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JAN 1950

REPORT ON STEAM TURBINE MACHINERY.

No. 75215 1950

Received at London Office

Date of Reporting Report 19 4 JAN 1950 When handed in at Local Office GLASGOW Port of GLASGOW

No. in Survey held at GLASGOW Date, First Survey 19-9-49 Last Survey 23-12-1949
 Reg. Book. on the OLINDA (Number of Visits 6)

Built at DUMBARTON By whom built W. DENNY & BROS L^o Yard No. 1432 Tons ^{Gross} _{Net}
 Engines made at GREENOCK By whom made J. G. KINCAID & CO L^o Engine No. 799 When built 1950
~~Boilers~~ made at GLASGOW By whom made BARCLAY CURLEY CO L^o No. BV107 When made 1949
 Shaft Horse Power at Full Power 1020 Owners BRITISH INDIA STR. NAV. CO L^o Port belonging to
 Nom. Horse Power as per Rule Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted
 Trade for which Vessel is intended OPEN SEA SERVICE

TEAM TURBINE ENGINES, &c. — Description of Engines One LP Turbine with DR Gearing & Hyd Coupling

No. of Turbines One ^{Ahead} ^{Direct coupled, single reduction geared, double 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 Direct Current Generator 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 LADING.	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.
ST EXPANSION												
ND							74 1/2"	898 1/2"	1			
RD							94 "	938 "	1			
TH							114 "	978 "	1			
TH							134 "	1018 "	1			
TH							154 "	1058 "	1			
TH							177 "	1104 "	1			
TH							200 "	1150 "	1			
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Shaft Horse Power at each turbine { H.P. I.P. L.P. 1020 } Revolutions per minute, at full power, of each Turbine Shaft { H.P. I.P. L.P. 3320 }

Generator Shaft diameter at journals { H.P. I.P. L.P. 170 1/2 } Pitch Circle Diameter { 1st pinion 8.784 1st reduction wheel 60.2074 2nd pinion 15.1404 main wheel 78.2728 } Width of Face { 1st reduction wheel 260 1/2 main wheel 600 1/2 }

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st pinion 225 1/2 1st reduction wheel 1565 1/2 2nd pinion 422.5 1/2 main wheel 525 1/2 }

Pinion Shafts, diameter at bearings { External 1st 125 1/2 2nd 35 1/2 Internal 1st 320 1/2 2nd 250 1/2 } diameter at bottom of pinion teeth { 1st 8.2074 2nd 14.3679 }

Generator Shaft, diameter at bearings 1890 1/2 Propelling Motor Shaft, diameter at bearings

Intermediate Shafts, diameter as per rule as fitted Thrust Shaft, diameter at collars as per rule as fitted 360 1/2 Tube Shaft, diameter as per rule as fitted

Low 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

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

ic 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

her appliance fitted at the after end of the tube shaft Length of Bearing in Stern Bush next to and supporting propeller Total Developed Surface square feet.

Can the H.P. or I.P. Turbine exhaust direct to the

propeller, diameter Pitch No. of Blades State whether Moveable

Single Screw, are arrangements made so that steam can be led direct to the L.P. Turbine

Feeder No. of Turbines fitted with astern wheels Feed Pumps { No. and size How driven }

Connections connected to the Main Bilge Line { No. and size How driven }

Fast 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

Water Circulating Pump Direct Bilge Suctions, No. and size Independent Power Pump Direct Suctions to the Engine Room

No. and size Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes

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

Sea Connections fitted direct on the skin of the ship Are they fitted with Valves or Cocks

Are they fitted 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 they fitted sufficiently high on the ship's side to be seen without lifting the stokehold plates How are they protected

Are they fitted with a Discharge Valve always accessible on the plating of the vessel Have they been tested as per rule

Pipes pass through the bunkers

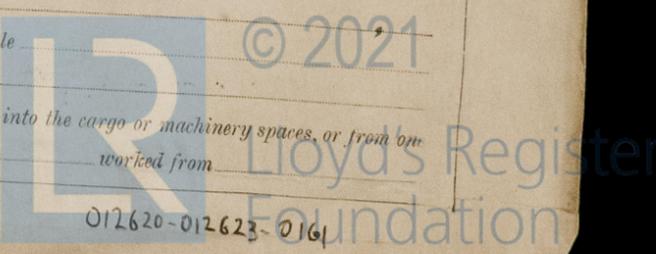
Pipes pass through the deep tanks

Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

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

worked from

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? ✓
 Plans. Are approved plans forwarded herewith for Shafting 23.2.49. 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:— spare gear supplied as per Rule requirements and attached list.

FOR HARDLAY, CURLE & CO., LTD.
 Wm & Brown
 Manufacturers of Heating

The foregoing is a correct description.

Dates of Survey while building { During progress of work in shops - - } 1949 SEP. 19 - NOV. 25. 30. DEC. 8. 14. 23.
 { During erection on board vessel - - - }
 { Total No. of visits }
 Dates of Examination of principal parts—Casings 25.11.49. Rotors 25.11.49. Blading 30.11.49. Gearing 8.12.49.
 Wheel shaft 19.9.49. Thrust shaft 8.12.49. 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 O.H. 15. Identification Mark 1425. BH. 17.11.4
 TRANSMISSION Shaft, Material and tensile strength O.H. 15. Identification Mark 1422. BH. 17.11.4
 Pinion shaft, Material and tensile strength O.H. 15. Identification Mark 1427. BH. 29.11.4
 1st Reduction Wheel Shaft, Material and tensile strength O.H. 15. Identification Mark 1417. W. 30.12.48. Thrust shaft, Material O.H. 15. Identification Mark W. 17.8
 Wheel shaft, Material O.H. 15. Identification Marks ✓ Tube shaft, Material ✓ Identification Marks ✓
 Intermediate shafts, Material ✓ Identification Marks ✓ Steam Pipes, Material ✓ Test pressure ✓
 Screw shaft, Material ✓ Identification Marks ✓ Is an installation fitted for burning oil fuel ✓
 Date of test ✓
 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? No. Name of vessel: B.W. No 84 Kincaid Engine 775 & Demigs 1401 (G.L.S. letter 23/2/49)

General Remarks (State quality of workmanship, opinions as to class, &c.) This machinery has been constructed under Special Survey in accordance with the Society Rule and the approved plans. Materials and workmanship are good.

The machinery has been despatched to Greenock to be installed with Messrs J. G. Kincaid Engine No 799

This LP Turbine with DR Gearing & Hyd coupling has been effectually installed & Please see Grh FE of 'N° 24073 for recommendations of Hunter & Greenock

The amount of Entry Fee ... £ 29 : 15 :
 Special ... £ : :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :
 When applied for, 5 JAN 1950
 When received, 19

Engineer Surveyor to Lloyd's Register of Shipping.
 L. Row.

Committee's Minute GLASGOW 5 JAN 1950 JNR.
 Assigned referred for completion

