

# REPORT ON OIL ENGINE MACHINERY.

No 23337.

Received at London Office 24 JUL 1946

Date of writing Report 11<sup>th</sup> JULY 1946 When handed in at Local Office 11<sup>th</sup> JULY 1946 Port of GREENOCK

To. in Survey held at GREENOCK Date, First Survey 28<sup>th</sup> JULY 1945. Last Survey 25<sup>th</sup> JUNE 1946. Number of Visits 74.

on the Single Triple Quadruple Screw vessel SING. SC. "NEOTHUMA" Oil TANKER Tons: Gross 8229 Net 4768

built at GLASGOW By whom built BLYTHSWOOD SHIP CO LTD Yard No. 82 When built 1946

Engines made at GREENOCK By whom made JOHN G. KINCAID & CO LTD Engine No. 4165 When made 1946

Boilers made at GREENOCK By whom made do Boiler No. 4168 When made 1946

Indicated Horse Power 3600 Owners ANGLO SAXON PETROLEUM CO LTD Port belonging to London

Net Horse Power as per Rule 502 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which vessel is intended 503 MN: 754 OPEN SEA SERVICE

ENGINES, &c. Type of Engines Kincaids B.W. under piston supercharge or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 250 lb 25 9/16 Diameter of cylinders 650 7/8 Length of stroke 1400 7/8 No. of cylinders 8 No. of cranks 8

Indicated Pressure 118.4 135 1/8 Is there a bearing between each crank Yes

Revolutions per minute 120 Flywheel dia. 2218 7/8 Weight 2.19 tons Means of ignition Compression Kind of fuel used Heavy oil

Crank Shaft, { Solid forged as per Rule app. dia. of journals as fitted 460 Crank pin dia. 460 7/8 Crank Webs Mid. length breadth 750 7/8 Thickness parallel to axis 267 7/8-290 1/2 Mid. length thickness 267 7/8-290 1/2 Thickness around eye hole 205 7/8

Wheel Shaft, diameter as per Rule app. as fitted 134 1/2 Intermediate Shafts, diameter as per Rule app. as fitted 21 1/2 Thrust Shaft, diameter at collars as per Rule app. as fitted 18 1/2

Propeller Shaft, diameter as per Rule app. as fitted 18 1/2 Is the shaft fitted with a continuous liner Yes

Bush Liners, thickness in way of bushes as per Rule 723 1/2 as fitted 875 1/2 Thickness between bushes as per Rule 542 1/2 as fitted 11 1/2 Is the after end of the liner made watertight in the

eller boss Yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner

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

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

No If so, state type Length of Bearing in Stern Bush next to and supporting propeller 5'0"

Propeller, dia. 15'0" Pitch 12'0" No. of blades 4 Material M.B. whether Moveable No Total Developed Surface 72 sq. feet

Method of reversing Engines Compression Air Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication

Thickness of cylinder liners 40 7/8 Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with

conducting material Lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine

ing Water Pumps, No. Two main engine Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

e Pumps worked from the Main Engines, No. One Diameter Rotary Stroke 32 tons/hr Can one be overhauled while the other is at work

ps connected to the Main Bilge Line { No. and Size One 32 tons/hr One 40 tons/hr One 85 tons/hr How driven Main engine Steam Steam (General service)

e cooling water led to the bilges No If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping

gements

ast Pumps, No. and size None Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size One 40 tons/hr One 8 1/2 Duplex

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

as, No. and size:—In Machinery Spaces Three @ 3 1/2" In Pump Room

olds, &c.

pendent Power Pump Direct Suctions to the Engine Room Bilges, No. and size Two @ 6"

all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes Are the Bilge Suctions in the Machinery Spaces

om easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes

Sea Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks Both

ey fixed sufficiently high on the ship's side to be seen without lifting the platform plates Yes Are the Overboard Discharges above or below the deep water line Above

ey 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

pipes pass through the bunkers None How are they protected

pipes pass through the deep tanks None Have they been tested as per Rule

l Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes

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

ment to another Yes Is the Shaft Tunnel watertight None Is it fitted with a watertight door

od vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Air Compressors, No. No. of stages Diameters Stroke Driven by

iliary Air Compressors, No. One No. of stages Two Diameters 120 cu ft/min Stroke Driven by Steam engine

all Auxiliary Air Compressors, No. One No. of stages Two Diameters 90 cu ft/min Stroke Driven by Diesel engine

at provision is made for first Charging the Air Receivers Steam compressor

iving Air Pumps, No. None Diameter Nottingham Cent. C 4255 Stroke Driven by

iliary Engines crank shafts, diameter as per Rule Nottingham Cent. C 4255 No. One Position E.R. platform

ve the Auxiliary Engines been constructed under special survey Yes Is a report sent herewith Nottingham Cent. C 4255C



