

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 18240.

13 MAR 1947

Received at London Office

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Date of writing Report 3rd Mar. 1947. When handed in at Local Office 5th Mar. 1947 Port of MIDDLESBROUGH.
No. in Reg. Book. Survey held at MIDDLESBROUGH. Date, First Survey 5th March, 1947. Last Survey 24th Feb. 1947.
Number of Visits 44.

Single on the Twin Triple Quadruple Screw vessel
Built at South Bank By whom built Smiths Dock Co. Ltd. Yard No. 1160 When built
Engines made at Belfast By whom made Messrs. Harland & Wolff Ltd. Engine No. 2217 When made 1946
Donkey Boilers made at Stockton-on-Tees By whom made Stockton C.E. & Riley Boilers Ltd Boiler No. 6957 When made 1946
Brake Horse Power 2800 Owners Anglo Saxon Petroleum Co. Ltd. Port belonging to London
Nom. Horse Power as per Rule 377 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted Yes
Trade for which vessel is intended M.N. 536 Case & Bulk Oil Carrier

ENGINES, &c. — Type of Engines 2 or 4 stroke cycle Single or double acting
Mean pressure in cylinders Diameter of cylinders Length of stroke No. of cylinders No. of cranks
Mean Indicated Pressure
Pitch 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 dia. of journals as per Rule Crank pin dia. Crank webs Mid. length breadth Thickness parallel to axis
Semi built dia. of journals as fitted Crank webs Mid. length thickness shrunk Thickness around eyehole
All built
Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as fitted
as fitted
Propeller Shaft, diameter as per Rule Screw Shaft, diameter as per Rule Is the tube shaft fitted with a continuous liner
as fitted
Bronze Liners, thickness in way of bushes Thickness between bushes as per Rule 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
Method of reversing Engines Is a governor or other arrangement fitted to prevent racing of the engine when declatched Means of lubrication
Thickness of cylinder liners Are the cylinders fitted with safety valves Are the exhaust pipes and silencers water cooled or 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 1 Bilge 6" x 6" x 6" and 1 General Service 8" x 8" x 10"
How driven Steam
Is the 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 arrangements
Ballast Pumps, No. and size 1- 8 x 8 x 10 Power Driven Lubricating Oil Pumps, including spare pump, No. and size 1 M.E. driven 125 tons/hr. @ 680 R.P.M.
Are two independent means arranged for circulating water through the Oil Cooler Yes Suction connected to both main bilge pumps and auxiliary bilge pumps, No. and size: In machinery spaces Aft well 1-3" Aft Coff 1-2" Ford 1-2" Stbd. P'd 3" In pump room 1-3 1/2"
In holds, No. Aft Hold 2- 3 1/2" Ford Hold 2- 3 1/2" Tank fore peak and aft peak 3"
Independent Power Pump Direct Suctions to the engine room bilges, No. and size Bilge Pump 1-4" Circulating pump injection 1- 6"
Are all the bilge suction pipes in holds and machinery spaces fitted with strum-boxes Yes Are the bilge suction pipes 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 Yes
Are all Sea Connections fitted direct on the skin of the Ship Yes Are they fitted with valves or cocks Cocks & Valves Are they 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 below
Are they 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
What pipes pass through the bunkers None How are they protected
What pipes pass through the deep tanks Shaft/Tank Protection plates Ford holds Have they been tested as per Rule Yes
Are all pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times Yes
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 Yes Is the shaft tunnel watertight Eng. aft 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. 9499 O.B. No. of stages 2 See London Rpt. No. D. 15780 driven by steam
Auxiliary Air Compressors, No. No. of stages See Nottingham Report Cert. 4628 driven by
Small Auxiliary Air Compressors, No. No. of stages driven by
What provision is made for first charging the air receivers Steam driven compressor
Scavenging Air Pumps, No. diameter stroke driven by
Auxiliary Engines crank shafts, diameter as per Rule No. Position
as fitted
Have the auxiliary engines been constructed under special survey Yes Is a report sent herewith Yes See Nottingham Cert. 4628
& London Cert. D. 15780

