

REPORT OF SURVEY FOR REPAIRS, &c., OF ENGINES AND BOILERS

(Received at London Office)

20 NOV 1946

Date of writing Report 4TH NOVEMBER 1946 When handed in at Local Office 16. 11. 1946 Port of GLASGOW.Survey held at GLASGOW. Date First Survey 14-8-46 Last Survey 30TH OCTOBER 1946 (No. of Visits 22)on the Machinery of the ~~Wood, Iron or Steel~~ S.S. "OCEAN VOLGA" NOW RENAMED "SITHONIA". Year. Month.

Gross 71.44 Vessel built at RICHMOND, CAL. By whom PERMANENTE METALS CORP. When 1942 5

Net 42.42 Engines made at HAMILTON, ONTARIO. By whom GENERAL MACHINERY CORP. When 1942.

Main Boilers 35.3 Boilers, when made (Main) 1942. (Donkey)

Donkey Boilers 3.3 Owners H. M. THOMSON. Owners' Address (if not already recorded in Appendix to Register Book.)

Main Boilers 220 LBS If Surveyed Afloat or in Dry Dock BOTH GOVAN DRYDOCK. Port LONDON Voyage

Donkey Boilers (State name of Dock.) & PRINCES DOCK AFLOAT.

Report No. Port OIL FUEL BURNING.

Particulars of Examination and Repairs (if any) L.M.C. T.S. & CONVERSION TO L.M.C. 5-42.

Medical Surveys, when held, must be reported in detail and serially in the terms of the Rules. State clearly the cause of Repairs, if any, in detail, the nature and extent of Examinations and subsequent Repairs. Repairs on account of Damage (the cause of which must be stated) should be separated from Repairs due to other causes; and besides being detailed in the body of the report, should be briefly summarised at the end of the report. State also the dates and initials of any letters respecting this case.

In cases where the Surveyor has not made a special damage report he is required to state whether he offered his services for this purpose, and why they were declined.

A damage report made by anyone else? If so, by whom?

The Surveyor personally go inside each Main Boiler separately and make a thorough examination at this time? YES.

Donkey " " " "

State for what reasons? What parts of the Boilers could not be thus thoroughly examined?

At special means, in the absence of internal examination, were adopted by the Surveyor to assure himself of the thorough efficiency of those parts of each Boiler?

The latest date of internal examination of each boiler ALL BOILERS. 7-10-46. Present condition of funnel(s) GOOD.

The Surveyor examine the Safety Valves of the Main Boilers? YES. To what pressure were they afterwards adjusted under steam? 220 LBS/SQ"

The Surveyor examine the Safety Valves of the Donkey Boilers? YES. To what pressure were they afterwards adjusted under steam?

The Surveyor examine all the manholes, doors and their fastenings of the Main Boilers? YES. and of the Donkey Boilers?

The Surveyor examine the drain plugs of the Main Boilers? NONE. and of the Donkey Boilers?

The Surveyor examine all the mountings of the Main Boilers? YES. and of the Donkey Boilers?

The screw shaft now been drawn and examined? YES. Has it a continuous liner? YES. Is an approved oil retaining appliance fitted at the after end? No.

The shaft now been changed? No. If so, state reasons. Has the shaft now fitted been previously used? YES. Has it a continuous liner?

An approved oil retaining appliance fitted at the after end? YES. State date of examination of Screw Shaft 10-10-46. State the wear down in the stern bush 5/32" Is electric light and/or power fitted? YES. If so, did the Surveyor examine the generators, motors, switchgear, cables and fuses? YES.

The insulation resistance of the generators, circuits and apparatus been tested and found to be not less than 100,000 ohms? YES.

Engine parts, when referred to by numbers, should be counted from forward. Survey Complete.

If the Survey is not complete, state what arrangements have been made for its completion and what remains to be done.

Work Done. DOCKING. Vessel placed in drydock propeller, stirrute, tailshaft (drawn) all sea cocks and outside fastenings examined and found in order.

The following machinery parts examined and found or placed in good condition.

All main engine cylinders, pistons, valves & casings. The crank, thrust, & intermediate shafting.

Main condenser cleaned & tested, main engine driven, air, bilge, and sanitary pumps. The independent circulating sea water pump, the ballast & general service pump, the inboard & outboard fuel pumps and the pumping arrangements throughout. The fan engine & the inboard & outboard dynamo engines.

The steering engine & winches examined & found or placed in good condition.

Repairs: M.P. cylinder found ridged on forward side, ridge removed & the engine re-aligned, MP valve & face found scored now machined & valve side strips renewed. L.P. piston ring found worn, a new Lockwood & Berle's ring fitted. All main bearing & bottom end brasses adjusted. Main engine driven, air, bilge & sanitary pumps overhauled, air pump head valves, bilge & sanitary pump suction valves renewed as required. Independent circulating pump engine, cylinders & valve chamber rebored, piston valve, piston & rings renewed.

General Observations, Opinion, and Recommendation: The machinery of this vessel as now run is in

(State clearly what alteration, if any, is suggested to be made in the existing classification of the vessel's machinery in the Register Book, consequent upon this survey, and also any alteration required to be made in the records of the vessel's machinery, boilers, working pressures, &c.; thus, for example, BS 9.11, B&MS 9.11 or LMC 140 lb., PD, &c.)

