

REPORT ON STEAM TURBINE MACHINERY.

No. 17218

Date of writing Report 31st Jan 1950 When handed in at Local Office 19 Port of Amsterdam Received at London Office 22 FEB 1950

No. in Survey held at Amsterdam Date, First Survey 2nd January Last Survey 25th Jan 1950

Reg. Book. 10848 on the S/S "GLADYS MOLLER" (T2 Tanker) (Number of Visits 11) Tons ^{Gross} 10712 _{Net} 6408

Built at Chester, Pa. U.S.A. By whom built Sun S.B. & Dry Dock Co. Yard No. 476 When built 1945

Engines made at Jeanette, Pa. U.S.A. By whom made Elliot Company Engine No. 9832 W When made 1945

Boilers made at Barberton, Ohio, U.S.A. By whom made Babcock & Wilcox Co Boiler No. 4072/11220 When made 1945

Shaft Horse Power at Full Power 6600 Owners Moller Line (U.K.) Ltd. Port belonging to London

Nom. Horse Power as per Rule 1518 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

Trade for which Vessel is intended Ocean Trade. Petroleum in Bulk

STEAM TURBINE ENGINES, &c.—Description of Engines One Curtis Impulse 10 stage turbine

No. of Turbines one Direct coupled, single reduction geared } to ✓ propelling shafts. No. of primary pinions to each set of reduction gearing ✓

✓ Alternating Current Generator 3 phase 62 periods per second } rated 5400 Kilowatts 4000 Volts at 3715 revolutions per minute;

for supplying power for driving ONE Propelling Motors, Type 3 phase - 62 cycle - 80 pole - revolving field - salient pole - synchronous.

rated 6600 BHP 4000 Kilowatts 2300 Volts at 93 revolutions per minute. Direct coupled, single or double reduction geared to one propelling shaft.

TURBINE BLADING.

T. P.				I. P.				L. P.				ASTERN.			
TURBINE				D. P.				L. P.				ASTERN.			
BLADING.				D. P.				L. P.				ASTERN.			
1ST EXPANSION				D. P.				L. P.				ASTERN.			
2ND				D. P.				L. P.				ASTERN.			
3RD				D. P.				L. P.				ASTERN.			
4TH				D. P.				L. P.				ASTERN.			
5TH				D. P.				L. P.				ASTERN.			
6TH				D. P.				L. P.				ASTERN.			
7TH				D. P.				L. P.				ASTERN.			
8TH				D. P.				L. P.				ASTERN.			
9TH				D. P.				L. P.				ASTERN.			
10TH				D. P.				L. P.				ASTERN.			
11TH				D. P.				L. P.				ASTERN.			
12TH				D. P.				L. P.				ASTERN.			

Shaft Horse Power at each turbine H.P. 3715 1st reduction wheel 93

Revolutions per minute, at full power, of main shaft 93

Rotor Shaft diameter at journals H.P. 5" and 10" Pitch Circle Diameter 1st pinion 1st reduction wheel Width of Face 1st reduction wheel

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings 2nd pinion main wheel

Flexible Pinion Shafts, diameter 1st ✓ Pinion Shafts, diameter at bearings External 1st 2nd diameter at bottom of pinion teeth 1st ✓

Wheel Shafts, diameter at bearings 1st ✓ diameter at wheel shroud, 1st ✓ Generator Shaft, diameter at bearings FORWARD END = 5 1/2" AFT (at coupling) = 11"

Intermediate Shaft, diameter as per rule 16 7/8" Thrust Shaft, diameter at collars as per rule 17 1/2"

Tube Shaft, diameter as per rule ✓ Screw Shaft, diameter as per rule 18 5/8" Is the ✓ screw shaft fitted with a continuous liner yes

Bronze Liners, thickness in way of bushes as per rule 1 1/8" Thickness between bushes as per rule 1" 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 ✓

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 or other appliance fitted at the after end of the tube shaft no

Propeller, diameter 19' 6" Pitch 17' 6" No. of Blades 4 State whether Moveable solid bronze Total Developed Surface 138.3 square feet.

If Single Screw, are arrangements made so that steam can be led direct to the L.P. Turbine ✓ Can the H.P. or I.P. Turbine exhaust direct to the

Condenser ✓ No. of Turbines fitted with astern wheels none Feed Pumps No. and size 2 Main - each 200 Gpm | 1 Aux. Simplex. 130 Gpm

How driven steam-turbo steam

Pumps connected to the Main Bilge Line No. and size 2 Bilge p. Rotary, each 175 Gpm | 1 Fire/Gen. Serv. p. Rotary, 450 Gpm | 1 Fire/Butterworth, Rotary, 450 Gpm.

