

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office
Sunderland

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.....)

Built at **Sunderland** By whom built **Short Bros Ld** Yard No. **504** When built **1950**

Engines made at **Sunderland** By whom made **G. Black (1938) Ltd** Engine No. **1463** When made **1950**

Boilers made at **Sunderland** By whom made **G. Black (1938) Ltd** Boiler No. **1463** When made **1950**

Registered Horse Power **405** Owners **Heders A/B Soya** Port belonging to **Stockholm**
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. 10 9/16" 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" H.P. 10 9/16" M.P. 9 3/4"** Thickness parallel to axis **Pin 4 3/8" Jaws 8 1/8"**
as fitted **14 3/4"** Mid. length thickness **MP. 9 3/4"** Thickness around eye-hole **as per Rule 14.53"**
Intermediate Shafts, diameter as per Rule **13.838"** Thrust shaft, diameter at collars as fitted **14 3/4"**

Tube Shafts, diameter as per Rule **15.3"** 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 **.764"** Thickness between bushes as per Rule **.545"** Is the after end of the liner made watertight in the propeller boss **Yes.** as fitted **.78"** as fitted **.548"**

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 **Yes.**

Propeller, dia. **17-72" (14-4 1/2")** Pitch **14.52" (mean)** No. of Blades **4** Material **Bronze** whether Moveable **No.** Total Developed Surface **943** 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. + 2 am. for pump 4" x 6 1/2" x 15"**
How driven **Steam** How driven **Steam.**

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 hold. 2 P & S in oily bilge**
In Pump Room **2 in bilge 3" 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 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 plate **Yes.** 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 **Yes.** 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 **Yes.**
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 **(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 (opt.) = 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? **Yes.**
IS A DONKEY BOILER FITTED? **No.** If so, is a report now forwarded? **-**

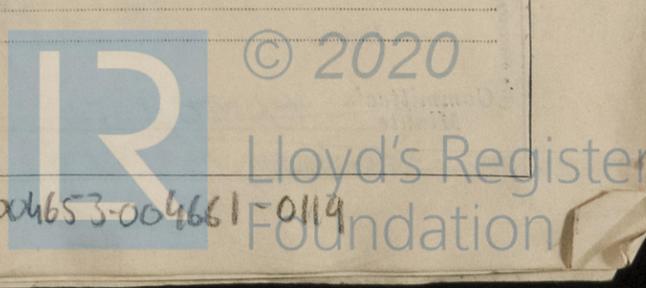
Can the donkey boiler be used for other than domestic purposes **Yes.**

PLANS. Are approved plans forwarded herewith for Shafting **Yes.** Main Boilers **Yes.** Auxiliary Boilers **-** Donkey Boilers **Yes.**
(If not state date of approval)

Superheaters **Yes.** General Pumping Arrangements **Yes.** Oil fuel Burning Piping Arrangements **Yes.**

SPARE GEAR.
Has the spare gear required by the Rules been supplied **Yes.**
State the principal additional spare gear supplied **As per attached list.**

The foregoing is a correct description.
George Black (1938) Ltd.
RESIDENT MANAGER.



End
28/4/50

✓ Crankshaft etc duplicate of Short's 498

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, 27, 28, 29, 30 Oct 3, 4, 5 (2), 6, 7, 11 (2), 12, 13, 14, 14, 19, 21, 24, 25, 26, 28 Nov 1, 2, 3, 7, 8, 14, 15, 16, 17, 18, 21, 22, 23, 24, 25, 28, 29 Dec 1, 2, 5, 6, 7, 8, 9, 12, 13

During erection on board vessel - - - 15, 16, 19, 21, 22, 23, 28, 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, 25, 27, 28 Mar 1, 2, 6, 28, 29, 30

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 L.P. 28/11/49 19/12/49 Covers No Cyls.

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 Spt. 3/8 St. Bl. S. 3/8 Spt. 3/8 P. 3/8 Spt. 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 18/11/49 Tube shaft, material - Identification Mark

Screw shaft, material Ingot Steel Identification Mark No 4929 WHF 18/11/49 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 all good. It has been securely fitted on board the vessel & tried under full working conditions with satisfactory results.

This machinery is now eligible in my opinion to have notation L.M.C. 4.50 T.S. (C.L.) 3 SB (Spt) 220 lbs/sq. in. F.D. Fitted to burn oil fuel (F.P. above 150°F) 4.50.

SUNDERLAND

The amount of Entry Fee ... £ : : When applied for, APR 14 1950

Special ... £ 2/6 - : : When received,

Donkey Boiler Fee ... £ : : 10

Travelling Expenses (if any) £ : :

J. St. Lawrence
 Engineer Surveyor to Lloyd's Register of Shipping.

Date Fri. 5 MAY 1950

Committee's Minute + L.M.C. 4.50.

FITTED FOR OIL FUEL 4.50 FLASH POINT ABOVE 150°F. F.D. C.L. 3 SB 220 lb. Spt.