The vessel is in good working condition and eligible in our opinion to remain as classed with fresh record of L.M.C. 10-46, and the notation of T.S. CL 10-46, and fitted for oil fuel 10-46 F.P. above 150°F.

Survey Fee (per Section 29) L.M.C. £ 21 : 0 : 0 Fees applied for

" " Electrical £ 6 : 0 : 0 19 NOV 1946

Special Damage Repair Fee (if any) £ 5 : 5 : 0 Received by me,

" " Electrical (29) £ 5 : 5 : 0 19

Travelling expenses (if chargeable) £ 5 : 5 : 0

CONVERSION TO OIL BURNING. £ 24 : 0 : 0

Committee's Minute GLASGOW 19 NOV 1946

Signed L.M.C. 10-46 Fitted for oil fuel 10-46 F.P. above 150°F

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S.S. "OCEAN VOLGA" NOW RENAMED "SITHONIA"

M.S. REPAIRS. CONT'D. Ballast pump overhauled, piston rods skimmed, neck rings renewed & glands bushed, bucket rings renewed. General service pump, bucket rings renewed, suction & delivery valves overhauled. Inboard & Outboard fuel pumps, water ends rebored, buckets & rings renewed, suction & delivery valves overhauled. Fan engine cylinder rebored, piston & rings renewed, piston rod built up & valve spindle renewed. Inboard dynamo engine overhauled & all bearings adjusted. Outboard dynamo engine cylinder ridges removed & piston rings renewed, piston rod skimmed & neck ring renewed, governor overhauled.

Windlass overhauled, piston rings & main stem pipe renewed. Steering engine overhauled reducing valve renewed & all bearings adjusted.

B.S. Port, Centre & Starboard boilers examined internally & externally with doors & all mountings & found or placed in good condition. The safety valves were adjusted under steam.

REPAIRS:- All furnace fronts removed, furnace front & back seams caulked & joints set up. Combustion chamber wrapper plate seams caulked & joints set up, all leaky tubes expanded, superheater elements re-jointed where necessary. Port Boiler, 33 combustion chamber stays caulked & nuts renewed, 8 stays cone welded. Centre Boiler, 8 combustion chamber stays caulked & nuts renewed, 8 stays cone welded. Starboard Boiler, 23 combustion chamber stays caulked & nuts renewed, 8 stays cone welded. All boiler mountings overhauled & placed in order.

CONVERSION FROM COAL TO OIL FUEL BURNING.

A Glyde Fuel Systems Ltd. Unit (Installation No. 2414) and a Weir oil fuel transfer pump No. 204637, size 4" x 6 1/2" x 15" of 25/30 tons capacity were installed in the engine room.

Separate stop valves fitted to the aft end plates of all boilers for the supply of saturated steam to the oil burning installation, reducing & relief valve fitted to give a steam pressure of 100 lbs/sq. in. All furnace fronts converted to suit oil burning. No funnel damper fitted.

The crossbunker forward of the stokehold now converted into deep water ballast or cargo tanks & bilge & ballast connections arranged, glandless pipes provided for blanking when necessary. Two ducts in way of engine & boiler room, subdivided into three port & three starboard oil fuel bunker tanks. The two deep water ballast tanks at the aft end of the engine room now made suitable for carrying oil fuel, water ballast or cargo, and two oil fuel settling tanks incorporated in the structure of these tanks at the forward end. Bilge, ballast & oil fuel connections fitted to the aft deep tanks are provided with approved change over pieces & blank flanges, to safeguard the contents of these tanks.

Oil gutters fitted in way of tanks above inner bottom & provision for drainage arranged. No. 5 & No. 4 double bottom tanks now fitted for carrying oil fuel, No. 6 reserve feed water tank isolated from the adjacent oil fuel tanks by cofferdams. Solid drawn steel heating coils fitted to all oil fuel tanks & tested in place to 200 lbs/sq. in. All heating coil drains return to an observation tank in the engine room. All oil fuel filling & suction pipes with fittings tested in place to 30 lbs/sq. in. the unit oil fuel discharge pipes & fittings hydraulically tested to 400 lbs/sq. in. after fitting in place. The feed pumps & fresh water tanks now isolated from fuel, bilge or ballast connections. No wood buns or lead pipes fitted in machinery spaces. Steam fire extinguishing pipes fitted under boilers and in way of oil gutters, and the oil burning installation in the engine room. Foam fire extinguishing apparatus clamped to convenient positions in engine & boiler room spaces.

All the fittings & pipes were installed & tested in accordance with approved plans & to the Society's Rules & Requirements. Approved plans & letters attached herewith.

For Electrical equipment: P.T.O.

A. A. Crawford.

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ELECTRICAL EQUIPMENT:- A Special Survey of the electrical equipment carried out. Generators, switchboard, cables and fittings examined. The following repairs were effected:-

Generators overhauled; switchboard cleaned and fuses checked; main cables moved to new position as necessary, due to structural alterations; new wheelhouse lighting installed and navigation light circuits rewired; all circuits overhauled and repaired as necessary. On completion of repairs, all circuits examined and I.R. tests taken. Installation seen under working conditions and all found satisfactory.

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On completion of repairs & conversion to oil burning the main and auxiliary machinery, pumps and pumping arrangements were tried under working conditions and found satisfactory. Heating coil returns, steam smothering, unit controls, extended spindles & live operated oil fuel quick closing valves tried & found in order.

Albrawford.