

RECEIVED  
Rpt. 4a.  
D.O.

# REPORT ON STEAM TURBINE MACHINERY. No. 75054

Received at London Office FEB 1950

Date of writing Report 10 When landed in at Local Office 3/21 10 50 Port of GLASGOW

No. in Survey held at GLASGOW Date, First Survey 14/12/49 Last Survey 16/11 19 50  
 Reg. Book. on the SS. TREGLISSON (Number of Visits 5) Tons } Gross  
 Net

Built at PORT GLASGOW By whom built HAMILTON Yard No. 484 When built  
 Engines made at GLASGOW By whom made BARCLAY CURLE & CO Engine No. 3W109 When made 1950  
 Boilers made at \_\_\_\_\_ By whom made \_\_\_\_\_ Boiler No. \_\_\_\_\_ When made \_\_\_\_\_  
 Shaft Horse Power at Full Power 970 Owners \_\_\_\_\_ Port belonging to \_\_\_\_\_  
 Nom. Horse Power as per Rule 162 Is Refrigerating Machinery fitted for cargo purposes \_\_\_\_\_ Is Electric Light fitted \_\_\_\_\_  
 Trade for which Vessel is intended \_\_\_\_\_

## STEAM TURBINE ENGINES, &c.—Description of Engines One LP Turbine with DR fairings Hydraulic Coupling

No. of Turbines Ahead One ~~Double reduction geared~~ to One propelling shafts. No. of primary pinions to each set of reduction gearing One  
 Astern ✓ ~~single reduction geared~~ ~~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.	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							82 7/8"	216 7/8"	1			
2ND							99 1/2"	248"	1			
3RD							118"	286"	1			
4TH							136"	322"	1			
5TH							155"	360"	1			
6TH							177"	404"	1			
7TH							200"	450"	1			
8TH												
9TH												
10TH												
11TH												
12TH												

Shaft Horse Power at each turbine { H.P. \_\_\_\_\_ I.P. \_\_\_\_\_ L.P. 970 } Revolutions per minute, at full power, of each Turbine Shaft { H.P. \_\_\_\_\_ I.P. \_\_\_\_\_ L.P. 3360 } 1st reduction wheel 490 main shaft 85

Rotor Shaft diameter at journals { H.P. \_\_\_\_\_ I.P. \_\_\_\_\_ L.P. 170 7/8" } Pitch Circle Diameter { 1st pinion 878 1/2" Ast reduction wheel 60.202 1/2" 2nd pinion 14.283 1/2" main wheel 79.1298" } Width of Face { 1st reduction wheel 260 7/8" main wheel 600 7/8" }

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st pinion 8.225 1/2" 2nd pinion 8.225 1/2" } 1st reduction wheel 360 7/8" main wheel 525 7/8"

Pinion Shafts, diameter at bearings { External 125 7/8" Internal 35 7/8" } 2nd 370 7/8" 250 7/8" } diameter at bottom of pinion teeth { 1st 8.207 1/2" 2nd 13.7068" }

Wheel Shafts, diameter at bearings { 1st 320 7/8" & 250 hole diameter at wheel shroud, main 500 7/8" & 484 hole } 1st 1448 7/8" Generator Shaft, diameter at bearings main 1910 7/8" Propelling Motor Shaft, diameter at bearings \_\_\_\_\_

Intermediate Shafts, diameter as per rule \_\_\_\_\_ as fitted \_\_\_\_\_ Thrust Shaft, diameter at collars 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 \_\_\_\_\_ 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 I.P. Turbine exhaust direct to the Condenser \_\_\_\_\_ No. of Turbines fitted with astern wheels \_\_\_\_\_

Feed Pumps { No. and size \_\_\_\_\_ How driven \_\_\_\_\_ } Lubricating Oil Pumps, including Spare Pump, No. and size 2 @ 11000 gals/hr.

Pumps connected to the Main Bilge Line { No. and size \_\_\_\_\_ How driven \_\_\_\_\_ } Oil Cooler yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Engine and Boiler Room \_\_\_\_\_

Ballast Pumps, No. and size \_\_\_\_\_ Are two independent means arranged for circulating water through the Oil Cooler \_\_\_\_\_

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 \_\_\_\_\_

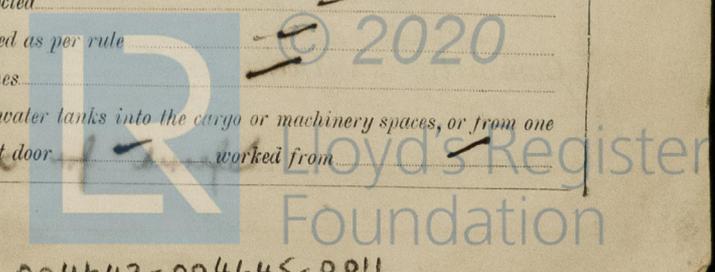
Are they each fitted with a Discharge Valve always accessible on the plating of the vessel \_\_\_\_\_ Are the Blow Off Cocks fitted with a spigot and brass covering plate \_\_\_\_\_

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 \_\_\_\_\_



004642-004645-0011

**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? If so, is a report now forwarded?  
 Plans. Are approved plans forwarded herewith for Shafting Main Boilers Auxiliary Boilers Donkey Boilers  
 Superheaters General Pumping Arrangements Oil Fuel Burning Arrangements  
 Spare Gear. State the articles supplied:— Spare gear as per rule requirements and attached list.

The foregoing is a correct description.

Wm G Diversall Manufacturer

Dates of Survey while building: During progress of work in shops - - 1949 Dec. 14, 16, 19, 20, 1950 Jan. 10  
 During erection on board vessel - - -  
 Total No. of visits  
 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 pumping arrangements Boilers fixed Engines tried under steam  
 Main boiler safety valves adjusted Thickness of adjusting washers  
 Rotor shaft, Material and tensile strength O.H.I.S. 36.8 tns 0 Identification Mark 1478 BH 21.12.48  
 TRANSMISSION Pinion shaft, Material and tensile strength O.H.I.S. 31.6 tns 0 Identification Mark 1472 BH 17.11.48  
 1st Reduction Wheel Shaft, Material and tensile strength O.H.I.S. 32.6 tns 0 Identification Mark 1503 BR 3.10.49  
 Wheel shaft, Material O.H.I.S. Identification Mark 1432 WK 8.3.49 Thrust shaft, Material O.H.I.S. Identification Mark 1397 LW 13.1.49  
 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  
 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  
 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 Turbine Double Reduction gearing and Hydraulic coupling has been constructed under Special Survey in accordance with the Society's Rules and approved plans. Materials and workmanship are good.

The unit has been transported to Messrs D. Roran Glasgow for installing with their machinery contract No 1724.  
 The unit has now been efficiently installed on board the vessel, tried under full working conditions with satisfactory results. A. Shaw.

The amount of Entry Fee ... £ 28 : 10 :  
 Special ... £ : :  
 Donkey Boiler Fee ... £ : :  
 Travelling Expenses (if any) £ : :  
 When applied for, 8 FEB 1950  
 When received, 19

A. Shaw  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW - 8 FEB 1950

Assigned Deferred for completion

