

REPORT ON STEAM TURBINE MACHINERY. No. 74651

Date of writing Report 10 When handed in at Local Office 10 Port of Glasgow
 No. in Survey held at 23430 on the 55 Reg. Book. 23430 Date, First Survey 2-12-48 Last Survey 19-9-1949
 Engines made at Bremen By whom built Howaldtswerke n/s Yard No. 2099
 Boilers made at Kiel By whom made Deutsche Schiff- u. Maell. Engine No. AT 357
 Shaft Horse Power at Full Power 360 Owners - Burnie Line Ltd Boiler No. 1520/1
 Nom. Horse Power as per Rule Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted - Yes
 Trade for which Vessel is intended International

STEAM TURBINE ENGINES, &c.—Description of Engines Compound & LP Turbine with DR gearing & hydraulic coupling
 No. of Turbines Ahead 1 Direct coupled, single reduction geared } to 1 propelling shafts. No. of primary pinions to each set of reduction gearing 1
 Astern - 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.

TUBINE 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													
2ND													
3RD													
4TH													
5TH													
6TH													
7TH													
8TH													
9TH													
10TH													
11TH													
12TH													

Shaft 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. 5000. } 1st reduction wheel - main shaft -

Rotor Shaft diameter at journals { H.P. - I.P. - L.P. 99.9 in. } Pitch Circle Diameter { 1st pinion - 2nd pinion - } 1st reduction wheel - main wheel - Width of Face { 1st reduction wheel 110 in. - main wheel 390 in. - }

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st pinion 338 x 115 in. - 2nd pinion 305 x 315 in. - } 1st reduction wheel 233 x 253 in. - main wheel 352 x 352 in. -

Flexible Pinion Shafts, diameter { 1st - 2nd - } Pinion Shafts, diameter at bearings External 1st { 100 in. - 2nd { 200 in. - diameter at bottom of pinion teeth { 1st - 2nd - }

Wheel Shafts, diameter at bearings { 1st 180 x 200 in. - main 310 in. - } diameter at wheel shroud, { 1st - main - } Generator Shaft, diameter at bearings - 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 Movable Total Developed Surface square feet. 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 - }

Pumps connected to the Main Bilge Line { No. and size - How driven - }

Ballast Pumps, No. and size 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 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 fall 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

How are they protected 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

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?
{ an Auxiliary }

Plans. 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. State the articles supplied:—

The foregoing is a correct description,

Manufacturer

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—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 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

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 machinery, built under G.L.

survey has now been examined throughout, tried under working conditions and found satisfactory and is eligible to be classed with a record M.B.S. 9-49 and notation T.S. cc.

The amount of Entry Fee ... £ : : When applied for,
Special ... £ see Rpt 9. : : 19
Donkey Boiler Fee ... £ : : When received,
Travelling Expenses (if any) £ : : 19

J.R. Dale
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW - 9 NOV 1949

Assigned

See Rpt 9.



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Foundation