

REPORT ON STEAM TURBINE MACHINERY.

17824

No. 112152

Received at London Office 21 SEP 1944

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Date of writing Report Sept. 1944 When handed in at Local Office Sept. 1944 Port of London

No. in Survey held at West Drayton Date, First Survey 29 MARCH 1944 Last Survey 14 SEPTEMBER 1944

Reg. Book. S.S. "Wave Governor" (Number of Visits 7) Tons Gross 8196 Net 4568

Built at Hamilton Hill-on-Sea By whom built Lumess & Co. Ltd. Yard No. 362 When built -

Engines made at Hartlepool By whom made Richardson & Gough Engine No. 2451 When made 1944

Boiler made at West Drayton By whom made Power Plant Co. Ltd. Boiler No. - When made 1944

Shaft Horse Power at Full Power 6800 Owners - Port belonging to -

Nom. Horse Power as per Rule - Is Refrigerating Machinery fitted for cargo purposes - Is Electric Light fitted -

Trade for which Vessel is intended -

STEAM TURBINE ENGINES, &c.—Description of Engines

No. of Turbines 1 Ahead - Direct coupled, single reduction geared - to - propelling shafts. No. of primary pinions to each set of reduction gearing -

Direct coupled to Alternating Current Generator phase - periods per second - Direct Current Generator - 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 LOADING.	H. P.			I. 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.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
1ST EXPANSION												
2ND												
3RD												
4TH												
5TH												
6TH												
7TH												
8TH												
9TH												
10TH												
11TH												
12TH												

Shaft Horse Power at each turbine H.P. 3400. L.P. 3400. Revolutions per minute, at full power, of each Turbine Shaft H.P. 3941. L.P. 2865. 1st reduction wheel 431 main shaft 116.

Rotor Shaft diameter at journals H.P. 11.94264" L.P. 13.0688" Pitch Circle Diameter 1st pinion 19.1894" 2nd pinion 124.6448" 1st reduction wheel 51.2041" main wheel 124.6448" Width of Face 1st reduction wheel 205 main wheel 39"

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings 1st pinion HP & LP 16.45" 2nd pinion 16.45" 1st reduction wheel 38.45" main wheel 42"

Flexible Pinion Shafts, diameter at bearings 1st 11" 2nd 14.5" Pinion Shafts, diameter at bearings 1st 46.45" 2nd 119.45" Generator Shaft, diameter at bearings - Propelling Motor Shaft, diameter at bearings -

Wheel Shafts, diameter at bearings 1st 11" 2nd 14.5" diameter at wheel shroud, 1st 46.45" 2nd 119.45" Thrust Shaft, diameter at collars - as per rule - as fitted -

Intermediate Shafts, diameter - as per rule - as fitted - Tube Shaft, diameter - as per rule - as fitted - Screw Shaft, diameter - as per rule - as fitted - Is the tube screw shaft fitted with a continuous liner -

Bronze Liners, thickness in way of bushes - as per rule - as fitted - Thickness between bushes - as per rule - as fitted - Is the after end of the liner made watertight in the propeller boss -

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 - If so, state type - Length of Bearing in Stern Bush next to and supporting propeller -

Propeller, diameter - Pitch - No. of Blades - State whether Moveable - Total Developed Surface - 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 L.P. Turbine exhaust direct to the Condenser -

No. of Turbines fitted with astern wheels - Feed Pumps - No. and size - How driven -

Pumps connected to the Main Bilge Line - No. and size - How driven - Lubricating Oil Pumps, including Spare Pump, No. and size -

Are two independent means arranged for circulating water through the Oil Cooler - Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Engine and Boiler Room - In Pump Room -

In Holds, &c. - Main Water Circulating Pump Direct Bilge Suctions, No. and size - Independent Power Pump Direct Suctions to the Engine Room -