How driven electrically 1 Main - Rotary - 60 Gpm.

Ballast/Fire Pumps, No. and size 1 Duplex, 300 Gpm Lubricating Oil Pumps, including Spare Pump, No. and size 1 Stand-by - Simplex - 60 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 10 (φ 3") 1 (φ 3 1/2") Aft well: 1 (φ 3 1/2") From Boiler flat: 1 (φ 3 1/2") on 4 mutual drain wells

2000 cofferdams: 3 (φ 3") Fathometer comp: 1 (φ 3") Forw. Pump room (on Ballast/Fire pump): 2 (φ 2 1/2") and in Dry Stores above: 2 (φ 2 1/2").

Independent Bilge Ejectors: Boatwain Store: 2 (φ 1 1/2") Chain Locker: 1 (φ 2 1/2") Main Water Circulating Pump Direct Bilge Suctions, No. and size ONE (φ 1 1/2") Independent Power Pump Direct Suctions to the Engine Room

Bilges, No. and size 2 (φ 4") — one on each Bilge pump Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes ✓

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 drain wells

Are all Sea Connections fitted direct on the skin of the ship clash or spool pieces Are they fitted with Valves or Cocks yes

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 no

What pipes pass through the bunkers none How are they protected ✓

What pipes pass through the deep tanks none Have they been tested as per rule ✓

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 Aft E Room comp. watertight yes Is it fitted with a watertight door yes worked from locally

BOILERS, &c.—(Letter for record ✓) Total Heating Surface of Boilers (incl. water walls & superheaters): 11868 sq. ft.
Is Forced Draft fitted yes No. and Description of Boilers 2 Babcock & Wilcox Designed Working Pressure 500 lbs.
Is a Report on Main Boilers now forwarded? yes
Is { a Donkey } Boiler fitted? no If so, is a report now forwarded? ✓
Is the donkey boiler intended to be used for domestic purposes only ✓
Plans. None available for the Society Are approved plans forwarded herewith for Shafting ✓ Main Boilers ✓ Auxiliary Boilers ✓ Donkey Boilers ✓
(If not state date of approval)
Superheaters ✓ General Pumping Arrangements ✓ Oil Fuel Burning Arrangements ✓

SPARE GEAR.

Has the spare gear required by the Rules been supplied yes, except spare impeller shaft for main circulating pump
State the principal additional spare gear supplied Spare tail shaft (ABS. Cert. 48/2663/204. Philadelphia, 15-9-48)

The foregoing is a correct description,

Manufacturer.

American Bureau Supervision.

Dates of Survey while building { During progress of work in shops -- }
{ During erection on board vessel -- }
Total No. of visits

Dates of Examination of principal parts—Casing 12-1-50 Rotor 16-1-50 Blading 16-1-50 Gearing
Wheel shaft Thrust shaft Intermediate shaft 24-1-50 Tube shaft Screw shaft
Propeller 12-1-50 Stern tube Engine and boiler seatings Engine holding down bolts
Completion of fitting sea connections Completion of pumping arrangements Boilers fixed Engines tried under steam 25-1-50
Main boiler safety valves adjusted 25-1-50 Thickness of adjusting washers BOILERS { Starb: 20,8 + 14,1 mm Port: 3,5 + 3,8 mm Superheaters { Starb: 11,5 mm Port: 11 mm
Rotor shaft, Material and tensile strength ABS Cert. N: PH.34474. Pittsburgh, 2-12-49 forwarded herewith. Identification Mark
Flexible Pinion Shaft, Material and tensile strength Identification Mark
Pinion shaft, Material and tensile strength Identification Mark
1st Reduction Wheel Shaft, Material and tensile strength Identification Mark
Wheel shaft, Material Identification Mark Thrust shaft, Material Identification Mark
Intermediate shafts, Material Identification Marks Tube shaft, Material Identification Marks
Screw shaft, Material Identification Marks Steam Pipes, Material Test pressure
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 ✓ If so, have the requirements of the Rules been complied with ✓
If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with ✓
Is this machinery a duplicate of a previous case ✓ If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c.) This machinery has been built under supervision and to the requirements of the American Bureau of Shipping and U.S. Coast Guards, and the materials and workmanship are considered satisfactory.
The scantlings and general arrangements have been verified as far as practicable and found in accordance with the plans on board.

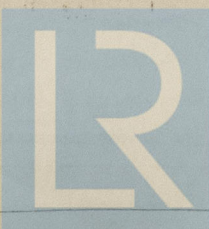
For recommendations as to class etc. please see Survey Rpt. 9

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

[Signature]
Engineer Supervisor to Lloyd's Register of Shipping.

Committee's Minute
Assigned

FRI. 14 APR 1950



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Foundation