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AIR RECEIVERS:—Have they been made under survey. Yes ✓ State No. of report or certificate 92 H.V. "ELAX"
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, lap welded or riveted longitudinal joint. Material — Range of tensile strength — Working pressure by Rules. —
Starting Air Receivers, No. 1 ✓ Total cubic capacity 462 — — cu. ft. Internal diameter 1600 m/m thickness 27.5 m/m
Seamless, lap welded or riveted longitudinal joint Riveted Material Steel Range of tensile strength 22-33 Working pressure by Rules. As a Actual 357
IS A DONKEY BOILER FITTED Yes ✓ If so, is a report now forwarded Yes see T.P. sq. in. Midland Tinsmiths Report 18148
Is the donkey boiler intended to be used for domestic purposes only. No ✓
PLANS. Are approved plans forwarded herewith for shafting. Yes ✓ Receivers No Ex m/v ELAX Separate fuel tanks —
(If not, state date of approval)
Donkey boilers. — General pumping arrangements. Yes ✓ Pumping arrangements in machinery space. Yes ✓
Oil fuel burning arrangements. Yes ✓

SPARE GEAR.

Has the spare gear required by the Rules been supplied. Yes ✓
State the principal additional spare gear supplied.
One R.H. Cast Iron Propeller.
One propeller shaft complete with continuous liner.
Twelve thrust coupling bolts.

THE SMITH'S DOCK CO. LTD.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1946, Mar. 5, June 18, July 2, 9, 10, Sept. 5, 19, 20, Oct. 3, 17, 23, 24, 29, 31, Nov. 5, 8, 19, 25, 27, Dec. 12, 20, 23, 1947, Jan. 7, 10, 13, 14, 15, 16, 21, 23, 24, 28, Feb. 3, 4, 6, 7, 13, 14, 17, 18, 20, 21, 24.
During erection on board vessel - -
Total No. of visits 44.

Dates of examination of principal parts—Cylinders. Covers. Pistons. Rods. Connecting rods.
Crank shaft 13.1.47 Flywheel shaft 13.1.47 Thrust shaft 13.1.47 Intermediate shafts 13.1.47 Tube shaft 13.1.47
Screw shaft 31.10.46 Propeller 31.10.46 Stern tube 24.10.46 Engine seatings 3.10.46 Engine holding down bolts 13.1.47
Completion of fitting sea connections 31.10.46 Completion of pumping arrangements 20.2.47 Engines tried under working conditions 24.2.47
Crank shaft, material Belfast Rpt. No. 14229 Identification mark — Flywheel shaft, material — Identification mark —
Thrust shaft, material —dc— Identification mark — Intermediate shafts, material — Identification marks —
Tube shaft, material — Identification mark — Screw shaft, material — Identification mark —
Identification marks on air receivers No. 906 Test 650 lbs/sq. inch. W.P. 450 F.N.B. 11/7/27.
Re-test Lloyd's Test 650 lbs/sq. inch. 10.7.46. C.N.S.

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 Smothering and Perforated water pipes and hand fire exh.
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. No ✓ If so, state name of vessel.

General Remarks (State quality of workmanship, opinions as to class, &c.)
These engines and boilers were fitted on board this vessel in accordance with the approved plans and Rule requirements and on completion the machinery was tried out under working conditions and found satisfactory and in my opinion is now eligible for record of LMC, 2.47. and notation of T.S. (C.L.) 2.47. Forced draught fitted.
H.B. Air Receiver ex m.v. "ELAX" examined internally and externally and afterwards hydraulically tested to 650 lbs. per square inch, and found satisfactory. Stamped Lloyd's Test 650 lbs. sq. inch. 10.7.46. C.N.S.

The amount of Entry Fee ... £ :
1/3 Special Survey ... £ 33 : 10 When applied for 11.3. 19.47.
Donkey Boiler Fee... £ : : When received 19.
Travelling Expenses (if any) £ :
Committee's Minute FRI. 11 APR 1947
Assigned + LMC 2.47 Oil Eng.
C.L. 1 D.B. 18016.

Engine Surveyor to Lloyd's Register of Shipping.
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