

# REPORT ON STEAM TURBINE MACHINERY. No. 6695

Received at London Office

Date of writing Report 19 When handed in at Local Office 10 Port of **SAN FRANCISCO, CAL.**

No. in Survey held at **BOSTON, MASS & SAN FRANCISCO** Date, First Survey **4 July** Last Survey **3 June** 1932

Reg. Book. **41281** on the **Tw. Sc. S.S. MONTEREY** (Number of Visits **10**) Gross **18017** Tons Net **10580**

Built at **Quincy, Mass.** By whom built **Bethlehem S. B. Corp.** Yard No. **1441** When built **1932**

Engines made at **d°** By whom made **d°** Engine No. **1441** When made **1932**

Boilers made at **Bayonne N.J.** By whom made **Balcock & Wilcox Co.** Boiler No. **1441** 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 **AUSTRALIAN**

## STEAM TURBINE ENGINES, &c.—Description of Engines **PARSONS TYPE. GEARED SINGLE REDUCTION**

No. of Turbines Ahead **6** 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;  
for 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 BLADING	ONE IMPULSE WHEEL	H. P.			I. P.			L. P.			ASTERN. IMPULSE		
		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.
1ST EXPANSION		1+1 1/2	52" PD	2	1 7/8	3-1 1/4	6	2 1/2	4-2"	4	1 1/2-2 1/2-3 1/2	60" PD	3
2ND		1 5/8	2-6 3/4	10	2 3/16	3-2 3/8	6	3 5/8	4-3 1/4	4	5+7"		2
3RD		1 7/8	2-6 3/4	10	2 3/4	3-3 1/2	6	3 7/8	4-4 3/4	4			
4TH		2 1/4	2-7 1/2	10	3 1/16	3-4 1/8	6	4 3/4	4-6 1/2	4			
5TH		"	"	10	4	3-6	6	5 1/8	4-8 3/4	4			
6TH					5 1/8	3-8 1/4	5	7 1/4	4-11 1/2	4			
7TH					6	3-10	5	9	5-3	4			
8TH								10	5-5	2			
9TH								:	5-5	2			
10TH								:	5-5	2			
1TH													
2TH													

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 }

Rotor Shaft diameter at journals { H.P. **8"** I.P. **8"** L.P. **9"** } Pitch Circle Diameter { 1st pinion **12 1/4"** 1st reduction wheel } Width of Face { 1st reduction wheel } 2nd pinion **156"** main wheel } main wheel **56"**

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st pinion **19 1/4" + 21"** 1st reduction wheel } 2nd pinion **7'-5"** main wheel }

Pinion Shafts, diameter at bearings { 1st **8"** External } 2nd { diameter at bottom of pinion teeth } 1st **11 3/4"** 2nd

Wheel Shafts, diameter at bearings { 1st **21"** main } diameter at wheel shroud, { 1st **2'-0 1/2"** Generator Shaft, diameter at bearings } Propelling Motor Shaft, diameter at bearings

Intermediate Shafts, diameter as per rule **17.3** as fitted **18" with 5" bore** Thrust Shaft, diameter at collars as per rule **18.2** as fitted **21"** Tube Shaft, diameter as per rule **17.3** as fitted

Screw Shaft, diameter as per rule **16.8** as fitted **20 1/2" DD** Is the shaft fitted with a continuous liner **YES** Bronze Liners, thickness in way of bushes as per rule **1 3/16** as fitted

Thickness between bushes as per rule **7/8** as fitted **7/8** 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 **YES** If two liners are fitted, is the shaft lapped or protected between the liners **YES** Is an approved Oil Gland other appliance fitted at the after end of the tube shaft **NO** Length of Bearing in Stern Bush next to and supporting propeller **14'-0"**

Propeller, diameter **18'-0"** Pitch **19'-6"** No. of Blades **3** State whether Moveable **NO** Total Developed Surface **105.8** square feet. Single Screw, are arrangements made so that steam can be led direct to the L.P. Turbine **YES** Can the H.P. or I.P. Turbine exhaust direct to the Condenser **YES**

Condenser  No. of Turbines fitted with astern wheels **2** Feed Pumps { No. and size **2-550 GPM 2-100 GPM 2-12"x8"x18"** 2 INJECTORS **2 1/2"** How driven **STEAM TURBINES**

