

REPORT ON OIL ENGINE MACHINERY.

No. 13803

Received at London Office

11 JAN 1945

Date of writing Report 19... When handed in at Local Office 8/9/ 1944 Port of Belfast

Date, First Survey 21st Jan. 1944 Last Survey 1st Sept 1944
Number of Visits 54

on the ^{Single} ~~Twin~~ ^{Triple} ~~Quadruple~~ Screw vessel M.V. "NISO" Tons { Gross 8273
Net 4777

built at BELFAST By whom built HARLAND & WOLFF LD. Yard No. 1198 When built 1944

engines made at GLASGOW By whom made HARLAND & WOLFF LD. Engine No. 1198 When made 1944

Boilers made at BELFAST By whom made HARLAND & WOLFF LD. Boiler No. 1272/3 When made 1944

Horse Power Owners ANGLO-SAXON PETROLEUM CO. LD. Port belonging to

Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted YES

Trade for which vessel is intended CARRIAGE OF PETROLEUM IN BULK

ENGINES, &c. —Type of Engines 2 or 4 stroke cycle Single or double acting

Maximum pressure in cylinders Diameter of cylinders Length of stroke No. of cylinders No. of cranks

Mean Indicated Pressure

Position of bearings, adjacent to the crank, measured from inner edge to inner edge Is there a bearing between each crank

Revolutions per minute Flywheel dia. Weight Means of ignition Kind of fuel used

Crankshaft { Solid forged
Semi built dia. of journals as per Rule
All built as fitted

Crank pin dia. Crank webs Mid. length breadth Thickness parallel to axis
Mid. length thickness shrunk Thickness around eye-hole

Crankshaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule as fitted 17" Thrust Shaft, diameter at collars as fitted as per Rule

Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as fitted 16" Is the tube screw shaft fitted with a continuous liner YES

Bronze Liners, thickness in way of bushes as per Rule 13/16" Thickness between bushes as per Rule 21/32" 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

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

Propeller, dia 15'-6" Pitch 12'-0" No. of blades 4 Material BRONZE whether moveable No Total developed surface 75 sq. feet

Method of reversing Engines Is a governor or other arrangement fitted to prevent racing of the engine when declutched Means of lubrication Thickness of cylinder liners Are the cylinders fitted with safety valves Are the exhaust pipes and silencers water cooled lagged with non-conducting material If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine

Cooling Water Pumps, No. Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Bilge Pumps worked from the Main Engines, No. Diameter Stroke Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line { No. and size
How driven

Is the cooling water led to the bilges If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping arrangements

Ballast Pumps, No. and size Power Driven Lubricating Oil Pumps, including spare pump, No. and size

Are two independent means arranged for circulating water through the Oil Cooler Suctions, connected to both main bilge pumps and auxiliary bilge pumps, No. and size:—In machinery spaces In pump room

Independent Power Pump Direct Suctions to the engine room bilges, No. and size

Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes Are the bilge suction in the machinery spaces led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges

Are all Sea Connections fitted direct on the skin of the Ship YES Are they fitted with valves or cocks YES Are they fixed efficiently high on the ship's side to be seen without lifting the platform plates Are the overboard discharges above or below the deep water line

Are they each fitted with a discharge valve always accessible on the plating of the vessel Are the blow off cocks fitted with a spigot and brass covering plate

That pipes pass through the bunkers How are they protected

That pipes pass through the deep tanks 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

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 Is the shaft tunnel watertight Is it fitted with a watertight door worked from

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

Main Air Compressors, No. No. of stages diameters stroke driven by

Auxiliary Air Compressors, No. No. of stages diameters stroke driven by

Small Auxiliary Air Compressors, No. No. of stages diameters stroke driven by

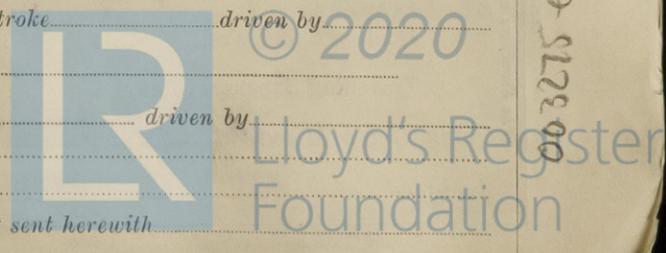
What provision is made for first charging the air receivers

Scavenging Air Pumps, No. diameter stroke driven by

Auxiliary Engines crank shafts, diameter as per Rule as fitted No. Position

Have the auxiliary engines been constructed under special survey Is a report sent herewith

