

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

No. 34719

Date of writing Report 19 When handed in at Local Office 10 July 1947 Port of **SUNDERLAND** Received at London Office 14 JUL 1947

No. in Survey held at **SUNDERLAND**. Date, First Survey 13 January 1947 Last Survey 4 July 1947
 Reg. Book. on the **S/S "MARTIN CARL"** (Number of Visits 88)

Built at **SUNDERLAND**. By whom built **S.P. AUSTIN & SON LTD.** Yard No. **389**. Tons { Gross 2498.97 Net 1310.60
 Engines made at **SUNDERLAND**. By whom made **N.E. MARINE ENG. CO. LD.** Engine No. **4154**. When built **1947**.
 Boilers made at **SUNDERLAND**. By whom made **N.E. MARINE ENG. CO. LD.** Boiler No. **4154**. When made **1947**.
 Registered Horse Power Owners **A/S DAMPSKELSK HEIMDAL**. Port belonging to **COPENHAGEN**.
 Nom. Horse Power as per Rule **386**. Is Refrigerating Machinery fitted for cargo purposes **NO**. Is Electric Light fitted **YES**.
 Trade for which Vessel is intended **OCEAN GOING**.

ENGINES, &c.—Description of Engines **TRIPLE EXPANSION RECIPROCATING**

Dia. of Cylinders **21 1/2" x 34" x 62"** Length of Stroke **39"** No. of Cylinders **3** Revs. per minute **84 SERVICE**
 Crank shaft, dia. of journals as per Rule **11.98"** as fitted **12 1/4"** Crank pin dia. **12 1/4"** No. of Cranks **3**
 Intermediate Shafts, diameter as per Rule **11.41"** as fitted **11 7/8"** Thrust shaft, diameter at collars as per Rule **11.98"** as fitted **12 1/4" + 11 7/8"**
 Tube Shafts, diameter as per Rule **12.69"** as fitted **13"** Is the **screw** shaft fitted with a continuous liner **YES**
 Screw Shaft, diameter as per Rule **2 1/2" x 32"** as fitted **3 1/4"** Thickness between bushes as per Rule **16 5/32"** as fitted **1 1/16"** Is the after end of the liner made watertight in the propeller boss **YES**
 Bronze Liners, thickness in way of bushes as per Rule **3 1/4"** as fitted **3 1/4"** Thickness between bushes as per Rule **1 1/16"** as fitted **1 1/16"** 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 **CONTINUOUS**
 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 **TIGHT FIT**
 If two liners are fitted, is the shaft lapped or protected between the liners **NO** Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft **NO**
 Length of Bearing in Stern Bush next to and supporting propeller **4'-4 1/2"**
 Propeller, dia. **15'-4 1/2"** Pitch **15'-9"** No. of Blades **4** Material **M.B.** whether Moveable **NO** Total Developed Surface **87** sq. feet
 Feed Pumps worked from the Main Engines, No. **2** Diameter **3 1/4"** Stroke **1'-10"** 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 **1'-10"** Can one be overhauled while the other is at work **YES**
 Feed Pumps { No. and size **TWO 8 1/2" x 6" x 18"** Pumps connected to the { No. and size **ONE 9" x 10" x 10"** **ONE 5 1/4" x 4 1/2" x 10"**
 { How driven **STEAM** Main Bilge Line { How driven **STEAM**
 Ballast Pumps, No. and size **ONE - 0" x 10" x 10"** Lubricating Oil Pumps, including Spare Pump, No. and size **ONE - 1" x 1" x 1"**
 Are two independent means arranged for circulating water through the Oil Cooler **YES** Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room **E.R. 1-2 1/2" P.S.** **B.R. 1-2 1/2" P.S.** **COFFERDAM FOR 1-2 1/2" AFT 1-2 1/2" TUNNEL WELL 1-2 1/2"**
 In Pump Room **2 2" P.S.** In Holds, &c. **FOREHOLD 1-3" P.S.** **AFT HOLD 1-3 1/4" P.S.**

Main Water Circulating Pump Direct Bilge Suctions, No. and size ONE - 7" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size **ONE 4"**
 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 plates **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 **YES**
 What pipes pass through the deep tanks **YES** 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 **YES** Is the Shaft Tunnel watertight **YES** Is it fitted with a watertight door **YES** worked from **E.R. TOP PLATFORM**.

