

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Date of writing Report 19<sup>th</sup> October 1948 When handed in at Local Office 18<sup>th</sup> October 1948 Port of Sunderland  
 No. in Survey held at Sunderland Date, First Survey 1<sup>st</sup> February 1948 Last Survey 14<sup>th</sup> October 1948  
 Reg. Book "OTTO BANCK" (Number of Visits           )  
 on the "OTTO BANCK"  
 Built at Sunderland By whom built Shor Bros. L<sup>td</sup> Yard No. 501 Tons Gross 2325  
Net 1168  
 Engines made at Sunderland By whom made G. Clark (1938) L<sup>td</sup> Engine No. 1451 When built 1948  
 Boilers made at Sunderland By whom made G. Clark (1938) L<sup>td</sup> Boiler No. 1451 When made 1948  
 Registered Horse Power 413 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 1/2" - 62" Length of Stroke 39" No. of Cylinders 3 Revs. per minute             
 Crank shaft, dia. of journals 11.98" Crank pin dia. 12 1/4" No. of Cranks 3  
 Intermediate Shafts, diameter 11.41" Crank webs 1-10 1/2" Thickness parallel to axis MP 1.7 1/8" MP 8"  
 Tube Shafts, diameter 12" Thrust shaft, diameter at collars 11.98" Thickness around eye-hole Journal 6 5/8"  
 Bronze Liners, thickness in way of bushes 64" Screw Shaft, diameter 13 1/2" Is the tube shaft fitted with a continuous liner Yes  
 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 one length

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 2 - 4 1/2" x 4" x 21" Pumps connected to the Main Bilge Line 2 main pumps & 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             
 Bilge Pumps:—In Engine and Boiler Room 3 @ 3 1/4" E.R. Suctions, connected both to Main Bilge Pumps and Auxiliary 2 @ 2 1/2" E.R. 1 - 1 3/4" Journal well.  
 In Pump Room 1 @ 2" bilge hat aft In Holds, &c. N<sup>o</sup> 1. 2 1/2" φ 15. N<sup>o</sup> 2. 3 1/2" φ 15. N<sup>o</sup> 3. 3" φ 15.  
 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,             
 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 or 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. top plating

MAIN BOILERS, &c.—(Letter for record S.) Total Heating Surface of Boilers 5304 φ + 994 φ (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"  
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes  
 IS A DONKEY BOILER FITTED? no. If so, is a report now forwarded?           

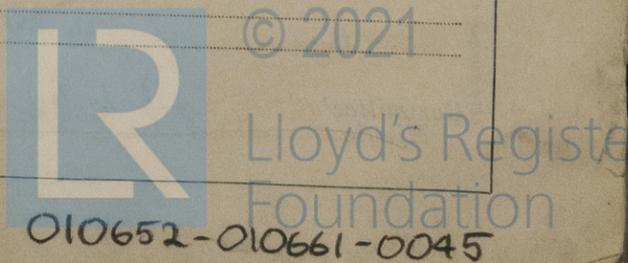
PLANS. Are approved plans forwarded herewith for Shafting Report C1439 9/3/48. Main Boilers Retained Auxiliary Boilers            Donkey Boilers             
 Superheaters Retained General Pumping Arrangements Retained Oil fuel Burning Piping Arrangements Retained  
 SPARE GEAR.  
 Has the spare gear 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.

*George Clark*  
RESIDENT MANAGER.

Manufacturer.



79  
39  
19  
27

18.19.21  
4.27.28

94

SWK  
18/11/48

1948 Feb 10, 12. March Apr 5, 20, 28, 29, 30 May 3, 5, 7, 11, 13, 18, 19, 21, 24. June 1, 3, 9, 11, 14, 16, 17, 18, 21, 22, 25, 28, 29 July 1, 2, 6, 9, 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

HP. 22/6/48 MP. 1/7/48 LP. 19/7/48 Slides Poppet valves 19/8/48 L.P. 12/7/48 Covers As left.

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

Completion of pumping arrangements 6/10/48 Boilers fixed 6/9/48 Engines tried under steam 14/10/48

Main boiler safety valves adjusted 30/9/48 Thickness of adjusting washers P. 1/4 S. 5/16 S. 5/16 S. 3/8 S. 1/4 S. 1/4

Crank shaft material Ingot Steel Identification Mark 21/5/48 Thrust shaft material Ingot Steel Identification Mark 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

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.

The amount of Entry Fee ... £ : : When applied for, Special ... £ 148 : 18. : OCT 26 1948 Donkey Boiler Fee ... £ : : When received, Travelling Expenses (if any) £ : : 19.

W. H. Brown  
Engineer Surveyor to Lloyd's Register of Shipping

Date FRI. 29 NOV 1948

Committee's Minute HMC 10. 48



SUNDERLAND. Certificate to be sent to ...