1200-K2300-5123 00



AIR RECEIVERS:—Have they been made under survey **YES** ✓ State No. of report or certificate **Z 1211** ✓
 Is each receiver, which can be isolated, fitted with a safety **DISC.** as per Rule **YES** ✓
 Can the internal surfaces of the receivers be examined and cleaned **YES** ✓ Is a drain fitted at the lowest part of each receiver **YES** ✓

Injection Air Receivers, No. _____ Cubic capacity of each _____ Internal diameter _____ thickness _____
 Seamless, lap welded or riveted longitudinal joint _____ Material _____ Range of tensile strength _____ Working pressure _____
 Starting Air Receivers, No. **2** ✓ Total cubic capacity **900 CUB. FT.** ✓ Internal diameter **6'-0 5/16"** ✓ thickness **1"** ✓
 Seamless, lap welded or riveted longitudinal joint **RIVETED** ✓ Material **M.S.** ✓ Range of tensile strength **28/32** ✓ Working pressure _____
 by Rules _____ Actual **356 LB**

IS A DONKEY BOILER FITTED **YES** ✓ (2) 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 **15/1/44** Receivers **26/5/41** Separate fuel tanks _____
 (If not, state date of approval)

Donkey boilers **26/5/41** General pumping arrangements _____ Pumping arrangements in machinery space _____

Oil fuel buring arrangements _____

SPARE GEAR.

Has the spare gear required by the Rules been supplied _____

State the principal additional spare gear supplied _____

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building
 During progress of work in shops - **1944**
 Jan 21, 26, 27 Feb 1, 3, 4, 7, 8 Apr 12, 28 May 6, 16, 17, 22, 23, 25 June 2, 5, 7, 8, 9, 10, 12, 13, 15, 16, 20, 21, 23, 26
 During erection on board vessel - **29** July 3, 6, 7, 18, 20, 21, 22, 26, 28, 29, 31 Aug 1, 3, 4, 9, 11, 15, 16, 17, 18, 23 Sept 1
 Total No. of visits **54**

Dates of examination of principal parts—Cylinders _____ Covers _____ Pistons _____ Rods _____ Connecting rods _____

Crank shaft _____ Flywheel shaft _____ Thrust shaft _____ Intermediate shafts _____ Tube shaft _____

Screw shaft _____ Propeller **26/7/44** Stern tube **7/7/44** Engine seatings _____ Engine holding down bolts _____

Completion of fitting sea connections **29/7/44** Completion of pumping arrangements _____ Engines tried under working conditions _____

Crank shaft, material _____ Identification mark _____ Flywheel shaft, material, _____ Identification mark _____

Thrust shaft, material _____ Identification mark _____ Intermediate shafts, material **M.S.** Identification marks **Lloyd's No. T.D.S. 29/6**

Tube shaft, material _____ Identification mark _____ Screw shaft, material **M.S.** Identification mark **Lloyd's No. 45 T.D.S. 29/6**

Identification marks on air receivers **No. 291** **No. 292**

LLOYD'S TEST 556 LB

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W.P. 356 LB.

W.P. 356 LB.

T.D.S. 1/8/44

T.D.S. 3/8/44

Is the flash point of the oil to be used over 150°F _____

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with _____

Description of fire extinguishing apparatus fitted _____

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo _____ 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 _____

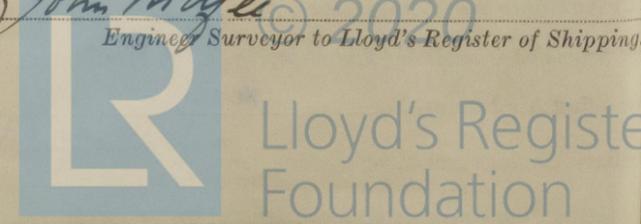
Is this machinery duplicate of a previous case _____ If so, state name of vessel _____

General Remarks (State quality of workmanship, opinions as to class, &c. **The donkey boiler, air receiver propeller and screw shaft have been efficiently fitted on board and the vessel has been taken to Glasgow for installation of main engines.**

Certificate (if required) to be sent to Committee's Minute.

The amount of Entry Fee ... £ : :
 Special ... £ : :
 Donkey Boiler Fee... £ : :
 Travelling Expenses (if any) £ : :
 When applied for 19
 When received 19

John Miller
 Engineer Surveyor to Lloyd's Register of Shipping



(Committee's Minute) **GLASGOW** **9 JAN 1945**
 Assigned **SEE ACCOMPANYING MACHINERY REPORT.**