

REPORT ON STEAM TURBINE MACHINERY. No. 105986

Date of writing Report 8. 3 49 When handed in at Local Office 8. 3 49 Port of NEWCASTLE-ON-TYNE Received at London Office 16 MAR 1949

No. in Survey held at NEWCASTLE-ON-TYNE Date, First Survey 3. 5. 48 Last Survey 4. 3 49

Reg. Book. 95136 on the S/S "SHILLONG" (Number of Visits 48)

Gross Tons 8933.68
Net Tons 4816.33

Built at NEWCASTLE By whom built VICKERS-ARMSTRONG LTD. Yard No. 104 When built 1948

Engines made at BARROW By whom made VICKERS-ARMSTRONG LTD. Engine No. 955 When made 1948

Boilers made at BARROW By whom made VICKERS-ARMSTRONG LTD. Boiler No. 955 When made 1948

Shaft Horse Power at Full Power 13000 Owners PENINSULAR & ORIENTAL STEAM NAV. CO. Port belonging to LONDON

Nom. Horse Power as per Rule 2880 Is Refrigerating Machinery fitted for cargo purposes YES Is Electric Light fitted YES

Trade for which Vessel is intended OPEN SEA

STEAM TURBINE ENGINES, &c.—Description of Engines SEE BARROW REPORT NO 3194

No. of Turbines Ahead Direct coupled, single reduction geared to propelling shafts. No. of primary pinions to each set of reduction gearing 1

Astern double reduction geared

direct coupled to Alternating Current Generator phase periods per second 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 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												
2ND												
3RD												
4TH												
5TH												
6TH												
7TH												
8TH												
9TH												
10TH												
11TH												
12TH												

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

Rotor Shaft diameter at journals H.P. I.P. L.P. Pitch Circle Diameter 1st pinion 1st reduction wheel 2nd pinion main wheel Width of Face 1st reduction wheel main wheel

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings 1st pinion 1st reduction wheel 2nd pinion main wheel

Flexible Pinion Shafts, diameter 1st 2nd Pinion Shafts, diameter at bearings External Internal 1st 2nd diameter at bottom of pinion teeth 1st 2nd

Wheel Shafts, diameter at bearings 1st main diameter at wheel shroud 1st main 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

Tube Shaft, diameter as per rule as fitted Screw Shaft, diameter as per rule as fitted Is the 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 YES If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner CONTINUOUS

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 TIGHT FIT

If two liners are fitted, is the shaft lapped or protected between the liners NO If so, state type Is an approved Oil Gland or other appliance fitted at the after end of the tube 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 YES Can the H.P. or I.P. Turbine exhaust direct to the

Condenser YES No. of Turbines fitted with astern wheels Feed Pumps No. and size TWO 117000/162000 LBS/HR. How driven TURBO

Pumps connected to the Main Bilge Line No. and size TWO 255 7/8" How driven ELECTRIC Ballast Pump 255 7/8" Bilge Pump 120 7/8" How driven ELECTRIC

Ballast Pumps, No. and size ONE 8" 255 7/8" Lubricating Oil Pumps, including Spare Pump, No. and size TWO 6" 19,000 Gals/HR.

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 4 3 1/2" Oil Bilge COFFERDAM 6 2" TUNNEL WELL 1 3" In Pump Room

In Holds, &c. N°1 10 3/2" N°2 20 3/2" N°3 20 3/2" COFFERDAM 2 2" N°4 20 3/2" N°5 10 3/2" REF. COFFERDAM 2 2" DB COFFERDAM 1 3"

Main Water Circulating Pump Direct Bilge Suctions, No. and size ONE 23 dia. Independent Power Pump Direct Suctions to the Engine Room

Bilges, No. and size ONE 5 1/2 dia. Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes YES

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 YES

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

Are 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 line

Are 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 covering plate YES

That pipes pass through the bunkers How are they protected

That pipes pass through the deep tanks Have they been tested as per rule

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

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 YES Is the Shaft Tunnel watertight YES Is it fitted with a watertight door YES worked from TOP DECK PLATFORM

BOILERS, &c.—(Letter for record 'S') Total Heating Surface of Boilers

Is Forced Draft fitted YES No. and Description of Boilers 2 FOSTER WHEELER Working Pressure 585 LBS/D

Is a Report on Main Boilers now forwarded? YES

Is a Donkey Boiler fitted? YES If so, is a report now forwarded? YES

Is the donkey boiler intended to be used for domestic purposes only NO

Plans. Are approved plans forwarded herewith for Shafting ✓ Main Boilers ✓ Auxiliary Boilers ✓ Donkey Boilers ✓
(If not state date of approval)

Superheaters ✓ General Pumping Arrangements ✓ Oil Fuel Burning Arrangements ✓

SPARE GEAR.

