

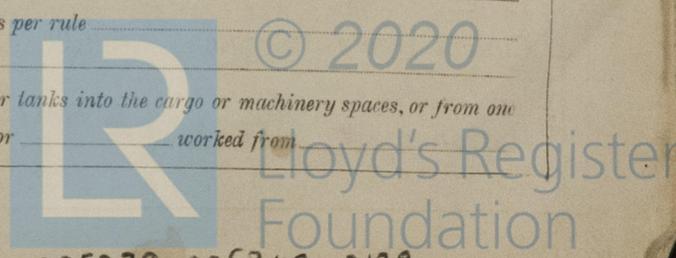
REPORT ON STEAM TURBINE MACHINERY. No. 62629

Date of writing Report 22.7.40 When landed in at Local Office Port of GLASGOW Received at London Office JUL 25 1940
 No. in Survey held at GLASGOW Date, First Survey 1940 Apr. 2nd Last Survey 11th July 1940
 Reg. Book "BURNSIDE" (Number of Visits 9) Tons Gross 5659 Net 3280
 on the S/S "BURNSIDE"
 Built at GLASGOW By whom built BARCLAY CURLE & CO. LD. Yard No. 676 When built 1940
 Engines made at GREENOCK By whom made J. G. KINCAID & CO. LD. Engine No. 704 When made
 Turbine made at GLASGOW By whom made BARCLAY CURLE & CO. LD. Boiler No. BW 69 When made 1940
 Shaft Horse Power at Full Power 960 Owners _____ Port belonging to _____
 Nom. Horse Power as per Rule 160 Is Refrigerating Machinery fitted for cargo purposes _____ Is Electric Light fitted _____
 Trade for which Vessel is intended _____

STEAM TURBINE ENGINES, &c.—Description of Engines ONE L.P. TURBINE WITH D.R. GEARING AND 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
 Astern _____ double reduction geared }
 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 _____
 _____ Kilowatts _____ Volts at _____ revolutions per minute. Direct coupled, single or double reduction geared to _____ propelling shafts.

TURBINE LOADING.	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	/	/	/	/	/	/	74 mm	898 mm	1	/	/	/
2nd	/	/	/	/	/	/	94	958	1	/	/	/
3rd	/	/	/	/	/	/	114	978	1	/	/	/
4th	/	/	/	/	/	/	134	1018	1	/	/	/
5th	/	/	/	/	/	/	154	1058	1	/	/	/
6th	/	/	/	/	/	/	177	1104	1	/	/	/
7th	/	/	/	/	/	/	200	1150	1	/	/	/

Shaft Horse Power at each turbine { H.P. _____ I.P. _____ L.P. 960 } Revolutions per minute, at full power, of each Turbine Shaft { H.P. _____ I.P. _____ L.P. 3340 }
 1st reduction wheel 487
 main shaft 85
 Propeller Shaft diameter at journals { H.P. _____ I.P. _____ L.P. 170 mm } Pitch Circle Diameter { 1st pinion 8.784" 1st reduction wheel 60.2094" 2nd pinion 14.2834" main wheel 79.1298" } Width of Face { 1st reduction wheel 260 mm main wheel 600 mm }
 Distance between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st pinion A 225 mm F 265 mm 1st reduction wheel A 360 mm F 1565 mm 2nd pinion 422.5 mm F 1A main wheel 525 mm }
 Pinion Shafts, diameter at bearings { External 1st 125 mm 2nd 320 mm Internal 1st 35 mm 2nd 250 mm } diameter at bottom of pinion teeth { 1st 8.2094" 2nd 13.511" }
 Wheel Shafts, diameter at bearings { 1st A 250 F 230 diameter at wheel shroud, { 1st 144.8 mm Generator Shaft, diameter at bearings _____ } main 500 mm F 1A } Propelling Motor Shaft, diameter at bearings _____
 Intermediate Shafts, diameter as per rule _____ as fitted _____ Thrust Shaft, diameter at collars as per rule 466 as fitted 360 mm Tube Shaft, diameter as per rule _____ as fitted _____
 Propeller 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 _____
 Sealed 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 _____ stic 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 _____
 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 I.P. Turbine exhaust direct to the _____
 Sension _____ 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 _____ }
 Bilge Pumps, No. and size _____ Lubricating Oil Pumps, including Spare Pump, No. and size _____
 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 _____
 Folds, &c. _____
 Main Water Circulating Pump Direct Bilge Suctions, No. and size _____ Independent Power Pump Direct Suctions to the Engine Room _____
 Pumps, 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 _____
 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 _____
 Are the pipes pass through the bunkers _____ How are they protected _____
 Are the pipes pass through the deep tanks _____ Have they been tested as per rule _____
 All Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times _____
 Are arrangements 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 _____
 Department to another _____ Is the Shaft Tunnel watertight _____ Is it fitted with a watertight door _____ worked from _____



Rpt 4^A No 62629.

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 6/10/39 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.



THE BARCLAY, CURLE & CO. LTD.

Alexander Macneil.

Chief Draughtsman

Manufacturer.

The foregoing is a correct description,

Dates of Survey while building { During progress of work in shops - - } 1940 Apr. 2, 22, May 10, 15, 30 June 5, 19, 25, July 11
{ During erection on board vessel - - - }
Total No. of visits 9

Dates of Examination of principal parts—Casings 2-4-40 Rotors 2-4-40 Blading 19-6-40 Gearing 30-5-40

Wheel shaft 30-5-40 Thrust shaft 15-5-40 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 S.M. Steel 37.6 tons Identification Mark 44 WTM, LT 16-2-40 ATB 30-5-40

TRANS² Flexible Pinion Shaft, Material and tensile strength S.M. Steel 28.2 tons Identification Mark FD 10-4-40 ATB 30-5-40

Pinion shaft, Material and tensile strength S.M. Steel 46.8 tons Identification Mark 765 LT 16-2-40 ATB 30-5-40

1st Reduction Wheel Shaft, Material and tensile strength S.M. Steel 30.8 tons Identification Mark 729 LT 16-2-40

Wheel shaft, Material S.M. Steel Identification Mark 43 WTM Thrust shaft, Material S.M. Steel Identification Mark 715 FH 31-1-40 ATB 30-5-40

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 _____ If so, state name of vessel _____

General Remarks (State quality of workmanship, opinions as to class, &c. This machinery has been built under special survey and in accordance with the Rules, and the materials and workmanship are good. It will be fitted in the s/s "BURNSIDE" at Greenock in conjunction with Messrs J. G. Macnaid & Co's. Eng. H. 704

This turbine has been efficiently installed on board the vessel & tried out under full working conditions with satisfactory results

Charles W. Hunter
Gourock
8/10/40

	When applied for,	When received,
The amount of Entry Fee ... £	2.00	19.00
Special ... £	16.00	
Donkey Boiler Fee ... £		
Travelling Expenses (if any) £	2.00	19.00

Engineer Surveyor to Lloyd's Register of Shipping.

23 JUL 1940

Committee's Minute Glasgow JRA

Assigned Deputed



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