

Report on Steam Turbine Machinery. No. 17267

Received at London Office 26 JUN 1945

Form 4a.
 Date of writing Report 18th Jun 1945. When handed in at Local Office 20th July 1945 Port of NIDDISBROUGH.
 Name in Survey held at Haverton Hill-on-Tees. Date, First Survey 12th Oct. 1944 Last Survey 31st May, 1945.
 Book (Number of Visits 58.)
 on the S.S. "WAVE REGENT". Tons {Gross 2184 Net 4554}
 Built at Haverton Hill-on-Tees. By whom built Furness Shipbuilding Co. Yard No. 363 When built 1945-5
 Engines made at West Hartlepool. By whom made Richardson Westgarth & Co. Ltd. Engine No. 2752 When made 1945
 Boilers made at -do- By whom made -do- Boiler No. 2752 When made 1945.
 Shaft Horse Power at Full Power 6800 Owners Admiralty. Port belonging to London
 Nom. Horse Power as per Rule 1210 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
 Trade for which Vessel is intended

STEAM TURBINE ENGINES, &c.—Description of Engines

Kind of Turbine: Direct coupled, single reduction geared } to propelling shafts. No. of primary pinions to each set of reduction gearing
 double reduction geared }
 Coupled to: Alternating Current Generator phase periods per second } rated Kilowatts Volts at revolutions per minute;
 Direct Current Generator }
 Power for driving: Propelling Motors, Type
 Kilowatts Volts at revolutions per minute. Direct coupled, single or double reduction geared to propelling shafts.

ROW	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												

Horse Power at each turbine: H.P. I.P. L.P. Revolutions per minute, at full power, of each Turbine Shaft: H.P. I.P. L.P.
 1st reduction wheel
 main shaft
 Rotor Shaft diameter at journals: H.P. I.P. L.P. Pitch Circle Diameter: 1st pinion 2nd pinion. Width of Face: 1st reduction wheel main wheel.

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings: 1st pinion 2nd pinion. 1st reduction wheel main wheel.
 Pinion Shafts, diameter at bearings: External Internal 1st 2nd diameter at bottom of pinion teeth 1st 2nd.
 Wheel Shafts, diameter at bearings: 1st diameter at wheel shroud 1st Generator Shaft, diameter at bearings. main Propelling Motor Shaft, diameter at bearings.
 Intermediate Shafts, diameter: as per rule as fitted. Thrust Shaft, diameter at collars: as per rule as fitted.

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.
 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 stern tube.
 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 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.
 If so, state type. Length of Bearing in Stern Bush next to and supporting propeller.
 Diameter Pitch No. of Bades State whether Moveable Total Developed Surface square feet.
 Are arrangements made so that steam can be led direct to the L.P. Turbine. Can the H.P. or I.P. Turbines 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.
 Independent means arranged for circulating water through the Oil Cooler. Suctions, connected both to Main Bilge Pumps and Auxiliary Pumps, No. and size:—In Engine and Boiler Room In Pump Room.

Water Circulating Pump Direct Bilge Suctions, No. and size. Independent Power Pump Direct Suctions to the Engine Room.
 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 the main deck.

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? See Middlesbrough Report No. 18619

Is { a Donkey } Boiler fitted? Yes If so, is a report now forwarded? See Middlesbrough Rpts Nos. 17790 & 17797.

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

Plans. Are approved plans forwarded herewith for Shafting..... Main Boilers..... Auxiliary Boilers..... Donkey Boilers.....

Superheaters..... General Pumping Arrangements..... Oil Fuel Burning Arrangements.....

SPARE GEAR.

Has the spare gear required by the Rules been supplied..... Yes

State the principal additional spare gear supplied..... As per rule requirements (see also attached list).

The foregoing is a correct description,

Dates of Survey while building { During progress of work in shops - - } 1944, Oct. 12, Nov. 3, 15, 30, Dec. 6, 1945, Jan. 9, 19, Feb. 6, 16, 19, 20, 26, 29, March 7, 12, 15, 16, 19, 21, April, 7, 10, 16, 25, 26, 29, May, 2, 4, 11, 25, 24, 25, 26, 30. Total No. of visits..... 30.

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

Wheel shaft..... Thrust shaft..... Intermediate shafts..... 5/4/45..... Tube shaft..... Screw shaft..... 28/2/45

Propeller..... 28/2/45..... Stern tube..... 29/9/45..... Engine and boiler seatings..... 16/3/45 & 19/3/45..... Engine holding down bolts..... 2/5/45

Completion of fitting sea connections..... 16/3/45..... Completion of pumping arrangements..... 29/5/45..... Boilers fixed..... 24/4/45 & 25/5/45..... Engines tried under steam..... 25/5/45

Main boiler safety valves adjusted..... 31/5/45..... Thickness of adjusting washers..... Port Blr: Drum 2/32 Spt. P = 9/32 S = 1/4 Starboard 5/18 Spt. P = 7/32 S = 1/4

Rotor shaft, Material and tensile strength..... 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..... Yes If so, state name of vessel..... "WAVE GOVERNOR"

General Remarks. (State quality of workmanship, opinions as to class, &c.)..... These engines and boilers were fitted on board this vessel in accordance with the approved plans and rule requirements and on completion the machinery was tried out under working conditions and found satisfactory and in my opinion is now eligible for record of RLMC. 15.45 and notation of TS/CL. 15.45. forced draught and superheated.

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

The amount of Entry Fee	£	:	:	When applied for.
Special	IMC	£	26-1-6d.	25-3-19-45
Donkey Boiler Fee	£	:	:	When received.
Supervision.	£	:	6-10-4d.	
Travelling Expenses (if any)	£	:	:	19

L. Norman Stuart
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute..... **FRI, 13 JUL 1945**

Assigned..... *+ LMC 6 45*

