

Report on Steam Turbine Machinery.

No. 20256
19 MAY 1950

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Writing Report 15th MAY 1950 When handed in at Local Office 0th 19 Port of SOUTHAMPTON
 Survey held at SOUTHAMPTON Date, First Survey 6th JAN 1949 Last Survey 9th MAY 1950
 (Number of Visits 13)
 Tons (Gross 2152 (Net 934)
 on the T.S.S. "ISLE OF GUERNSEY"
 at DUMBARTON By whom built W^m DENNY & BROS LTD Yard No. - When built 1930
 Engines made at DUMBARTON By whom made W^m DENNY & BROS LTD Engine No. - When made 1930
 Boilers made at DUMBARTON By whom made W^m DENNY & BROS LTD Boiler No. - When made 1930
 Horse Power at Full Power 5400 Owners BRITISH TRANSPORT COMMISSION Port belonging to SOUTHAMPTON
 Horse Power as per Rule 928 MN Is Refrigerating Machinery fitted for cargo purposes - Is Electric Light fitted YES
 for which Vessel is intended -

STEAM TURBINE ENGINES, &c.—Description of Engines STEAM TURBINE, SINGLE REDUCTION GEARED
 of Turbines Ahead 4 Direct coupled, single reduction geared to 2 propelling shafts. No. of primary pinions to each set of reduction gearing 2
 Astern 2 Double reduction geared
 coupled to Alternating Current Generator - phase - periods per second - rated - Kilowatts - Volts at - revolutions per minute;
 Direct Current Generator
 supplying power for driving Propelling Motors, Type -
 Kilowatts - Volts at - revolutions per minute. Direct coupled, single double reduction geared to 2 propelling shafts.

TURBINE LOADING.	H. P.		I. P.		L. P.		ASTERN.	
	HP.	LP.	HP.	LP.	HP.	LP.	HP.	LP.
No. of rows	2	-	-	-	-	-	3	2
No. of stages	5	-	-	-	5	-	-	5
No. of rows in each stage	6	-	-	-	3-4 4-5 2-3 3-1	-	-	2, 2, 1, 1, 1.

Horse Power at each turbine H.P. 2800 1st reduction wheel
 I.P. - Revolutions per minute, at full power, of each Turbine Shaft I.P. - main shaft 255
 L.P. 2630

Shaft diameter at journals H.P. 5 1/2" Pitch Circle Diameter 1st pinion 6.64" 1st reduction wheel
 I.P. - 2nd pinion 7.07 main wheel 72.84" Width of Face 1st reduction wheel
 L.P. 6" LP 2nd pinion 7.07 main wheel 72.84" Face main wheel 11" x 2

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings 1st pinion 9" 1st reduction wheel
 2nd pinion - main wheel 10 13/16"

Pinion Shafts, diameter at bearings External 1st 5 1/2" 2nd - diameter at bottom of pinion teeth
 Internal 1st - 2nd - LP 6.0644
 LP 6.4924

Generator Shaft, diameter at bearings 1st -
 Propelling Motor Shaft, diameter at bearings main 5.9"
 Thrust Shaft, diameter at collars as per rule 95 APPROVED
 as fitted 9 1/2" at COLLAR 8 7/8" AT COUPLING

Screw Shaft, diameter as per rule 95 APPROVED
 as fitted 9 3/8" IN BODY 9 1/4" AT FORE END Is the screw shaft fitted with a continuous liner NO
 Thickness between bushes as per rule 95 APPROVED
 as fitted 5/8" Is the after end of the liner made watertight in the

propeller boss YES If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner
 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
 two liners are fitted, is the shaft lapped or protected between the liners YES Is an approved Oil Gland or other appliance fitted at the after end of the tube

propeller, diameter 8.6" Pitch 9.6 No. of Bades 3 State whether Moveable NO Total Developed Surface 29.35 square feet.
 Single Screw, are arrangements made so that steam can be led direct to the L.P. Turbine NO Can the H.P. Turbines exhaust direct to the
 condenser NO No. of Turbines fitted with astern wheels 2 Feed Pumps (No. and size 2 NEIRS - 7,500 GPH each.
 How driven STEAM

