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JAN 1950

REPORT ON STEAM TURBINE MACHINERY.

No. 75215 1950

Date of Report 1950 When handed in at Local Office 4 JAN 1950 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^{td} Yard No. 1432 Tons } Gross
 Engines made at GREENOCK By whom made J. G. KINCAID & CO L^{td} Engine No. 799. When built 1950
 Boilers made at GLASGOW By whom made BARCLAY CURLEY CO L^{td} No. BV107 When made 1949
 Shaft Horse Power at Full Power 1020 Owners BRITISH INDIA STEAM NAV. CO L^{td} 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

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

No. of Turbines Ahead One 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.

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						74 1/2"	898 1/2"	1			
ED						94 "	938 "	1			
TH						114 "	978 "	1			
TH						134 "	1018 "	1			
TH						154 "	1058 "	1			
TH						177 "	1104 "	1			
TH						200 "	1150 "	1			
TH											
TH											
TH											
TH											

Shaft Horse Power at each turbine H.P. — I.P. — L.P. 1020
 Revisions per minute, at full power, of each Turbine Shaft H.P. — I.P. — L.P. 3320
 Motor Shaft diameter at journals H.P. — I.P. — L.P. 170 7/8"
 Pitch Circle Diameter { 1st pinion 8.784" 1st reduction wheel 60.2074" main wheel 78.2728"
 { 2nd pinion 15.1404" main wheel 265 1/2" 1st reduction wheel 1565 1/2"
 { 2nd pinion 422.5 1/2" main wheel 525 1/2"
 Distance between centres of pinion and wheel faces and the centre of the adjacent bearings { 1st pinion 125 1/2" 320 1/2" diameter at bottom of pinion teeth { 1st 8.2074" 2nd 14.3679"
 { 2nd pinion 35 1/2" 250 1/2"
 Pinion Shafts, diameter at bearings External 1st 125 1/2" 2nd 320 1/2"
 Internal 1st 35 1/2" 2nd 250 1/2"
 Wheel Shafts, diameter at bearings { 1st 250 1/2" diameter at wheel shroud, { 1st 1448 1/2" Generator Shaft, diameter at bearings { 1st 8.2074" 2nd 14.3679"
 { main 500 1/2"
 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
 New 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 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
 Is the 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
 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
 Fast Pumps, No. and size Lubricating Oil Pumps, including Spare Pump, No. and size
 No 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
 Pumps, No. and size:—In Engine and Boiler Room
 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 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
 How are they protected
 Pipes pass through the bunkers Have they been tested as per rule
 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
 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 Auxiliary }
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.

The foregoing is a correct description.

Dates { During progress of } 1949 SEP. 19 - NOV. 25.30 DEC. 8.14.23.
{ work in shops - - }
of Survey { During erection on }
while { board vessel - - - }
building { 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.
TRANSMISSION Shaft, Material and tensile strength O.H. 15.
Pinion shaft, Material and tensile strength O.H. 15.
1st Reduction Wheel Shaft, Material and tensile strength O.H. 15.
Wheel shaft, Material O.H. 15. Identification Mark 1W. 30.12.48. Thrust shaft, Material O.H. 15. Identification Mark 1W. 17.8.
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
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 If so, state name of vessel

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 L.P. Turbine with DR Gearing & Hyd coupling has been effectually installed & Please see Grk 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

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