Has the spare gear required by the Rules been supplied YES

State the principal additional spare gear supplied

ADDITIONAL SPARE GEAR COVERING ALL WORKING PARTS COMPREHENSIVELY SUPPLIED & PLACED ON BOARD.

NOTE! Only bilge pump (in engine room) & its pumping arrangements tested & not found satisfactory

The Owner representative states that the pump & its pumping arrangements will be further tested at London when the vessel is proceeding after part loading at Antwerp & Middlesbrough. As the pumping of the bilges is amply provided for by means of the ballast pump & bilge pump connected to the main bilge line it is recommended that the oily bilge pump & its pumping arrangements be tested at first opportunity. Vessel is meantime considered efficient. J M Parker (Jr) Vickers Armstrong & Co. Manufacturer.

Dates of Survey while building { During progress of work in shops -- { 1914, 18, 26, 28, 31, JUNE 9, 16, 17, 23, JULY 19, AUG. 4, 16, 26, SEPT. 20, 29, OCT. 7, 18, 25, NOV. 1, 22, 29, DEC. 3, 6, 13, 20, 30, 1914, JAN. 5, 6, 19, 17, 19, 20
During erection on board vessel --- { 21, 26, 27, FEB. 1, 2, 9, 7, 10, 14, 15, 16, 21, 22, 24, 25, MAR. 2, 3, 4
Total No. of visits --- 48

Dates of Examination of principal parts—Casings ✓ Rotors ✓ Blading ✓ Gearing ✓

Wheel shaft ✓ Thrust shaft ✓ Intermediate shafts ✓ Tube shaft ✓ Screw shaft FITTED 31.5.48

Propeller FITTED 31.5.48 Stern tube FITTED 26.5.48 Engine and boiler seatings 17.6.48 Engine holding down bolts 6.12.48

Completion of fitting sea connections 9.6.48 Completion of pumping arrangements 4.3.49 Boilers fired 6.9.48 Engines tried under steam 4.3.49

Main boiler safety valves adjusted 15.2.49 Thickness of adjusting washers PORT M.B. DRUM 3/4" SUPA'S F=23/64" STAINLESS DRUM 3/8" SUPA'S F=13/32"

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 ✓

1st Reduction Wheel Shaft, Material and tensile strength ✓ Identification Mark ✓

Wheel shaft, Material ✓ Identification Mark ✓ Thrust shaft, Material ✓ Identification Mark ✓

Intermediate shafts, Material ✓ Identification Marks ✓ Tube shaft, Material ✓ Identification Marks ✓

Screw shaft, Material ✓ Identification Marks ✓ Steam Pipes, Material ACSB M.L. & MILD STEEL Test pressure 1585 LBS/D

Date of test TESTED BY BARROW SURVEYORS 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 YES If so, have the requirements of the Rules been complied with YES

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 S.S. SURAT NEWCASTLE REPORT N° 1056/14

General Remarks (State quality of workmanship, opinions as to class, &c.) The machinery of this vessel has been

efficiently installed on board and examined under full power conditions during

sea trials with satisfactory results

The welded gear case was specially examined during & on completion of full

power trials & was found sound & in good condition

The machinery is eligible in our opinion to have the record of LMC 3,49

& notation TS CL, 2 WT BOILERS 585 LBS/D, FD, SPI, DB 100 LB, FITTED FOR OIL

FUEL FP ABOVE 150°F 3,49. Subject to oily bilge pump & its pumping arrangements

being tested at first opportunity

The amount of Entry Fee £83 16 When applied for, 15 MAR 1949

Special ... When received, ...

Donkey Boiler Fee ... Travelling Expenses (if any) £

Committee's Minute FRI 29 APR 1949

Assigned + LMC 3,49 Subject

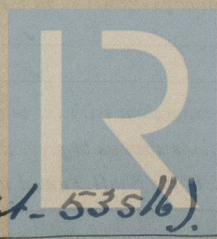
FITTED FOR OIL FUEL 3,49 FLASH POINT ABOVE 150°F. FD. CL 2 WT B 585 LB (Spt-535 LB) DB 100 LB

NEWCASTLE-ON-TYNE

Certified

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

Foundation



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