

REPORT ON STEAM TURBINE MACHINERY

Sld. N^o 32139

Lon No. 104581

Received at London Office JUL 16 1937

Date of writing Report 23 June 1937 When handed in at Local Office 24 JUN 1937 Port of London 24 JUN 1937
 No. in Survey held at West Drayton Date, First Survey 7 January 1937 Last Survey 31 May 1937
 Reg. Book. on the Reduction Gearing for s/s Biddulstone (Number of Visits 4)
 Built at Liverpool By whom built Wm. Short Bros Yard No. 450 Tons 4910
 Engines made at Hebburn on Tyne By whom made White Marine Eng. Co. Ltd. Engine No. 112 When built 1937
 Boilers made at White Shipping Co. Ltd Boiler No. 1937 When made 1937
 Shaft Horse Power at Full Power Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted
 Nom. Horse Power as per Rule Is Electric Light fitted
 Trade for which Vessel is intended

STEAM TURBINE ENGINES, &c.—Description of Engines Reciprocating & Turbine Combination
 No. of Turbines Recip. Unit I
 Direct coupled to single reduction geared to one propelling shaft. No. of primary pinions to each set of reduction gearing TURBINE UNIT I
 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
rated Kilowatts Volts at revolutions per minute Direct coupled, single or double reduction geared to propelling shafts

	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.
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Shaft Horse Power at each turbine TURBINE H.P. 730
 Motor Shaft diameter at journals H.P. 5.896"
 Pitch Circle Diameter 1st pinion 5.896"
 1st reduction wheel 52.304"
 main wheel 74.549"
 Width of Face 1st reduction wheel 16"
 main wheel 2'-6"
 1st pinion 12"
 1st reduction wheel 12"
 2nd pinion 1'-10" 41-62"
 main wheel 1'-10"
 1st 5'-529"
 2nd 11-717"
 Pinion Shafts, diameter at bearings External 1st 4 1/2"
 Internal 2nd 5"
 diameter at bottom of pinion teeth 1st 5'-529"
 2nd 11-717"
 Wheel Shafts, diameter at bearings 1st 8 7/8"
 main 13 1/4"
 diameter at wheel shroud, 1st 49 1/2"
 main 70 1/4"
 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 fitted Screw Shaft, diameter
 as fitted Is the tube
 as fitted screw
 shaft fitted with a continuous liner Is the after end of the liner made watertight in the
 propeller boss If the liner is in more than one length are the
 sections 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
 Length of Bearing in Stern Bush next to and supporting propeller If so, state type
 Pitch No. of Blades State whether Moveable Total Developed Surface square feet.
 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
 No. of Turbines fitted with stern 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 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
That pipes pass through the bunkers How are they protected
That 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

W188-0021

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?

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

Plans. Are approved plans forwarded herewith for Shafting 7 4. 27 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

State the principal additional spare gear supplied

THE POWER PLANT COMPANY LTD

The foregoing is a correct description, OF GEARING

WORKS MANAGER

24. 6. 37

Manufacture

Dates of Survey while building { During progress of work in shops -- 1937 Jan. 7. March 19. May 26. 31
During erection on board vessel ---
Total No. of visits 4 (In Shops)

Dates of Examination of principal parts—Casings

Rotors

Blading

Gearing 26. 6. 37

Wheel shaft 19. 2. 37.

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 fired

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

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

If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.)

The gearing has been constructed under Special Survey in accordance with the requirements of the Rules and approved plans. The materials have been made at Works approved by the Society & tested to Rule requirements. The workmanship is good & the gearing is eligible, in my opinion, for service in a classed vessel & to have the notation of + L.R.C. (with a) when satisfactorily installed & tested under full working condition

The amount of Entry Fee ... £

Special ... £

Donkey Boiler Fee ... £

Travelling Expenses (if any) £

When applied for,

When received,

See here Rpt.

J. H. Earnett

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE 20 JUL 1937

Assigned

See Sea 32319



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