

EXHAUST.
REPORT ON STEAM TURBINE MACHINERY. No. 50356

Rpt. 4a.

Received at London Office 14 MAY 1930

Date of writing Report 10-5-30 When handed in at Local Office 10-5-30 Port of Glasgow
No. in Survey held at Glasgow Date, First Survey 27-5-29 Last Survey 3-5-30
Reg. Book. City of Barcelona (Number of Visits 94)
on the ss Glasgow By whom built Barclay Curle & Co Ltd Yard No. 636 Tons Gross 1930
Engines made at Manchester By whom made Metropolitan Vickers Electrical Co Ltd Engine No. 2660 When made 1930
Boilers made at Glasgow By whom made Barclay Curle & Co Ltd Boiler No. 636 When made 1930
Shaft Horse Power at Full Power 990 Owners The Ellerman Lines Ltd Port belonging to Liverpool
Nom. Horse Power as per Rule 165 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

No. of Turbines Ahead Direct coupled, single reduction geared } to propelling shafts. No. of primary pinions to each set of reduction gearing
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.	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. } 1st reduction wheel main shaft

Rotor Shaft diameter at journals { H.P. I.P. L.P. } Pitch Circle Diameter { 1st pinion 2nd pinion } 1st reduction wheel main wheel 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

Flexible Pinion Shafts, diameter { 1st 2nd } Pinion Shafts, diameter at bearings External Internal { 1st 2nd } diameter at bottom of pinion teeth { 1st 2nd }

Wheel Shafts, diameter at bearings { 1st main } 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 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

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 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

002750-002753-0030

BOILERS, &c.—(Letter for record) Total Heating Surface of Boilers *See Glasgow Rpt for Blrs.* Working Pressure

Is Forced Draft fitted *Yes.* No. and Description of Boilers
Is a Report on Main Boilers now forwarded? *yes.* If so, is a report now forwarded? *yes.*
Is ~~Donkey~~ *an Auxiliary* Boiler fitted? *yes* Main Boilers ☒ Auxiliary Boilers ☒ Donkey Boilers ☒
Plans. Are approved plans forwarded herewith for Shafting ☒ Oil Fuel Burning Arrangements
(If not state date of approval) General Pumping Arrangements
Superheaters
Spare Gear. State the articles supplied:—

see Manchester Rpt: 6974

The foregoing is a correct description,

Dates of Survey while building { During progress of work in shops -- }
{ During erection on board vessel --- }
Total No. of visits *See Accompanying machy. Report 94*
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 Identification Mark
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 Marks 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
Is an installation fitted for burning oil fuel ☒

10/5/30 Date of test *See Manchester Report no 6974* Have the requirements of the Rules for carrying and burning oil fuel been complied with ☒

Is the flash point of the oil to be used over 150° F. ☒ If so, state name of vessel ☒

Is this machinery a duplicate of a previous case *no*

General Remarks (State quality of workmanship, opinions as to class, &c.)
The exhaust turbine, generator and propulsion motor mentioned in Manchester Report no 6974, have been properly fitted on board the Kessel, tried under working conditions and found satisfactory.

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

Committee's Minute GLASGOW 13 MAY 1930

Assigned *See Accompanying machy Report.*

J. S. R. R. H. L. Sutherst.
ELECTRICAL Engineer Surveyors to Lloyd's Register of Shipping.



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