

REPORT ON STEAM TURBINE MACHINERY.

No. 6262

Rpt. 4a.

Received at London Office JUL 25 1940

Date of writing Report

When handed in at Local Office

22.7.40 Port of GLASGOW

No. in Survey held at Glasgow

Date, First Survey 1939 June 22 Last Survey 10th July 1940

Reg. Book

(Number of Visits 15)

Tons Gross 6343.44 Net

on the S/S "DALESMAN"

Built at Pt. Glasgow By whom built Lithgow & Co. Ltd. Yard No. 927 When built 1940

Engines made at Glasgow By whom made David Brown & Co. Ltd. Engine No. 1038 When made 1940

TURBINE made at Glasgow By whom made Barclay Curle & Co. Ltd. Boiler No. BW 67 When made 1940

Shaft Horse Power at Full Power 1512 Owners T & J. Hanson Port belonging to Liverpool

Nom. Horse Power as per Rule 252 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 One L.P. turbine with double reduction gearing & hydraulic coupling.

No. of Turbines Ahead one Direct coupled, single reduction geared to one propelling shafts. No. of primary pinions to each set of reduction gearing one

direct coupled to Alternating Current Generator phase periods per second rated Kilowatts Volts at revolutions per minute; Direct Current Generator

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							94 in	1138 in	1			
2ND							115 "	1180 "	1			
3RD							136 "	1222 "	1			
4TH							157 "	1264 "	1			
5TH							179 "	1308 "	1			
6TH							207 "	1364 "	1			
7TH							235 "	1420 "	1			
8TH												
9TH												
10TH												
11TH												
12TH												

Shaft Horse Power at each turbine H.P. 1512 I.P. 2640 L.P. 2640 1st reduction wheel 428 main shaft 82

Rotor Shaft diameter at journals H.P. 170 in I.P. 170 in L.P. 170 in Pitch Circle Diameter 1st pinion 11.1409" 1st reduction wheel 68.7722" 2nd pinion 8.2827" main wheel 91.6992" Width of Face 1st reduction wheel 310 in main wheel 680 in

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings 1st pinion 305 in 1st reduction wheel 425 in 2nd pinion 487 in main wheel 590 in

TRANSMISSION Flexible Pinion Shafts, diameter 1st 90 in 2nd 170 in Pinion Shafts, diameter at bearings External 1st 170 in 2nd 420 in Internal 1st 50 in 2nd 365 in diameter at bottom of pinion teeth 1st 10.5641" 2nd 17.5103"

Wheel Shafts, diameter at bearings 1st 300 in main 550 in diameter at wheel shroud, 1st 1650 in main 2218 in 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 425 in Tube Shaft, diameter as per rule as fitted

Screw Shaft, diameter as per rule as fitted Is the tube 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. 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 Lubricating Oil Pumps, including Spare Pump, No. and size 2 @ 11 1/2" x 10 1/2" x 18"

Ballast Pumps, No. and size Are two independent means arranged for circulating water through the Oil Cooler Yes 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 Have they been tested as per rule What pipes pass through the deep tanks

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 Auxilliary
Plans. Are approved plans forwarded herewith for Shafting 26/5/39 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:— List attached



FOR BARCLAY, CURLE & CO. LTD.

Alexander Macmillan.

Manufacturer.

The foregoing is a correct description,

Dates of Survey while building { During progress of work in shops -- 1939 June 22 July 10 Aug 2 11 18 23 Sept 7 15 29 Oct 2 9 17
During erection on board vessel --- 1940 Apr 2 23 July 10
Total No. of visits 15

Dates of Examination of principal parts—Casings 29-9-39 Rotors 29-9-39 Blading 9-10-39 Gearing 2-10-39

Wheel shaft 2-10-39 Thrust shaft 29-9-39 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 10-7-40

Main boiler safety valves adjusted - Thickness of adjusting washers -

Rotor shaft, Material and tensile strength S.M. Steel 37.8 tons Identification Mark 8679ATB + test numbers

TRANSMISSION
Pinion shaft, Material and tensile strength S.M. Steel 31.2 tons Identification Mark 8679ATB + test numbers

Pinion shaft, Material and tensile strength NICKEL STEEL 45.0 tons Identification Mark 8679ATB + test numbers

1st Reduction Wheel Shaft, Material and tensile strength S.M. Steel 31.2 tons Identification Mark 8679ATB + test numbers

Wheel shaft, Material S.M. Steel Identification Mark 8679ATB Thrust shaft, Material S.M. Steel Identification Mark 8679ATB + test numbers

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 carrying and burning oil fuel been complied with -

Is this machinery a duplicate of a previous case Yes If so, state name of vessel "BARRISTER" GLS. REG. NO. 6126

General Remarks (State quality of workmanship, opinions as to class, &c. This machinery has been

built under special survey in accordance with the Rules,

and the materials and workmanship are good.

It has been satisfactorily installed in the vessel and

tested under full load and found efficient.

Certificate (if required) to be sent to Committee's Minute.

The amount of Entry Fee ... £ : :
Special ... £ 25 : 4 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :

When applied for,

23 JUL 1940

When received,

24 July 1940

Engineer Secretary to Lloyd's Register of Shipping.

Committee's Minute

Glasgow 23 JUL 1940

Assigned



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