MAIN BOILERS, &c.—(Letter for record **S**) Total Heating Surface of Boilers **4740 sq. ft.** SUPERHEATERS **948 sq. ft.**
 Which Boilers are fitted with Forced Draft **BOTH** Which Boilers are fitted with Superheaters **BOTH**
 No. and Description of Boilers **TWO - SINGLE ENDED MULTITUBULAR** 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? **NO**

Can the donkey boiler be used for domestic purposes only **NO**
PLANS. Are approved plans forwarded herewith for Shafting **12.11.46** Main Boilers **9.10.46** Auxiliary Boilers **YES** Donkey Boilers **YES**
 Superheaters **30.1.47** General Pumping Arrangements **6.5.47** Oil fuel Burning Piping Arrangements **6.5.47**

SPARE GEAR.
 Has the spare gear required by the Rules been supplied **YES**
 State the principal additional spare gear supplied **YES**

The foregoing is a correct description.

THE NORTH EASTERN MARINE ENGINEERING CO. (1938) LTD.

W. H. H. H.
RESIDENT MANAGER.

Manufacturer.



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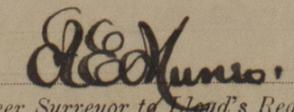
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During progress of work in shops - - 1947. Jan 13, 17, 20, 28 Feb 4, 5, 7, 10, 12, 13, 14, 17, 18, 19, 21, 24, 25, 26, 28. Mar 4, 5, 6, 11, 12, 13, 14, 17, 18, 20, 26, 27
 During erection on board vessel - - - Apr 2, 3, 9, 10, 11, 14, 15, 16, 17, 18, 21, 22, 23, 24, 25, 28, 29, 30. May 1, 2, 3, 5, 6, 7, 8, 12, 14, 15, 19, 20, 21, 22, 23, 26, 28, 30
 Total No. of visits **58**

Dates of Examination of principal parts—Cylinders 28/30-4-47. Slides 28/30-4-47. Covers 28/30-4-47.
 Pistons 28/30-4-47. Piston Rods 1-5-47. Connecting rods 7-5-47.
 Crank shaft 26-4-47. Thrust shaft 3-5-47. Intermediate shafts 3-5-47.
 Tube shaft ✓. Screw shaft WORKING. 28-4-47. SPARE. 5-6-47. Propeller 30-4-47.
 Stern tube 11-4-47. Engine and boiler seatings 25-5-47. Engines holding down bolts 3-6-47. 6-6-47.
 Completion of fitting sea connections 21-4-47.
 Completion of pumping arrangements 4-7-47. Boilers fixed 25-5-47. Engines tried under steam 26-6-47.
 Main boiler safety valves adjusted 26-6-47. Thickness of adjusting washers F. P. A. F. S. A. 3/8" SH 1/4" 3/8" 5/16" SH 1/4" 11/32"
 Crank shaft material O.K. STEEL. Identification Mark 9015 } REM. 3019 } REM. Thrust shaft material O.K. STEEL. Identification Mark 9554. REM.
 Intermediate shafts, material O.K. STEEL. Identification Marks 9554, 9555 } REM. 9556, 9557 } REM. Tube shaft, material ✓. Identification Mark ✓
 Screw shaft, material O.K. STEEL. Identification Mark W. 9552, } REM. S. 9553 } REM. Steam Pipes, material O.K. STEEL. Test pressure 660 LBS/SQ. IN. Date of Test 14-3-47
 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 NO. ✓ If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c.)
 The machinery of this vessel has been constructed under Special Survey in accordance with the approved plans, Secretary's letters and the Requirements of the Rules.
 The workmanship and materials are good.
 The machinery has been efficiently fitted on board the vessel, and tried under working conditions, and found satisfactory, and is eligible in my opinion for the record of:-

**LMC 7.47. TS (CL). 2 SB (SPT) 220 LBS/SQ AND
 FITTED TO BURN OIL FUEL. FP ABOVE 150°F 7.47.**


 Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ : ✓ :
 Special ... £ 102 : 4 : ✓ JUL 12 1947
 Donkey Boiler Fee £ 3 : 3 : ✓
 Travelling Expenses (if any) £ : ✓ :
 When applied for, 19...
 When received, 19...

Committee's Minute **FIL 15 AUG 1947**

Assigned **+ LMC 7.47**
FITTED FOR OIL FUEL 7.47 FLASH POINT ABOVE 150°F. F.D. C.L.
2 SB (Spt 220/16)

The Surveyors are requested not to write on or below the space for Committee's Minute.
 Certificate to be sent to