

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Date of writing Report 19 When handed in at Local Office 18th October 1948 Port of Sunderland Received at London Office 27 OCT 1948

No. in Survey held at Sunderland Date, First Survey 1st February 1948 Last Survey 14th October 1948

Reg. Book "OTTO BANCK" (Number of Visits)

Built at Sunderland By whom built Short Bros. Ltd. Yard No. 501 Tons Gross 2325 Net 1168

Engines made at Sunderland By whom made G. Clark (1938) Ltd. Engine No. 1451 When built 1948

Boilers made at Sunderland By whom made G. Clark (1938) Ltd. Boiler No. 1451 When made 1948

Registered Horse Power Owners Otto Banck Red. A/B. Port belonging to Helsingborg.

Nom. Horse Power as per Rule M.N. 413. Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.

Trade for which vessel is intended NHP = 368

ENGINES, &c.—Description of Engines Triple expansion (Pepper valves on HP & MP)

Dia. of Cylinders 21 1/2" - 34" - 62" Length of Stroke 39" No. of Cylinders 3. Revs. per minute 11.98" HP 1.7 1/8" MP 8"

Crank shaft, dia. of journals as per Rule 11.98" as fitted 12 1/4" Crank pin dia. 12 1/4" Mid. length breadth 1'-10 1/2" MP 1.7 1/8" MP 8" Thickness parallel to axis shrunk Pin 6 1/8" Journal 6 5/8"

Intermediate Shafts, diameter as per Rule 11.41" as fitted 12" Thrust shaft, diameter at collars as per Rule 11.98" as fitted 12 1/4"

Tube Shafts, diameter as per Rule 12.26" as fitted 13 1/2" Is the tube screw shaft fitted with a continuous liner Yes.

Screw Shaft, diameter as per Rule 6.4" as fitted 4.2" Thickness between bushes as per Rule 5.04" as fitted 5.9" Is the after end of the liner made watertight in the propeller boss No. 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.

Propeller, dia. 14'-3" Pitch (Mean) 14'-3" No. of Blades 4 Material Bronze whether Moveable No. Total Developed Surface 42 sq. feet

Feed Pumps worked from the Main Engines, No. 2 Diameter 3 1/4" Stroke 22" Can one be overhauled while the other is at work Yes.

Bilge Pumps worked from the Main Engines, No. 2 Diameter 3 1/4" Stroke 22" Can one be overhauled while the other is at work Yes.

Feed Pumps No. and size 2 - 4 1/2" x 4" x 21" How driven Steam Pumps connected to the Main Bilge Line No. and size 2 main engines & Ballast Pump. (Steam)

Ballast Pumps, No. and size 1 - 9" x 11" x 10" 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 3 @ 3 1/4" E.R. 2 @ 2 1/2" Eff. dam. 1 - 3" Journal well.

In Pump Room 1 @ 2" in bilge hat aft In Holds, &c. No. 1. 2 1/2" P.R. No. 2. 3 1/2" P.R. No. 3. 3" P.R.

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 8" 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 (Injection in reservoir.) 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.

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 E.R. 6th plating.

AIN BOILERS, &c.—(Letter for record S.) Total Heating Surface of Boilers 5304 sq. ft. + 994 sq. ft. (Spec.)

Which Boilers are fitted with Forced Draft Both Which Boilers are fitted with Superheaters Both.

No. and Description of Boilers 2 SB (Spec.) Working Pressure 220 lbs/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? Report No. 439 9/3/48.

PLANS. Are approved plans forwarded herewith for Shafting Main Boilers Retained Auxiliary Boilers - Donkey Boilers -

(If not state date of approval)

Superheaters Retained. General Pumping Arrangements Retained. Oil fuel Burning Piping Arrangements Retained.

SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes. State the principal additional spare gear supplied (List attached).

The foregoing is a correct description.

GEORGE CLARK (1938) LTD.

Manufacturer.

RESIDENT MANAGER.



1948 Feb 10.12. March Apr 5.20.28.29.30 May 3.5.7.11.13.15.19.21.24. June 1.3.9.11.14.16.17.18.21.22.25.28.29 July 1.2.6(2).9(2).12.13.14. 16.19.20.21.22.23 Aug 5.11.12.16.17.18.19.23.24.25.26.27.30 Sep 1.2.3.6.7.8.9.10.13.15.16.21.22.23.24.27.30 Oct 13.14

Dates of Survey while building { During progress of work in shops - - { During erection on board vessel - - { Total No. of visits 78

Dates of Examination of principal parts—Cylinders HP. 22/6/48 MP. 1/7/48 LP. 19/7/48 Slides Poppet valves 19/8/48 23/8/48 L.P. 12/7/48 Covers As L.P.H.

Pistons 8/7/48 Piston Rods 9/7/48 Connecting rods 17/8/48

Crank shaft 21/5/48 Thrust shaft 30/4/48 Intermediate shafts 21/5/48

Tube shaft - Screw shaft 13/7/48 Propeller 29/6/48

Stern tube 1/4/48 Engine and boiler seatings 6/9/48 Engines holding down bolts 6/9/48

Completion of fitting sea connections 1/4/48 Boilers fixed 6/9/48 Engines tried under steam 14/10/48

Completion of pumping arrangements 6/10/48 Thickness of adjusting washers P. 1/4 S. 5/16 St. 3/8 P. 3/8 S. 1/4 St. 1/4

Main boiler safety valves adjusted 30/9/48 Crank shaft material Ingot Steel Identification Mark N° 1451 WHF. Thrust shaft material Ingot Steel Identification Mark N° 7114 WHF. 30/4/48

Intermediate shafts, material Ingot Steel Identification Marks N° 4158(2) 4159(3) Tube shaft, material - Identification Mark

Screw shaft, material Ingot Steel Identification Mark N° 7096 WHF. 21/5/48 Steam Pipes, material S.D. Steel Test pressure 660 lbs/sq. in. Date of Test 11/8/48 9/9/48

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 No. 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 of the rules of the Society. The materials & workmanship are first class. It has been securely fitted on board the vessel & tried under full working conditions with satisfactory results. The machinery is eligible in my opinion to have notation LMC 10.48 T.S (CL) 2 DB (Spl) F.D 220 lbs/sq. in. fitted to burn oil fuel (F.P. above 150°F) 10.48.

SUNDERLAND.

The amount of Entry Fee ... £ 148 : 18. : When applied for, OCT 26 1948

Special ... £ : : When received,

Donkey Boiler Fee ... £ : : 19.

Travelling Expenses (if any) £ : :

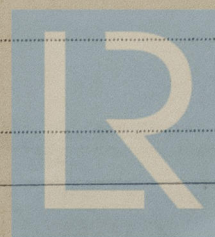
Date FRI. 19 NOV 1948

Committee's Minute

L.M.C 10.48

J. H. L. L. L.

Engineer Surveyor to Lloyd's Register of Shipping



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