

REPORT ON OIL ENGINE MACHINERY.

No. 133896

Received at London Office

17 FEB 1956

Date of writing Report 2nd June 1956. When handed in at Local Office 4th July 1956. Port of LONDON.

Survey held at Stamford Lines. Date, First Survey 16:5:56. Last Survey 30:5:56. 1956. Number of Visits 2.

Single on the Twin Triple Quadruple Screw vessel. "B.P. Explorer" Tons Gross Net.

Built at The Dale Northwich Cheshire. By whom built Yarwood & Sons. CONTRACT NO 900. No. 899. When built bears 7 hundred.

Engines made at Stamford Lines. By whom made Messrs Blackstone & Co Ltd. Engine No. M67362 When made 1956.

Boilers made at. By whom made. Boiler No. When made.

Indicated Horse Power 324. Owners. Port belonging to.

Power as per Rule 64.8. Is Refrigerating Machinery fitted for cargo purposes. Is Electric Light fitted.

Use for which vessel is intended.

ENGINES, &c. - Type of Engines Liston-Blackstone EVSM66 vertical diesel 2 or 4 stroke cycle 4. Single or double acting single.

Maximum pressure in cylinders 900 psi. Diameter of cylinders 8 3/4". Length of stroke 11 1/2". No. of cylinders 6. No. of cranks 6.

Mean Indicated Pressure 123 psi. Ahead Firing Order in Cylinders 1-5-3-6-2-4. Span of bearings, adjacent to the crank, measured from inner edge to inner edge 10 1/8".

Flywheel dia 38". Weight 1860 lbs. Moment of inertia of flywheel 5.45. Means of ignition COMP. Kind of fuel used Diesel.

Crankshaft, dia. of journals 6 3/4". Crank pin dia 6 1/8". Crank webs Mid. length breadth 3 1/4". Thickness parallel to axis. Mid. length thickness 2 5/32". Thickness around eye-hole.

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

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

Brass Liners, thickness in way of bushes as per Rule. Thickness between bushes 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 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. Hydraulic damper at feet end of main shaft.

Moment of inertia of propeller (lbs. in² or Kg. cm.²). Kind of damper, if fitted. Viscous Damper in flywheel coupling.

Method of reversing Engines VOITH SCHNEIDER PROPELLER. Is a governor or other arrangement fitted to prevent racing of the engine when declutched. Means of lubrication FORCED. Thickness of cylinder liners 19/32".

Are the cylinders fitted with safety valves. YES. 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. 2. 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.

Power Driven Lubricating Oil Pumps, including spare pump, No. and size. 1 - Pressure - 810 g.p.l. 1 - Scavenge - 1160 g.p.l.

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

Have they been tested as per Rule. What pipes pass through the deep tanks.

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.

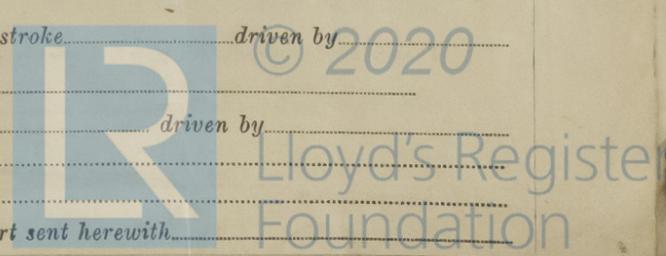
Main Air Compressors, No. No. of stages. diameters. stroke. driven by.

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. Revolving Air Pumps, No. diameter. stroke. driven by.

Auxiliary Engines crank shafts, diameter as per Rule. No. as fitted. Position. Have the auxiliary engines been constructed under special survey. Is a report sent herewith.



002592 002601 - 0281

AIR RECEIVERS:—Have they been made under survey... YES State No. of report or certificate C. 8831.

Is each receiver, which can be isolated, fitted with a safety valve 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, welded or riveted longitudinal joint _____ Material _____ Range of tensile strength _____ Working pressure by Rules

Starting Air Receivers, No. 2 Total cubic capacity 22 cu. ft. Internal diameter _____ thickness _____

Seamless, welded or riveted longitudinal joint welded Material M.S. 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 25.10.54 Receivers _____ Separate fuel tanks _____

Donkey boilers _____ General pumping arrangements _____ Pumping arrangements in machinery space _____

Oil fuel burning arrangements _____

Have Torsional Vibration characteristics been approved YES Date of approval 20.12.55

SPARE GEAR.

Has the spare gear required by the Rules been supplied _____

State the principal additional spare gear supplied Short voyage spares as attached sheet S/19240A/4-8.

The foregoing is a correct description, R. Waddell **BLACKSTONE & CO. LTD.** Manufacturer.

Dates of Survey while building During progress of work in shops - - 16.5.56 30.5.56

During erection on board vessel - - -

Total No. of visits _____

Dates of examination of principal parts—Cylinders 16.5.56 Covers 16.5.56 Pistons 16.5.56 Rods _____ Connecting rods 16.5.56

Crank shaft 16.5.56 Flywheel shaft _____ Thrust shaft _____ Intermediate shafts _____ Tube shaft _____

Screw shaft _____ Propeller _____ Stern tube _____ Engine seatings _____ Engine holding down bolts _____

Completion of fitting sea connections _____ Completion of pumping arrangements _____ Engines tried under working conditions _____

Crank shaft, material S.M. Steel Identification mark 8533/315 Flywheel shaft, material _____ Identification mark _____

Thrust shaft, material _____ Identification mark _____ Intermediate shafts, material _____ Identification marks _____

Tube shaft, material _____ Identification mark _____ Screw shaft, material _____ Identification mark _____

Identification marks on air receivers No's 5558, AD. 23.4.56 and 5559, AD. 23.4.56

Welded receivers, state Makers' Name R. Waddell, Manchester

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. Engine built under WORKS ORDER N° 14967.

This engine has been built under Special Survey in accordance with the approved plans, and Rules of the Society from materials manufactured under the Supervision of Surveys to the Society.

WORKMANSHIP is good throughout Expansion RELIEF DEVICES are fitted to Rules.

TEST BED TRIALS, full load & some duration, Alved, Astern, governor & overspeed trip, satisfactory.

The engine is eligible to be fitted to a classed vessel, in my opinion.

Construction			
The amount of Entry Fee ...	£ 23 : 10	When applied for	19
Special ...	£ :	When received	19
Donkey Boiler Fee...	£ :		
Travelling Expenses (if any) £	4 : 10.:		

W. Waddell
Engineer Surveyor to Lloyd's Register of Shipping
Lloyd's Register Foundation

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

(The Committee's Minute) _____
Assigned _____