

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Date of writing Report 19 11th April 1950 When handed in at Local Office 11th April 1950 Port of Sunderland
 No. in Survey held at Sunderland Date, First Survey 21st April 1949 Last Survey 6th April 1950
 Reg. Book "SOYA CHRISTINA" (Number of Visits) 4363
 on the Tons { Gross 4363
 Net 3968
 Built at Sunderland By whom built Short Brothers Yard No. 504 When built 1950
 Engines made at Sunderland By whom made G. Black (1938) Ld Engine No. 1463 When made 1950
 Boilers made at Sunderland By whom made G. Black (1938) Ld Boiler No. 1463 When made 1950
 Registered Horse Power 405 Owners Rederi A/B Soya Port belonging to Stockholm
 May. IHP 3700 at 93 r.p.m. Service 3250 at 89.
 Nom. Horse Power as per Rule = 612 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.
 Trade for which vessel is intended Tanker.

ENGINES, &c.—Description of Engines Triple Expansion (Poppet valves on H.P. & M.P. Cyls) Revs. per minute 89.
 Dia. of Cylinders 26" - 41" - 45" 72" Length of Stroke 48" No. of Cylinders 3 No. of Cranks 3 H.P. 19 1/4" M.P. 9 3/4"
 Crank shaft, dia. of journals as per Rule 14.53" Crank pin dia. 15 1/4" Crank webs Mid. length breadth 2' 2" Thickness parallel to axis H.P. 19 1/4" M.P. 9 3/4"
 as fitted 14 3/4" Mid. length thickness M.P. 9 3/4" shrunk Thickness around eye-hole Pin 4 1/8" Jaud 8 1/8"
 Intermediate Shafts, diameter as per Rule 13.838" Thrust shaft, diameter at collars as per Rule 14.53" as fitted 14 3/4"
 Tube Shafts, diameter as per Rule 15.3" as fitted 15 1/2" Is the (tube) shaft fitted with a continuous liner? Yes.
 as fitted 15 1/2" Is the (screw) shaft fitted with a continuous liner? Yes.
 Bronze Liners, thickness in way of bushes as per Rule 76.4" as fitted 78" Thickness between bushes as per Rule 54.5" as fitted 54.8" 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 one length.
 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.
 If two liners are fitted, is the shaft lapped or protected between the liners. Is an approved Oil Gland or other appliance fitted at the after end of the tube at No. If so, state type. Length of Bearing in Stern Bush next to and supporting propeller 5' 3" ✓
 Propeller, dia. 14' 4 1/2" Pitch 14.52' (mean) No. of Blades 4 Material Bronze whether Moveable No. Total Developed Surface 94.3 sq. feet
 Feed Pumps worked from the Main Engines, No. none Diameter 4 1/2" Stroke 26" Can one be overhauled while the other is at work? Yes.
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 4 1/2" Stroke 26" Can one be overhauled while the other is at work? Yes.
 Feed Pumps No. and size Two @ 9" x 12" x 24" Pumps connected to the Main Bilge Line { No. and size 2 M. Eng. Ballant. & Lian. for pump 4" x 6 1/2" x 15" How driven Siam.
 Ballast Pumps, No. and size 1 @ 10" x 12" x 12" Lubricating Oil Pumps, including Spare Pump, No. and size —
 Are two independent means arranged for circulating water through the Oil Cooler — Suctions, connected both to Main Bilge Pumps and Auxiliary
 Bilge Pumps: — In Engine and Boiler Room 1 @ 3 1/2" in Cofferdam bilge 2 @ 3" in Bilge 1 @ 3 1/2" aft well 2 P & S in oil bilge
 In Pump Room 1 @ 3" in Midship Room 1 @ 3" in Sack In Holds, &c. (Tanker) Fore hold. 3" P & S.

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 10" ✓ Independent Power Pump Direct Suctions to the Engine and/or Boiler Room Bilges.
 No. and size 1 @ 5" ✓ Are all the Bilge Suction Pipes in holds and tunnel and 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? No. Are they fitted with Valves or Cocks? Bolts.
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plate? No. Are the Overboard Discharges above or below the deep water line? Below.
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel? No. Are the Blow Off Cocks fitted with a spigot and brass covering plate? Yes.
 What Pipes pass through the bunkers? none How are they protected? —
 What pipes pass through the deep tanks? none 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? No.
 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? (Tanker) Is the Shaft Tunnel watertight? — Is it fitted with a watertight door? — worked from? —

