitted at the after end of the tube shaft ✓ Length of Bearing in Stern Bush next to and supporting propeller 14'-0" Total Developed Surface 105.8 square feet.

Propeller, diameter 18'-0" Pitch 19'-6" No. of Blades 3 State whether Moveable NO Can the H.P. or I.P. Turbine exhaust direct to the Single Screw, are arrangements made so that steam can be led direct to the L.P. Turbine ✓

Condenser ✓ No. of Turbines fitted with astern wheels 2 Feed Pumps { No. and size 3- 700 GPM 2- 8' x 10' x 24' } How driven STEAM TURBINES STEAM

Pumps connected to the Main Bilge Line { No. and size 1- 700 GPM 1- 8' x 10' x 24' } How driven ELEC. MOTORS STEAM Lubricating Oil Pumps, including Spare Pump, No. and size 4- 300 GPM

Ballast Pumps, No. and size 1- 700 GPM 1- 8' x 10' x 24' Oil Cooler YES Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Are two independent means arranged for circulating water through the Oil Cooler YES 6-4", 6-3", 1-5", 2-6" Independent Power Pump Direct Suctions to the Engine Room

Main Water Circulating Pump Direct Bilge Suctions, No. and size 2- 12" Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with stram-boxes YES

Bilges, No. and size 1-5", 1-6" Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges YES

Are the Sea Connections fitted direct on the skin of the ship YES Are they fitted with Valves or Cocks VALVES Are the Overboard Discharges above or below the deep water line BELOW

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates YES Are the Blow Off Cocks fitted with a spigot and brass covering plate YES

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel YES How are they protected YES Have they been tested as per rule YES

What pipes pass through the bunkers NONE PIPE TUNNELS FITTED What pipes pass through the deep tanks NONE Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times YES

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Lloyd's Register Foundation

BOILERS, &c.—(Letter for record) Total Heating Surface of Boilers 53520 sq ft
 Is Forced Draft fitted YES No. and Description of Boilers 12 BABCOCK & WILCOX Working Pressure 400 LBS
 Is a Report on Main Boilers now forwarded? YES
 Is { a Donkey } Boiler fitted? NO If so, is a report now forwarded? ✓
 { an Auxiliary }
 Plans. Are approved plans forwarded herewith for Shafting Main Boilers Auxiliary Boilers Donkey Boilers
 (If not state date of approval) FORWARDED WITH S.G. MARIPOSA S.F. RPT 6623.
 Superheaters General Pumping Arrangements Oil Fuel Burning Arrangements
 Spare Gear. State the articles supplied:— SPARE GEAR SUPPLIED IN ACCORDANCE WITH RULES

The foregoing is a correct description,

BETHLEHEM S. B. CORPORATION

S. M. McKeown Manufacturer

Dates of Survey while building { During progress of work in shops -- } 4/2/32
 { During erection on board vessel --- } 2+4/11/32 1922, 21/12/32 JAN 25-26-27, 1933
 Total No. of visits 9
 Dates of Examination of principal parts—Casings 4 Feb 1932 Rotors 4 Feb 1932 Blading 4 Feb 1932 Gearing 4 Feb 1932
 Wheel shaft 4 Feb 1932 Thrust shaft 4 Feb 1932 Intermediate shafts 4 Feb 1932 Tube shaft 4 Feb 1932 Screw shaft 4 Feb 1932
 Propeller 4 Feb 1932 Stern tube 4 Feb 1932 Engine and boiler seatings 2 Nov 1932 Engine holding down bolts 2 Nov 1932
 Completion of pumping arrangements 2 Nov 1932 Boilers fixed 2 Nov 1932 Engines tried under steam 4 Nov 1932
 Main boiler safety valves adjusted Thickness of adjusting washers
 Rotor shaft, Material and tensile strength STEEL 60000 LBS Identification Mark
 Flexible Pinion Shaft, Material and tensile strength Identification Mark
 Pinion shaft, Material and tensile strength STEEL 75000 LBS 115000 Identification Mark
 1st Reduction Wheel Shaft, Material and tensile strength Identification Mark
 Wheel shaft, Material STEEL Identification Mark Thrust shaft, Material STEEL Identification Mark
 Intermediate shafts, Material STEEL Identification Marks Tube shaft, Material Identification Marks
 Screw shaft, Material STEEL Identification Marks Steam Pipes, Material STEEL Test pressure 1200 LBS
 Date of test 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 the Rules for the use of oil as fuel been complied with YES
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo NO If so, have the requirements of the Rules been complied with ✓
 Is this machinery a duplicate of a previous case YES If so, state name of vessel MARIPOSA, MONTEREY

General Remarks (State quality of workmanship, opinions as to class, &c.) The machinery of this vessel has not been built under Special Survey but it has been examined at intervals during construction & the workmanship & material are good. The forgings & castings, boilers & steam pipes have been tested by American Bureau of Shipping & U.S. Govt Inspectors. The machinery has been satisfactorily tried at full power & it is now in good & safe working condition & eligible, in our opinion to receive the notation LMC FD and 'FITTED FOR OIL FUEL' F.P. ABOVE 150°F in the Register Book, subject to Water Tube Boilers being annually surveyed.

The amount of Entry Fee ... £ CHARGED : When applied for, ✓ 19...
 Special ... £ ON :
 Donkey Boiler Fee ... £ HULL RPT FORM : When received, ✓ 19...
 Travelling Expenses (if any) £ : 19...

Committee's Minute

Assigned LMC. 12.32

CERTIFICATE WRITTEN.

J. H. Archbold & John S. Heck
 Engineer Surveyor to Lloyd's Register of Shipping.



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