**AIR RECEIVERS:** — Have they been made under survey *Yes* ✓ State No. of Report or Certificate *Relief valve on line & fusible plug in receiver*  
 Is each receiver, which can be isolated, fitted with a safety valve as per Rule *Yes* ✓ Is a drain fitted at the lowest part of each receiver *Yes* ✓  
 Can the internal surfaces of the receivers be examined and cleaned *Yes* ✓ Internal diameter *✓* thickness *✓*  
**Injection Air Receivers, No.** *None* ✓ Cubic capacity of each *✓* Range of tensile strength *✓* Working pressure *by Rules* *Actual* *✓*  
 Seamless, lap welded or riveted longitudinal joint *✓* Material *✓*  
**Starting Air Receivers, No.** *One* ✓ Total cubic capacity *450 cu ft* Internal diameter *5'3"* thickness *1 3/8"* ✓  
 Seamless, lap welded or riveted longitudinal joint *TR DBS* ✓ Material *SM S* ✓ Range of tensile strength *28/32 tons* ✓ Working pressure *by Rules* *Actual* *350 lbs* ✓  
**IS A DONKEY BOILER FITTED?** *Yes two* ✓ If so, is a report now forwarded? *Yes* ✓  
 Is the donkey boiler intended to be used for domestic purposes only *No*  
**PLANS.** Are approved plans forwarded herewith for Shafting *23/1/45* Receivers *30/7/45* Separate Fuel Tanks *None*  
 (If not, state date of approval)  
 Donkey Boilers *15/12/44* General Pumping Arrangements *Glasgow report* Pumping Arrangements in Machinery Space *14/9/45*  
 Oil Fuel Burning Arrangements *17/8/45* **SPARE GEAR.**  
 Has the spare gear required by the Rules been supplied *Yes*  
 State the principal additional spare gear supplied *See separate list*  
*Spare Screw shaft 19/4/46 LR 14332 CNH.*  
*Insurances approved 6.3.45. (See research files)*

The foregoing is a correct description,  
 For **JOHN G. KINCAID & CO. LIMITED,**  
 Manufacturer.

*Robert Green* Director & Secretary  
 Dates of Survey while building  
 During progress of work in shops - (1945) JUN 28. AUG. 2. 6. 7. SEPT. 4. 14. 17. 26. OCT. 14. 19. 20. NOV. 7. 15. 29. 30. DEC. 14. 17. 18. (1946) JAN. 5. 10. 14. 16. 22. 29. 30.  
 During erection on board vessel - FEB. 14. 6. 8. 14. 20. 27. 28. MAR. 4. 6. 11. 15. 20. 22. 29. APR. 2. 9. 16. 17. 18. 19. 24. 25. 30. MAY 7. 10. 14. 16. 17. 20. 21. 22. 23. 24. 25. 27. 28. 29. 31.  
 Total No. of visits *74.*  
 Dates of Examination of principal parts—Cylinders *22/1/46* Covers *22/1/46* Pistons *22/1/46* Rods *24/4/46* Connecting rods *24/4/46*  
 Crank shaft *24/4/46* Flywheel shaft *NONE* Thrust shaft *22/3/46* Intermediate shafts *15/3/46* Tube shaft *✓*  
 Screw shaft *15/3/46* Propeller *15/3/46* Stern tube *18/12/45* Engine sealings *30/4/46* Engines holding down bolts *24/5/46*  
 Completion of fitting sea connections *20/3/46* Completion of pumping arrangements *25/6/46* Engines tried under working conditions *25/6/46*  
 Crank shaft, Material *SM S* Identification Mark *LR 14276 CNH* Flywheel shaft, Material *NONE* Identification Mark *15-3-46*  
 Thrust shaft, Material *SM S* Identification Mark *LR 14276 CNH* Intermediate shafts, Material *SM S* Identification Marks *LR 14276 CNH*  
 Tube shaft, Material *✓* Identification Mark *✓* Screw shaft, Material *SM S* Identification Mark *LR 14276 CNH*  
 Identification Marks on Air Receivers *Air receiver ex Marpesora original markings indecipherable, app<sup>d</sup> gls letter 30/7/45*

*Retested 6-2-46*  
*550 lbs / 2" T.P.*  
*350 lbs / 1" W.P. CNH 6/2/46*

Is the flash point of the oil to be used over 150° F. *Yes* ✓  
 Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with *Yes* ✓  
 Description of fire extinguishing apparatus fitted *Steam under engine platform and under boiler.*  
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo *Tanker* ✓ If so, have the requirements of the Rules been complied with *Yes* ✓  
 If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with *No*  
 Is this machinery duplicate of a previous case *Yes* ✓ If so, state name of vessel *NUTTALLIA* *GRN P/N 22991*

**General Remarks** (State quality of workmanship, opinions as to class, &c.)

*This machinery has been built under special survey in accordance with the Rules and approved plans. The materials & workmanship are sound & good. The engine & boilers have been efficiently installed & tested under full working conditions on a sea trial with satisfactory results. This machinery is eligible in my opinion to be classed in the Society's Register.*

*Book with record*

*+ LMC 6-46 & Notation Screw shaft C.L. 2 DB 180 lbs / 1" fitted for oil fuel FP at 180° F.*

*Forging certificate common to this engine and K169 to follow, will be forwarded on completion of the latter.*

The amount of Entry Fee .. £ 6 : 0 :  
 Special ... .. £ 100 : 3 :  
 Donkey Boiler Fee .. £ 27 : 18 :  
 Air RECEIVER Ex 1000 .. £ 2 : 2 :  
 Travelling Expenses (if any) £ : :  
 When applied for, *15 JULY 1946*  
 When received, *23 JUL 1946*

Committee's Minute

Assigned *1- June 6. 46*  
*file Eng. 200 180 lbs.*

*Fitted for oil fuel 6. 4. 46 2" D. above 180° F.*

*Charles J. Hunter*  
 Engineer Surveyor to Lloyd's Register of Shipping.

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