

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 19693

-2 MAY 1936
29 JUL 1936Date of writing Report 1st May 1936 When handed in at Local Office 1. 5. 36

Port of Grimsby.

Date, First Survey 3rd October 1935 Last Survey 30th April 1936.No. in Survey held at Lincoln.
Reg. Book.

Number of Visits 25

Single
on the Twin
Triple
QuadrupleM/S *Arinia*Tons
Gross
Net

Built at

P. Glasgow

By whom built

Lithgows & Co

Yard No. 880

When built 1936

Engines made at Lincoln.

By whom made

Ruston & Prosser, Ltd.

Engine No. 18296

When made 1936.

Donkey Boilers made at

By whom made

Boiler No. ✓

When made ✓

Brake Horse Power 60.

Owners

Anglo Saxon Petroleum Co. Ltd.

Port belonging to

London

Nom. Horse Power as per Rule 18.6.

Is Refrigerating Machinery fitted for cargo purposes ✓

Is Electric Light fitted ✓

Trade for which vessel is intended ✓

[One Engine - Type 3 V C R Z]

OIL 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.

Mean *Ind.* " 81.5 lb

Span 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 cwt

Means of ignition *Compression*Kind of fuel used *Crude oil.*Crank Shaft, dia. of journals as *approved* ✓

as fitted 6"

Crank pin dia. 4 3/4"

Crank Webs

Mid. length breadth 8"

Thickness parallel to axis ✓

Mid. length thickness 2 1/2"

Thickness around eye hole ✓

Flywheel Shaft, diameter as *approved* ✓

as fitted 6"

Intermediate Shafts, diameter as per Rule ✓

as fitted ✓

Thrust Shaft, diameter at collars as per Rule ✓

as fitted ✓

Tube Shaft, diameter as per Rule ✓

as fitted ✓

Screw Shaft, diameter as per Rule ✓

as fitted ✓

Is the tube

screw

shaft fitted with a continuous liner ✓

Bronze Liners, thickness in way of bushes as per Rule ✓

as fitted ✓

Thickness between bushes as per rule ✓

as fitted ✓

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 ✓ 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

forced 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

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

What special arrangements are made for dealing with cooling water if discharged into bilges ✓

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 ✓

Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size *one geared.*

Ballast Pumps, No. and size ✓

Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Are two independent means arranged for circulating water through the Oil Cooler ✓

In Pump Room ✓

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size ✓

Are the Bilge Suctions in the Machinery Spaces

Are all the Bilge Suction pipes in Holds and Tunnels fitted with strum-boxes ✓

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 ✓

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 ✓

What pipes pass through the bunkers ✓

How are they protected ✓

What 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 ✓

Scavenging Air Pumps, No. ✓

Diameter ✓

Stroke ✓

Driven by ✓

Auxiliary Engines crank shafts, diameter as per Rule ✓

as fitted ✓

No. — ✓

Position — ✓

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

High Pressure Air Receivers, No. ✓

Cubic capacity of each ✓

Internal diameter ✓

thickness by Rules ✓

Seamless, lap welded or riveted longitudinal joint ✓

Material ✓

Range of tensile strength ✓

Working pressure Actual ✓

Starting Air Receivers, No. ✓

Total cubic capacity ✓

Internal diameter ✓

thickness by Rules ✓

Seamless, lap welded or riveted longitudinal joint ✓

Material ✓

Range of tensile strength ✓

Working pressure Actual ✓

IS A DONKEY BOILER FITTED? /

If so, is a report now forwarded? /

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

PLANS. Are approved plans forwarded herewith for Shafting 7.9.31.
(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 /

Huston & Hornsby, Limited,

The foregoing is a correct description.

R. Onions 30/4/36

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1935 Oct 3. 17. 22. 24. 28. 31 Nov 7. 11. 28 Dec 17. 1936 Feb 24. 27 Mar 2. 12. 16. 19. 23. 26. 30 Apr 2. 6. 16. 23. 27 30
During erection on board vessel - - -
Total No. of visits *25*

Dates of Examination of principal parts—Cylinders 17.2.36. Covers 24.2.36. Pistons 17.2.36. Rods / Connecting rods 28.11.35.

Crank shaft 11.11.35. Flywheel shaft 11.11.35. Thrust shaft / Intermediate shafts / Tube shaft /

Screw shaft / Propeller / Stern tube / Engine sealings / Engines holding down bolts /

Completion of fitting sea connections / Completion of pumping arrangements / Engines tried under working conditions 30.3.36.

Crank shaft, Material *Sm. Steel* Identification Mark *Nº 3229 B.* Flywheel shaft, Material *Sm. Steel* Identification Mark *Nº 3229 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. /

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 / *Grimby report Nº 18653, m/y "Inchanga"*

Is this machinery duplicate of a previous case *yes* If so, state name of vessel *same type, now 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.

Running trials were carried out at the maker's works under brake load with satisfactory results.

The engine has been built to the order of Messrs Peter Brotherhood, Ltd., Peterborough, for Messrs J. G. Kincaid & Co. of Greenock.

*Now securely fitted on board
H.M. Gunboat "Inchanga"
Greenock*

Fitted in

*Harland & Wolff's
981 G*

Request form attached Gms rpt No 19687

9/2270/P/IV. 5650 - 36/IV. 1.

The amount of Entry Fee .. £ : When applied for.

Special £ : 19

Donkey Boiler Fee £ : When received.

Travelling Expenses (if any) £ : 19

Committee's Minute

GLASGOW 28 JUL 1936

Assigned *See Gms. Rpt. No 20189*



Lloyd's Register
Foundation

*For Correspondence re allocation, etc.
76. Rpt on "Arinid"*