

RECEIVED

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 30 APR 1946

Date of writing Report 19... When handed in at Local Office 19... Port of Hull

No. in Survey held at Selby & Hull Date, First Survey 29. 6. 45. Last Survey 17. 6. 1946.  
 Reg. Book on the "EMPIRE NINA" A/M 5 1154 (Number of Visits 25.) Tons { Gross 296  
 Net Nil

Built at Selby By whom built Buchanan Sons Ltd. Yard No. 1304 When built 1946

Engines made at Providence, Rhode Is. USA By whom made Franklin Machine & Foundry Co. Engine No. 1022 ✓ When made 1944  
 Incorporated by Greenock By whom made Kincaid F.O. No. 766. 1946

Boilers made at Greenock By whom made Kincaid Boiler No. 282 When made 1946

Registered Horse Power Owners Ministry of War Transport Port belonging to Hull

Net Horse Power as per Rule 109 ✓ Is Refrigerating Machinery fitted for cargo purposes No ✓ Is Electric Light fitted Yes ✓

Trade for which vessel is intended Joining Services

GINES, &c.—Description of Engines Triple Expansion Recip. Stm. See USA Cert No. B 2327 Revs. per minute 130

No. of Cylinders 12, 20, 33 Length of Stroke 24 ✓ No. of Cranks 3 No. of Cranks 3

Crank shaft, dia. of journals as per Rule 7 3/4 ✓ Crank pin dia. 7 3/4 ✓ Crank webs Mid. length breadth 15 1/16 ✓ Thickness parallel to axis 5 ✓  
 as fitted 7 3/4 ✓ Crank webs Mid. length thickness 5 1/8 ✓ shrunk Thickness around eye-hole 3 1/2 ✓

Intermediate Shafts, diameter as per Rule 6 5/8 ✓ Thrust shaft, diameter at collars as per Rule 8 1/2 ✓  
 as fitted 6 5/8 ✓ as fitted 8 1/2 ✓

Tube Shafts, diameter as per Rule 8 ✓ Is the { tube } shaft fitted with a continuous liner { No ✓  
 as fitted 8 ✓ as fitted 8 ✓ { screw }

Bronze Liners, thickness in way of bushes as per Rule / Thickness between bushes as per Rule / Is the after end of the liner made watertight in the propeller boss ✓  
 If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner. ✓  
 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 shaft Yes ✓ If so, state type NEWARK ✓ Length of Bearing in Stern Bush next to and supporting propeller 2'-7 1/2"

Propeller, dia. 9'-0" Pitch 9'-6" No. of Blades 4 Material C.I. whether Moveable No Total Developed Surface 31.5 sq. feet

Feed Pumps worked from the Main Engines, No. NONE Diameter / Stroke / Can one be overhauled while the other is at work. ✓

Bilge Pumps worked from the Main Engines, No. NONE Diameter / Stroke / Can one be overhauled while the other is at work. ✓

Feed Pumps No. and size Two 7' x 5' x 12" Pumps connected to the Main Bilge Line { No. and size 7 1/2' x 5' x 6' 3' Ejector 9' 12' x 9' x 12' ME ✓  
 How driven IND. STM. How driven IND. STM. Stm. See this letter do. S. 466

Ballast Pumps, No. and size ONE 7 1/2' x 5' x 6" AS ABOVE Lubricating Oil Pumps, including Spare Pump, No. and size Two 4' x 2 1/2' x 4' TWO. ONE HANDPUMP ✓

Are two independent means arranged for circulating water through the Oil Cooler ONE ONLY. Suctions, connected both to Main Bilge Pumps and Auxiliary

Bilge Pumps:—In Engine and Boiler Room ER 3-2 1/2" & 1-3" BR 2-2 1/2"

In Pump Room ✓ In Holds, &c. 1-2" ✓

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1-4" Independent Power Pump Direct Suctions to the Engine and/or Boiler Room Bilges, No. and size 1-3" ✓ 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 ABOVE ✓

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 Part of ER. Is it fitted with a watertight door ✓ worked from ✓

MAIN BOILERS, &c.—(Letter for record S ✓) Total Heating Surface of Boilers 1786 sq. ft.