Pumps connected to the Main Bilge Line { No. and size **3-700 GPM 2-8"x10"x24"** How driven **ELEC MOTORS**

Ballast Pumps, No. and size **1-700 GPM + 1-8"x10"x24"** Lubricating Oil Pumps, including Spare Pump, No. and size **4-300 GPM** Are two independent means arranged for circulating water through the Oil Cooler **YES** Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Engine and Boiler Room **6-4", 6-3", 1-5", 2-6"**

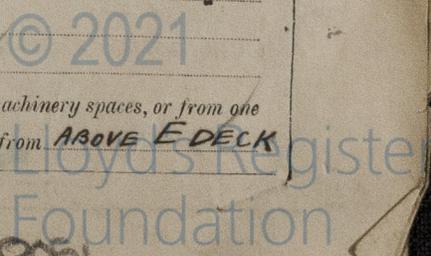
In Holds, &c. **2-3" IN EACH HOLD** Main Water Circulating Pump Direct Bilge Suctions, No. and size **2-12"** Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size **1-5", 2-6"** Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes **YES**

Are the Bilge Suctions in the Machinery Space led from easily accessible man-boxes, placed above the level of the working floor, with straight tail pipes to the bilges **YES** Are all Sea Connections fitted direct on the skin of the ship **YES** Are they fitted with Valves or Cocks **VALVES**

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates **YES** Are the Overboard Discharges 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 pass through the bunkers **NONE** How are they protected **YES** Have they been tested as per rule **YES** 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** Is the arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one compartment to another **YES** Is the Shaft Tunnel watertight **YES** Is it fitted with a watertight door **YES** worked from **ABOVE E DECK**



27 JUN 1932

**BOILERS, &c.**—(Letter for record ) Total Heating Surface of Boilers 53520 #

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? ✓

Plans. Are approved plans forwarded herewith for Shafting Main Boilers Auxiliary Boilers Donkey Boilers  
(If not state date of approval) APPROVED PLANS FORWARDED WITH S/S MARIPOSA SAN FRANCISCO RPT 66 4/12

Superheaters \_\_\_\_\_ General Pumping Arrangements \_\_\_\_\_ Oil Fuel Burning Arrangements \_\_\_\_\_

Spare Gear. State the articles supplied:— SPARE GEAR SUPPLIED AS PER RULES REQUIREMENTS

BETHLEHEM S. B. CORPORATION

S. H. Sherman

The foregoing is a correct description,

Dates of Survey while building { During progress of work in shops -- } 1932 FEB 4  
 { During erection on board vessel --- } APRIL 7, 8, 20, 21, 22, 27  
 { Total No. of visits } MAY 29-31 JUNE 3.

Dates of Examination of principal parts—Casings \_\_\_\_\_ Rotors \_\_\_\_\_ Blading \_\_\_\_\_ Gearing 27 APR

Wheel shaft \_\_\_\_\_ Thrust shaft \_\_\_\_\_ Intermediate shafts APR 7 Tube shaft \_\_\_\_\_ Screw shaft \_\_\_\_\_

Propeller APRIL 7 Stern tube APRIL 7 Engine and boiler seatings APRIL 7 Engine holding down bolts APR 7

Completion of pumping arrangements APRIL 7 Boilers fired APRIL 7 Engines tried under steam APR 21

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 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 " Identification Marks \_\_\_\_\_ Tube shaft, Material \_\_\_\_\_ Identification Marks \_\_\_\_\_

Screw shaft, Material " Identification Marks \_\_\_\_\_ Steam Pipes, Material STEEL Test pressure 600 LB

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 SAN FRANCISCO RPT

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 under working conditions & as opportunity allowed, & the workmanship & material are good. The forgings & castings, the boilers & steam piping have been tested by American Bureau of Shipping & U. S. Govt Steamboat Inspectors. In our opinion, the machinery of this vessel is now in good & safe working condition & eligible to receive the notation LMC and FD 'Fitted for Oil Fuel 5.32 FP above 150°F', subject to annual survey of the water tube boilers

The amount of Entry Fee ...	} charged on Hull report	When applied for,
Special ...		✓ 19. ✓
Donkey Boiler Fee ...		When received,
Travelling Expenses (if any) ...		✓ 19. ✓

H. F. Archbold  
 J. French John S. He...  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

NEW YORK JUN 15 1932

Assigned

MC 4-32  
CERTIFICATE WRITTEN



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SAN FRANCISCO

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

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