

29 JUN 1955

Rpt. 4b.

# REPORT ON OIL ENGINE MACHINERY.

No. 9974

Date of writing Report 15<sup>th</sup> June 1955 When handed in at Local Office Dundee 19 Port of Dundee Received at London Office

No. in Survey held at Dundee Date, First Survey 2<sup>nd</sup> Feb. 1954 Last Survey 6<sup>th</sup> June 1955 Reg. Book. Number of Visits 42

751565 on the Single Screw vessel M.V. "WOOLWICH" Tons Gross 7669 Net 4145

Built at Dundee By whom built Caledon S.B. & E. Ltd. Yard No. 691 When built 1955

Engines made at Glasgow By whom made Alex. Stephen & Sons, Ltd. Engine No. 108E When made 1954

Donkey Boilers made at Dundee By whom made Caledon S.B. & E. Ltd. Boiler No. - When made 1955

Brake Horse Power { Maximum 4700 Owners Britain SS Ltd. Port belonging to London Service 4400 M.N. as per Rule 940 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.

Trade for which vessel is intended Open sea service.

IL ENGINES, &c. — Type of Engines Stephan-Douford 2 or 4 stroke cycle 2 Single or double acting Opposed

Maximum pressure in cylinders 640 lb./sq. in. Diameter of cylinders 670 mm Length of stroke 2320 mm No. of cylinders 4 No. of cranks 12

Mean Indicated Pressure 88 lb./sq. in. Span of bearings (i.e., distance between inner edges of bearings in way of a crank) 2006 mm Is there a bearing between each crank No. Revolutions per minute { Maximum 118 Service 115

Flywheel dia. 5.61 ft. Weight 3.22 tons Moment of inertia of flywheel (lbs. in<sup>2</sup> or Kg. cm<sup>2</sup>) As appd. Means of ignition Compression Kind of fuel used Diesel oil

Crank Shaft, { Solid forged dia. of journals 500 mm as per Rule As appd. Crank pin dia. 500 mm Crank webs Mid. length breadth 710 mm Thickness parallel to axis 285 mm Semi built As appd. as fitted 500 mm Mid. length thickness 285 mm shrunk Thickness around eyehole 220 mm All built

Flywheel Shaft, diameter as per Rule As appd. Intermediate Shafts, diameter as per Rule As appd. Thrust Shaft, diameter at collars as per Rule As appd. as fitted 450 mm as fitted 15 1/2 in. as fitted 500 mm

Stern Tube Shaft, diameter as per Rule As appd. Screw Shaft, diameter as per Rule As appd. Is the tube screw shaft fitted with a continuous liner { Yes. as fitted - as fitted 17 in.

Bronze Liners, thickness in way of bushes as per Rule As appd. Thickness between bushes as per Rule As appd. 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 Continuous

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 fitted at the after end of stern tube No. If so, state type - Length of bearing in Stern Bush next to and supporting propeller 5'-6"

Propeller, dia. 16.5' Pitch 13.47' No. of blades 4 Material Nickelium whether moveable Solid Total developed surface 100.3 sq. feet

Moment of inertia of propeller including entrained water (lbs. in<sup>2</sup> or Kg. cm<sup>2</sup>) - Kind of damper, if fitted Draped-Billy Distern

Method of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine Yes Means of lubrication Forced Thickness of cylinder liners 25 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled

Are they lagged with non-conducting material Lagged 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. and how driven 1 SW (Eng Driven) 1 SW (Hand) Working F.W. 1 Eng driven

Working F.W. 1 Eng driven Spare F.W. 1 Hand S.W. 1 Hand Is the sea suction provided with an efficient strainer which can be cleared within the vessel No. F.W. cooling

Bilge Pumps worked from the Main Engines, No. and capacity None Can one be overhauled while the other is at work Yes

Pumps connected to the Main Bilge Line No. and capacity of each 1 @ 350 tpm p.h. (Ballast Pump), 1 @ 200 tpm p.h. (G.S. Pump), 1 @ 50 tpm p.h. (Bilge Pump) How driven Stem

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 capacity 1 @ 350 tpm p.h. Power Driven Lubricating Oil Pumps, including spare pump, No. and size 1 @ 10630 gph for main tank, 1 @ 44 tpm for Eng driven

Are there two independent means arranged for circulating water through the Oil Cooler Yes Branch Bilge Suctions

No. and size:—In machinery spaces 4 @ 3" Stand Ford, 2 @ 1" Port Ford, 2 @ 1" In pump room

Holds, &c. No. 1 hold - 2 @ 3", No. 2 - 2 @ 3", No. 3 - 2 @ 3 1/2", No. 4 (Deck hold) - 2 @ 3", No. 5 - 2 @ 3 1/2", No. 6 - 4 @ 2 1/2"

Direct Bilge Suctions to the engine room bilges, No. and size 1 @ 3" Port, 1 @ 5" Stand, 1 @ 10" Port

Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes Yes 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 Yes

Are all Sea Connections fitted direct on the skin of the Ship On sea Are they fitted with valves or cocks Both Are they fixed efficiently 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 None 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 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 Yes Is it fitted with a watertight door Yes worked from Platform

If the vessel is 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. 2 No. of stages 3 diameters 12 3/4, 10 1/4, 3" stroke 7" driven by Stem engines

Auxiliary Air Compressors, No. None No. of stages - diameters - stroke - driven by -

Small Auxiliary Air Compressors, No. None No. of stages - diameters - stroke - driven by -

What provision is made for first charging the air receivers Dunlop bulb provided with lighting up unit

Reversing Air Pumps or Blowers, No. 2 How driven From No. 3 & 4 Main engines

Auxiliary Engines Have they been made under survey Yes Engine Nos. 379327-8-9 Makers name Ruston & Hornsby, Ltd. Position of each in engine room Stand Ford, stand up, with 1 stand up

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