MAIN BOILERS, &c.—(Letter for record S.) Total Heating Surface of Boilers 9294 sq. ft. + 1950 sq. ft. (Spt.) = 11247 sq. ft.
 Which Boilers are fitted with Forced Draft? All ✓ Which Boilers are fitted with Superheaters? All.
 No. and Description of Boilers 3 SB ✓ Working Pressure 220 lb/sq. in. ✓
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? No. ✓
 IS A DONKEY BOILER FITTED? No. ✓ If so, is a report now forwarded? —

Can the donkey boiler be used for other than domestic purposes? No. ✓
 PLANS. Are approved plans forwarded herewith for Shafting? No. ✓ Main Boilers? No. ✓ Auxiliary Boilers? — Donkey Boilers? No. ✓
 (If not state date of approval)

Superheaters? No. ✓ General Pumping Arrangements? No. ✓ Oil fuel Burning Piping Arrangements? No. ✓

SPARE GEAR.

Has the spare gear required by the Rules been supplied? No. ✓
 State the principal additional spare gear supplied. As per attached list.

✓ Crankshaft etc duplicate of Short Brothers 498

The foregoing is a correct description.

Manufacturer.

RESIDENT MANAGER.

Dates of Survey while building
 During progress of work in shops - - 1949 Apr 21, 26 May 24 June 3 July 19, 21, 22 Aug 2, 3, 5, 8, 10, 11, 12, 15, 16, 17, 22, 23, 24, 25, 26, 29, 30, 31 Sep 1, 2, 5, 6, 7, 8, 9, 19, 20, 21, 22(2), 23
 During erection on board vessel - - 15, 16, 19, 21, 22, 23, 25, 30 / 1950 Jan 3, 4, 5, 6, 9, 10, 11, 12, 13, 14, 20, 23, 25, 26, 27, 31 Feb 2, 3, 6, 8, 9, 10, 14, 15, 23, 24, 27, 28 Mar 1, 2, 6, 28, 29
 Apr 3, 6
 Total No. of visits 134

Dates of Examination of principal parts—Cylinders ^{H.P.} 26/11/49 ^{M.P.} 28/10/49 ^{L.P.} 19/12/49 Slides ^{Poppet valves from} 28/11/49 ^{L.P.} 19/12/49 Covers ^{As c/yrs.}
 Pistons 2/9/49 L.P. 23/9/49 Piston Rods 12/12/49 Connecting rods 4/1/50
 Crank shaft 18/11/49 Thrust shaft 9/9/49 Intermediate shafts 18/11/49
 Tube shaft - Screw shaft 14/10/49 Propeller 8/11/49
 Stern tube 4/10/49 + 6/10/49 Engine and boiler seatings 14/2/50 Engines holding down bolts 14/2/50

Completion of fitting sea connections 5/10/49
 Completion of pumping arrangements 21/3/50 Boilers fixed 14/2/50 Engines tried under steam 5/4/50, 6/4/50
 Main boiler safety valves adjusted 6/3/50 Thickness of adjusting washers P. Bl. S. 3/8 St. Bl. S. 3/8 P. 3/8 S. 3/8 P. 3/8 S. 3/8
 Crank shaft material Ingot Steel Identification Mark No 1463 WHF Thrust shaft material Ingot Steel Identification Mark No 4949 WHF
 Intermediate shafts, material Ingot Steel Identification Marks No 4953 WHF Tube shaft, material - Identification Mark
 Screw shaft, material Ingot Steel Identification Mark No 4929 WHF Steam Pipes, material S.D. Steel Test pressure 660 lbs/sq. in. Date of Test 2/9/49 - 2/3/50

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. (Tanker) Yes. 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 Not desired.
 Is this machinery 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 built under Special Survey in accordance with the approved plans & the rules of the Society. The materials & workmanship are good. It has been securely fitted on board the vessel & tried under full working conditions with satisfactory results.

This machinery is now reliable in my opinion to have notation LMC. 4. 50 T.S. (CL) 3 SB (Spt) 220 lbs/sq. in. Fitted to burn oil fuel (F.P. above 150°F) 4. 50.

The amount of Entry Fee ... £ : : When applied for,
 Special ... £ 216 : - : APR 14 1950
 Donkey Boiler Fee ... £ : : When received,
 Travelling Expenses (if any) £ : : 10

Date Fri. 5 MAY 1950

Committee's Minute + LMC 4. 50.

FITTED FOR OIL FUEL 4.50 FLASH POINT ABOVE 150°F.

FD. C.L. 3 SB 220 lb. Spt.

John H. H. H.

Engineer Surveyor to Lloyd's Register of Shipping.



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