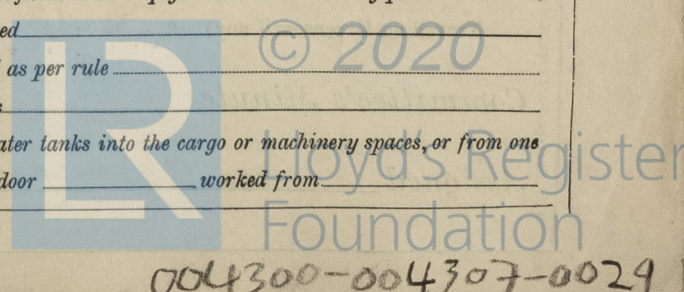
Bilges, No. and size - Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes - Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges -

Are all Sea Connections fitted direct on the skin of the ship - Are they fitted with Valves or Cocks - Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates - Are the Overboard Discharges above or below the deep water line -

Are 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 - What pipes pass through the bunkers - How are they protected -

What pipes pass through the deep tanks - 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 -

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 - Is the Shaft Tunnel watertight - Is it fitted with a watertight door - worked from -



004300-004307-0029

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

Is Forced Draft fitted No. and Description of Boilers Working Pressure

Is a Report on Main Boilers now forwarded?

Is { a Donkey } Boiler fitted?
{ an Auxiliary }

If so, is a report now forwarded?

Is the donkey boiler intended to be used for domestic purposes only

Plans. Are approved plans forwarded herewith for Shafting
(If not state date of approval)

Main Boilers

Auxiliary Boilers

Donkey Boilers

Superheaters

General Pumping Arrangements

Oil Fuel Burning Arrangements

Has the spare gear required by the Rules been supplied

SPARE GEAR.

State the principal additional spare gear supplied

Spare supplied according to Admiralty Requirements.

THE POWER PLANT COMPANY LIMITED.

The foregoing is a correct description,

RPM Lead

Manufacturer.

Dates of Survey { During progress of work in shops -- } Mar. 29, Apr. 5, 26, May 3, 10, 16, 26, June 4, 14, 21, 28, July 5, 12, 19, 26, Aug. 2, 30, Sept. 6, 9, 11, 1944
{ During erection on board vessel --- }
Total No. of visits 21

Dates of Examination of principal parts—Casings ✓ Rotors ✓ Blading ✓ Gearing ✓

Wheel shaft Thrust shaft ✓ Intermediate shafts ✓ Tube shaft ✓ Screw shaft ✓

Propeller ✓ 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 ✓

Main boiler safety valves adjusted ✓ Thickness of adjusting washers ✓

Rotor shaft, Material and tensile strength Identification Mark ✓

Flexible Pinion Shaft, Material and tensile strength Identification Mark ✓

Pinion shaft, Material and tensile strength HP. 38253 JLS. LP. 54208 JLS. HP. 41.4 100 MATERIAL LP. 42.6 100 Identification Mark ✓

1st Reduction Wheel Shaft, Material and tensile strength HP. 4405554230. 11/9/44 L.P. 440555404 JLS. 11/9/44 Identification Mark ✓

Wheel shaft, Material S.M.O.H. Steel Identification Mark LLOYDS 57205/13/9/44 Thrust shaft, Material Identification Mark ✓

Intermediate shafts, Material Identification Marks JLS. 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 ✓

Is the flash point of the oil to be used over 150°F. ✓ Have the requirements of the Rules for the use of oil as fuel been complied with ✓

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 yes. If so, state name of vessel A/m S/m. 341-2.

General Remarks (State quality of workmanship, opinions as to class, &c.) The above gears & gearcase have been constructed to approved plans; the materials were manufactured at works approved by the Committee. The workmanship throughout is considered satisfactory, and in my opinion the gearing is suitable to be installed in the vessel allotted by the Admiralty.

The amount of Entry Fee ... £ : : When applied for, 21 SEP 1944
Special Seal ... £ 29 : 8 :
Donkey Boiler Fee ... £ : : When received,
Travelling Expenses (if any) £ 5 : 1 : 0

Committee's Minute FRI. 13 APR 1945

Assigned Su F.E. machy. rpt.

J.L. Smith
Engineer Surveyor to Lloyd's Register of Shipping.



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