

REPORT ON OIL ENGINE MACHINERY.

No. 19529

30 29 MAY 1936

Received at London Office

Writing Report 23rd Oct 1935 When handed in at Local Office 29.10.35 Port of Grimsby

Survey held at Lincoln Date, First Survey 8th July Last Survey 22nd Oct 1935
Number of Visits 19

on the Motor Kessel "MACOMA" Screw vessel London Tons { Gross 2011
Net 4767

at Amsterdam By whom built Ned Scheepb NY Yard No. 275 When built 1936

Engines made at Amsterdam By whom made Mess N.Y. Werkspun Engine No. When made 1936

Engines made at Lincoln By whom made Ruston + Hornsby Engine No. 177225 When made 1935

Horse Power 60 Owners Anglo-Saxon Petroleum Co. Ltd. Port belonging to London

Horse Power as per Rule 18.6 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Engine for which vessel is intended [one engine - Type 3VCRZ]

ENGINES, &c. Type of Engines Airless injection, cold starting 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 700 lb. Diameter of cylinders 8" Length of stroke 10 3/4" No. of cylinders 3 No. of cranks 3

Indicated Pressure 81.5 lb. of bearings, adjacent to the Crank, measured from inner edge to inner edge 9 1/8" Is there a bearing between each crank Yes

Revolutions per minute 450 Flywheel dia. 3'-4" Weight 19 cwts Means of ignition Compression Kind of fuel used Crude oil

Crank Shaft, dia. of journals as approved Crank pin dia. 4 3/4" Crank Webs Mid. length breadth 8" Thickness parallel to axis shrunk

as fitted 6" Mid. length thickness 2 1/2" Thickness around eyehole

Propeller Shaft, diameter as approved Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as per Rule

as fitted 6" as fitted as fitted

Shaft, diameter as per Rule Screw Shaft, diameter as per Rule Is the { tube } shaft fitted with a continuous liner {

as fitted as fitted as fitted

Size 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

as fitted as fitted as fitted

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

Does the liner do 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

When 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

If so, state type Length of Bearing in Stern Bush next to and supporting propeller

Propeller, dia. Pitch No. of blades Material whether Moveable Total Developed Surface sq. feet

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

Thickness of cylinder liners 3/4" Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with

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

Exhausting Water Pumps, No. One Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes Ham cooling line

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

arrangements Fast Pumps, No. and size Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size one gland

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

Tools, &c. 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 Suctions in the Machinery Spaces

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 Are they fitted with Valves or Cocks

Are they fixed sufficiently 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

Do all pipes pass through the bunkers How are they protected

Do all 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

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

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

Auxiliary Air Compressors, No. I No. of stages 2 Diameters 206.206-104 Stroke 160mm Driven by Eng 177225

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

Revolving Air Pumps, No. Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule as fitted



Lloyd's Register Foundation

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule ✓

Can the internal surfaces of the receivers be examined and cleaned ✓

Is a drain fitted at the lowest part of each receiver ✓

High Pressure Air Receivers, No. *None*

Cubic capacity of each ✓

Internal diameter ✓

thickness ✓

Seamless, lap welded or riveted longitudinal joint ✓

Material ✓

Range of tensile strength ✓

Working pressure by Rules ✓

Starting Air Receivers, No. *None*

Total cubic capacity ✓

Internal diameter ✓

thickness ✓

Seamless, lap welded or riveted longitudinal joint ✓

Material ✓

Range of tensile strength ✓

Working pressure by Rules ✓

IS A DONKEY BOILER FITTED? ✓

Is the donkey boiler intended to be used for domestic purposes only ✓

If so, is a report now forwarded? ✓

PLANS. Are approved plans forwarded herewith for Shafting *11.11.32*

(If not, state date of approval)

Receivers ✓

Separate Tanks ✓

Donkey Boilers ✓

General Pumping Arrangements ✓

Oil Fuel Burning Arrangements ✓

SPARE GEAR.

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

State the principal additional spare gear supplied ✓

Kuston & Hornsby, Limited,

The foregoing is a correct description,

J. Coyst 28/10/35 Manufacturer.

Dates of Survey while building
 During progress of work in shops - - *1935 July 8. 11. 15. 18. 23 Aug 8. 22. 28 Sep 5. 12. 19. 23. 26 Oct 3. 10. 11. 21. 32.*
 During erection on board vessel - -
 Total No. of visits *19*

Dates of Examination of principal parts—Cylinders *19.9.35* Covers *29.8.35* Pistons *26.9.35* Rods ✓
 Crank shaft *29.8.35* Flywheel shaft *29.8.35* Thrust shaft ✓ Intermediate shafts ✓ Connecting rods *26.9.*
 Screw shaft ✓ Propeller ✓ Stern tube ✓ Engine seatings ✓ Engines holding down bolts ✓
 Completion of fitting sea connections ✓ Completion of pumping arrangements ✓ Engines tried under working conditions *10.10.35*
 Crank shaft, Material *Sm. steel* Identification Mark *3226 B* Flywheel shaft, Material *Sm. steel* Identification Mark *3226 B*
 Thrust shaft, Material ✓ Identification Mark ✓ Intermediate shafts, Material ✓ Identification Marks ✓
 Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material ✓ Identification Mark ✓

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 ✓

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 ✓ *Grimaby report No 18653, 7/8" Incha*
 Is this machinery duplicate of a previous case *Yes*. If so, state name of vessel *same type - how 3 instead of 5 cylinders*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The workmanship + materials are good.*

The engine has been built under Special Survey in accordance with the Rules + Approved plans

Trials were carried out at the Trapsers works under brake load + all found satisfactory.

The engine is being sent to Amsterdam, + is to the order of Messrs Werkspoor, N.V.

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

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

H. R. Pilditch
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. 12 JUN 1936*

Assigned *See other Amt J.E. 13698*