Pumps connected to the Main Bilge Line (No. and size 2-13000 GPH; 1-9000 GPH; 1 EMERGENCY 13500 GPH
 How driven STY DUPLEX; STY DUPLEX; ELECTRIC SUBMERSIBLE.
 Main Pumps, No. and size 2-13000 GPH. 1-13500 GPH Lubricating Oil Pumps, including Spare Pump, No. and size 3-5,800 GPH each
 two independent means arranged for circulating water through the Oil Cooler YES Suctions, connected both to Main Bilge Pumps and Auxiliary
 In Engine and Boiler Room 2-3" IN ER 2" IN ER 4" (DIRECT) 2-3" AFT STOKHOLD 1-4" In Pump Room

Holds, &c. 9-3"
 Main Water Circulating Pump Direct Bilge Suctions, No. and size 2-9" Independent Power Pump Direct Suctions to the Engine Room
 pipes, No. and size 2-4" Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes YES
 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 YES

all Sea Connections fitted direct on the skin of the ship YES Are they fitted with Valves or Cocks BOTH
 they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates YES Are the Overboard Discharges above or below the deep water
 they each fitted with a Discharge Valve always accessible on the plating of the vessel YES Are the Blow Off Cocks fitted with a spigot and brass
 How are they protected -

What 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 YES
 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 YES Is the Shaft Tunnel watertight YES Is it fitted with a watertight door YES worked from ER & BRIDGE.

Boilers, &c.—(Letter for record -) Total Heating Surface of Boilers 10,350 sq. ft.
 Forced Draft fitted YES No. and Description of Boilers 2 MULTITUBULAR Working Pressure 200 LBS
 Report on Main Boilers now forwarded? YES



Is ^{a Donkey} Boiler fitted? **NO** If so, is a report now forwarded? **-**
 { an Auxiliary
 Is the donkey boiler intended to be used for domestic purposes only? **-**
 Plans. Are approved plans forwarded herewith for Shafting **YES** Main Boilers **YES** Auxiliary Boilers **-** Donkey Boilers **-**
 (If not, state date of approval)
 Superheaters **-** General Pumping Arrangements **YES** Oil Fuel Burning Arrangements **YES**
 Geared turbines situated aft. Have torsional vibration characteristics of system been approved? **-** Date of approval **-**

SPARE GEAR.

Has the spare gear required by the Rules been supplied? **YES**
 State the principal additional spare gear supplied.

The foregoing is a correct description,

Manufacture

Dates of Survey while building
 During progress of work in shops **-**
 During erection on board vessel **-**
 Total No. of visits **-**

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 fitting sea connections **-** 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 **-** Identification Mark **-**
 Flexible Pinion Shaft, Material and tensile strength **-** Identification Mark **-**
 Pinion shaft, Material and tensile strength **-** Identification Mark **-**

; Chemical analysis **-**
 If Pinion Shafts are made of special steel state date of approval of chemical analysis, physical properties and heat treatment **-**
 1st Reduction Wheel Shaft, Material and tensile strength **-** Identification Mark **-**
 Wheel shaft, Material **-** Identification Mark **-** Thrust shaft, Material **-** Identification Mark **-**
 Intermediate shafts, Material **Steel** 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? **YES**

Is the flash point of the oil to be used over 150°F? **YES** Have the requirements of the Rules for the use of oil as fuel been complied with? **YES**
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo? **-** If so, have the requirements of the Rules been complied with? **-**
 If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with? **-**
 Is this machinery a duplicate of a previous case? **YES** If so, state name of vessel. **'ISLE OF JERSEY'**

General Remarks. (State quality of workmanship, opinions as to class, &c.)
The machinery of this vessel, which has not been constructed under special survey, has now been completely dismantled & examined, & the material & workmanship appears to be satisfactory in my opinion. The machinery is eligible to be classed with this Society, & to have notation of LMC 1,99 & record of RS 3,50; TS 2,50

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

Robert H. Sturges
 Engineer Surveyor to Lloyd's Register of Shipping.



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The Surveyors are requested not to write on or below the space for Committee's Minute.

Committee's Minute **TUES. 13 JUN 1950**
 Assigned