Which Boilers are fitted with Forced Draft SINGLE BOILER ✓ Which Boilers are fitted with Superheaters NONE ✓

No. and Description of Boilers ONE SINGLE END CYLINDRICAL MULT. TBR Working Pressure 220 lb. ✓

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes. BC Certificate

IS A DONKEY BOILER FITTED? No ✓ If so, is a report now forwarded? ✓

Can the donkey boiler be used for other than domestic purposes ✓

PLANS. Are approved plans forwarded herewith for Shafting 25.7.44 Main Boilers 14.9.42 Auxiliary Boilers ✓ Donkey Boilers ✓  
 (If not state date of approval)

Superheaters ✓ General Pumping Arrangements 19.7.44 Oil fuel Burning Piping Arrangements 11.5.45.

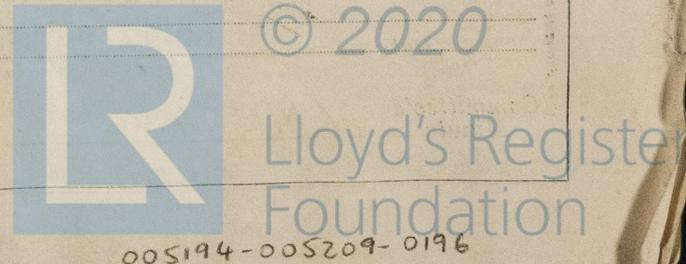
### SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes ✓

State the principal additional spare gear supplied As per Specification.

The foregoing is a correct description.

Manufacturer.



NOTE.—The words which do not apply should be deleted.

2nd. 1.4. T (MADE IN ENGLAND.)

E. NINA

Sea American Bureau of Shipping  
 Certificate N<sup>o</sup> B-2327.

Dates of Survey while building  
 During progress of work in shops - -  
 1945 May 29 JUN 7 SEP 14, 17, 25, 31. DEC 28  
 During erection on board vessel - - -  
 1946 JAN 7, 9, 11, 15, 16, 18, 23, 25, 30. FEB 5, 20, 28, MAR 5, 14, 18, 27. Apr 17,  
 Total No. of visits 25.

Dates of Examination of principal parts - Cylinders Slides Covers  
 Pistons Sea American Piston Rods Bureau of Shipping Cert. N<sup>o</sup> B-2327  
 Crank shaft Thrust shaft Connecting rods 16.4.45  
 Tube shaft ✓ Screw shaft 2.2.45 Propeller 7.6.45  
 Stern tube 29.5.45 Engine and boiler seatings 31.10.45 Engines holding down bolts 11.1.46  
 Completion of fitting sea connections 7.6.45  
 Completion of pumping arrangements 14.3.46 Boilers fixed 28.12.45 Engines tried under steam 17/3/46 23/3/46  
 Main boiler safety valves adjusted 12.3.46 Thickness of adjusting washers P. 13/32" S. 25/64"  
 Crank shaft material Sea American Bureau Identification Mark of Shipping Thrust shaft material Cut N<sup>o</sup> Identification Mark B-2327  
 Intermediate shafts, material F.I. STL Identification Marks B 294, FW, 766 16.4.45 15. Tube shaft, material ✓ Identification Mark ✓  
 Screw shaft, material F.I. STL Identification Mark B 252, FW, 6-12-45 766, 2.2.45. Steam Pipes, material Steel ✓ Test pressure 660 lb Date of Test 16.1.46  
 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 ✓  
 Is this machinery duplicate of a previous case Yes ✓ If so, state name of vessel Empire Nora

General Remarks (State quality of workmanship, opinions as to class, &c.)  
 The main engines and boiler for this vessel, supplied by Admiralty from reserve stock have been installed by Amos Smith Lt. Hull in accordance with the Specifications the Secretary's letters and the Rules.  
 The workmanship and materials appear to be good.  
 The machinery has been tried under working conditions and found satisfactory on completion of all tests.  
 Eligible in my opinion to be recorded in the Register Book  
 LMC (R) 4,46 O.G. T. 3 Cy. 12", 20", 33" - 24" MN 109. 15B 220  
 3CJ, HS 1786 1/2 - F.D. Fitted for oil fuel FP above 150° F.

Order PA

The amount of Entry Fee ... £ 3 : 0 : When applied for,  
 Special F.I.T. - OUT. ... £ 5 : 9 : 19  
 25% SPEC.  
 Donkey Boiler Fee ... £ 1 : 7/3 : When received,  
 Travelling Expenses (if any) £ : : 19

Date FRI. 17 MAY 1946  
 Committee's Minute LMC 4.46  
 4.46 FLASH POINT ABOVE 150° F. F.D. O.G.

W.S. Shields  
 Engineer Surveyor to Lloyd's Register of Shipping



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