

## REPORT ON OIL ENGINE MACHINERY.

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Reg. Book. 951565 on the Single Screw vessel M.V. "WOOLWICH" Tons Gross 7669 Net 4145

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

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

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

Brake Horse Power { Maximum 4700 Owners British SS Co. 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 Stephen-Douglas 2 or 4 stroke cycle 2 Single or double acting Opposed

Maximum pressure in cylinders 640 lb./sq. in. Diameter of cylinders 650 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. Mid. length thickness 285 mm shrunk Thickness around eye hole 220 mm

Flywheel Shaft, diameter 450 mm as per Rule As appd. Intermediate Shafts, diameter 154 mm as per Rule As appd. Thrust Shaft, diameter at collars 500 mm as per Rule As appd.

Stern Tube Shaft, diameter 171 mm as per Rule As appd. Is the tube shaft fitted with a continuous liner { Yes.  
Screw Shaft, diameter 171 mm as per Rule As appd.

Bronze Liners, thickness in way of bushes 2 3/32 as per Rule As appd. Thickness between bushes 2 3/32 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 Continuum

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 Yes If two liners are fitted, is the shaft lapped or protected between the liners Yes 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 13.42' No. of blades 4 Material Nichium 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 Damped-Billy Distern

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

Cooling Water Pumps, No. and how driven 15W (Eng Driven) 15W (Hand) Working F.W. 1 Eng Driven

W. 1 Eng Driven Spare H.W. 1 Ind. S.W. 1 Ind. Is the sea suction provided with an efficient strainer which can be cleared within the vessel No.

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 Yes

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

No. and size:—In machinery spaces 4 @ 3" Std. Ford. & App. Port Ford. & App. In pump room Yes

Holds, &c. No. 1 hold - 2 @ 3", No. 2 - 2 @ 3", No. 3 - 2 @ 3 1/2", No. 4 (Deep Tank) - 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" Std., 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 Yes Are they fitted with valves or cocks Both 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 None 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 Yes Is it fitted with a watertight door Yes worked from Platform

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

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 Doubly filled, provided with lighting up unit.

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

Have they been made under survey Yes Engine Nos. 379327-8-9

Auxiliary Engines Makers name Ruston & Hornsby, Ltd. Position of each in engine room Std. Ford, std. app. mtd. std. app.

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