

Newcastle no 93907

25 AUG 1936
Sld. No. 31892

pt. 4a.

REPORT ON STEAM TURBINE MACHINERY.

No. 103020
18 JUN 1936

Date of writing Report 12th June 1936 When handed in at Local Office 18 JUN 1936 Port of London
No. in Survey held at West Alrayton Date, First Survey 5 February 1936 Last Survey 9th June 1936
Reg. Book. on the Reduction gearing for. (Number of Visits 16)

Built at Sunderland By whom built J. L. Thompson & Sons Yard No. 574 When built 1936
Engines made at Hobbam & Type By whom made White Marine Eng Co Engine No. 5C When made 1936
Boilers made at By whom made Boiler No. When made
Shaft Horse Power at Full Power 1800 Owners The Queen's Shipping Co Ltd Port belonging to Newport
Nom. Horse Power as per Rule Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted
Trade for which Vessel is intended

TEAM TURBINE ENGINES, &c.—Description of Engines. RECIPROCATING & TURBINE COMBINATION

No. of Turbines Ahead 1 Direct coupled, single reduction geared } to one propelling shafts. No. of primary pinions to each set of reduction gearing RECIPI UNIT 1
Astern 1 double reduction geared TURBINE UNIT 1
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												
2ND												
3RD												
4TH												
5TH												
6TH												
7TH												
8TH												
9TH												
10TH												
11TH												
12TH												

RECIP ENGINE 1000 MAX. Shaft Horse Power at each turbine TURBINE 800 MAX. Revolutions per minute, at full power, of each Turbine Shaft RECIP ENGINE 305 TURBINE 3446 1st reduction wheel 400 main shaft 61
Rotor Shaft diameter at journals H.P. Pitch Circle 1st pinion 6" 1st reduction wheel Width of 1st reduction wheel 16"
I.P. Diameter 2nd pinion 11.666" main wheel 75.333" Face main wheel 30"
L.P. RECIP ENG. PINION 15" 2nd pinion 12" 1st reduction wheel 12"
Distance between centres of pinion and wheel faces and the centre of the adjacent bearings 2nd pinion 1'-10" main wheel 1'-10"
Flexible Pinion Shafts, diameter at bearings RECIP ENG 5 1/4" External 1st 4 1/2" 2nd 8 3/4" diameter at bottom of pinion teeth 1st 5.56"
TURBINE 4 3/4" Internal 1st 10 1/2" 2nd 5" 2nd 10.933"
Wheel Shafts, diameter at bearings 1st 8 3/4" diameter at wheel shroud, 1st 10 1/2" 2nd 5" RECIP ENG 8 3/4" EXT 5 1/4" BORE Generator Shaft, diameter at bearings RECIP ENG 14.26
main 13 1/4" Propelling Motor Shaft, diameter at bearings
Intermediate Shafts, diameter as per rule Thrust Shaft, diameter at collars as per rule
Tube Shaft, diameter as fitted Screw Shaft, diameter as fitted Is the tube screw shaft fitted with a continuous liner
Bronze Liners, thickness in way of bushes as per rule Thickness between bushes as per rule 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
If so, state type 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
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
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

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W116-0177

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 ☒ an Auxiliary 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 ☒ 16.12.35 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 foregoing is a correct description, OF GEARING

R. E. Hughes

Manufacturer.

Dates of Survey while building

During progress of work in shops --

During erection on board vessel --

Total No. of visits

1936

Feb 5. 18. 26 Mar 5. 16. 23. 30 Apr 9. 16. 22. 25. 28. May 11. 21. 25 June 9.

Dates of Examination of principal parts—Casings

Rotors

Blading

Gearing 25.5.36

Wheel shaft

25.5.36

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 fixed

Engines tried under steam

Main boiler safety valves adjusted

Thickness of adjusting washers

Rotor shaft, Material and tensile strength

Flexible Pinion Shaft, Material and tensile strength

Steel

55.6 65 tons

Pinion shafts Material and tensile strength

Steel

TURBINE 58.4 T RECIPE ENG 47.6 T

1st Reduction Wheel Shaft, Material and tensile strength

Steel

29.6 T

Wheel shaft, Material

Steel

Identification Mark

Lloyd's 241 AE 25.5.36

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 ☒ Yes

If so, state name of vessel

J. L. Thompson YON° 573
Whitby chartered by C. N° 4 C

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

This gearing has been constructed under special survey in accordance with approved plans and Rule Requirements. The materials have been made at works approved by the Society and tested in accordance with rules, the workmanship is good.

Eligible in my opinion for service in a classed vessel having notation of +LMC with date when satisfactorily installed under survey and tried under working conditions.

The amount of Entry Fee ... £

0 : 0

When applied for,

Special ... £

:

When received,

Donkey Boiler Fee ... £

:

Travelling Expenses (if any) £

5 : 5

19

Committee's Minute

FRI. 28 AUG 1936

Assigned

See Ill. J.E. 31892

W. E. Ewing
Engineer Surveyor to Lloyd's Register of Shipping.



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