

Report on Steam Turbine Machinery.

MOB. 17824

No. 18607

Date of writing Report 7/12/1944 When handed in at Local Office 7/12/1944 Port of W. Hartlepool
 Date, First Survey 24-12-43 Last Survey 1-12-1944
 Survey held at Hartlepool (Number of Visits 28)
 on the S/S "WAVE GOVERNOR" Tons (Gross 8196 Net 4568)
 Built at Haverston Hill By whom built Furness S. B. Co. Yard No. 362 When built 1945
 Engines made at Hartlepool By whom made Richardson Westgarth Engine No. 2451 When made 1944
 Boilers made at " By whom made " Boiler No. 2451 When made 1944
 Shaft Horse Power at Full Power 6800 Owners " Port belonging to "
 Nom. Horse Power as per Rule 1215-1226 Is Refrigerating Machinery fitted for cargo purposes " Is Electric Light fitted Yes
 Trade for which Vessel is intended 1226 M/V 1470

STEAM TURBINE ENGINES, &c.—Description of Engines Double Reduction Geared Turbines

No. of Turbines 2 Ahead 2 Direct coupled, single reduction geared to 1 propelling shafts. No. of primary pinions to each set of reduction gearing 2
 Astern 1 double reduction geared
 Direct coupled to { Alternating Current Generator phase periods per second } rated Kilowatts Volts at revolutions per minute;
 or supplying power for driving Propelling Motors, Type
 Direct coupled, single or double reduction geared to propelling shafts.

TURBINE	H. P.			I. P.			L. P.			ASTERN.		
	HEIGHT OF BLADES AT TIP.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES AT TIP.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES AT TIP.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES AT TIP.	DIAMETER AT TIP.	NO. OF ROWS.
1st Expansion	1.23	17.46	7				1.875	39.75	3	4	49.5	1
2nd "	1.52	18.04	7				1.324	Cyl.	1	7	52.75	1
3rd "	1.68	18.36	6				1.896	bone	1	9	55	1
4th "	2.07	19.14	6				2.468	tapered	1	(Rotor)		
5th "	2.58	20.16	6				3.109	between	1			
6th "	Above blading truncated by 2 Row Impulse wheel			Rotor outlet			3.824	1st	1	Impulse Blading		
7th "	above Hartlepool below			NOTE			4.539	4	1			
8th "	1.75	30.47	1	all dimensions in inches			5.3	12th	1			
9th "	1.68	31.69	1				6.13	expansions	1			
10th "							7.047		1			
11th "							8.185		1			
12th "							9	56	1			

Shaft Horse Power at each turbine H.P. 3500 I.P. 3969 1st reduction wheel
 L.P. 3300 main shaft
 Revolutions per minute, at full power, of each Turbine Shaft
 Propeller Shaft diameter at journals H.P. 5" I.P. 5" 1st pinion 1st reduction wheel
 L.P. 4" 2nd pinion main wheel

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings
 Flexible Pinion shafts, diameter at bearings 1st External Pinion Shafts, diameter at bearings 1st diameter at bottom of pinion teeth
 2nd Internal Pinion Shafts, diameter at bearings 2nd diameter at bottom of pinion teeth
 Wheel Shafts, diameter at bearings 1st diameter at wheel shroud, 1st Generator Shaft, diameter at bearings
 2nd diameter at wheel shroud, 2nd Propelling Motor Shaft, diameter at bearings

Intermediate Shafts, diameter as per rule 15.54" as fitted 16" Thrust Shaft, diameter at collars as per rule 17.04" as fitted 17 3/4"
 Tube Shaft, diameter as per rule 17.04" as fitted 17 3/4" Is the screw shaft fitted with a continuous liner Yes
 Bronze Liners, thickness in way of bushes as per rule .821" as fitted 7/8" Thickness between bushes as per rule .615" as fitted 3/4" 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 or other appliance fitted at the after end of the tube Yes
 Propeller, diameter 18'-0" Pitch Varying No. of Blades 4 State whether Moveable No Total Developed Surface 121 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. Turbines exhaust direct to the condenser Yes
 No. of Turbines fitted with astern wheels one Feed Pumps No. and size 2-3" Turbo Feed Pumps
 How driven Steam
 Pumps connected to the Main Bilge Line No. and size 1-10" x 9" x 10" Fire & Bilge, 1-10" x 9" x 10" Ballast
 How driven Steam

Ballast Pumps, No. and size 1-10" x 9" x 10" Lubricating Oil Pumps, including Spare Pump, No. and size 2-9" x 8" x 18"
 Are two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected both to Main Bilge Pumps and Auxiliary
 Bilge Pumps, No. and size:—In Engine and Boiler Room 4-3 1/2" + 2-2 1/2" E. & B. Space, 1-2 1/2" Tunnel Well Pump Room

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 mud-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 Both
 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 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 Yes How are they protected Yes
 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

