

REPORT ON OIL ENGINE MACHINERY.

No. 13748

16 JUL 1929

Received at London Office

Writing Report 13. 7. 1929 When handed in at Local Office 13. 7. 1929 Port of *Middlebrough*
 Survey held at *Haverton Hill-on-Fees* Date, First Survey *28 Nov/27* Last Survey *6. 7. 1929*
 on the *Single* *Twin* *Triple* *Quadruple* Screw vessel " *Calgarolite* " Tons { Gross *11940*
 at *Haverton Hill-on-Fees* By whom built *Furness Shipbuilding Co. Ltd. Yard No. 131* When built *1929*
 made at *Kiel* By whom made *Fried. Krupp Germaniawerft A.G.* Engine No. *2277* When made *1929*
 Boilers made at *Glasgow* By whom made *Babcock & Wilcox* Boiler No. *6/1231* When made *1929*
 Horse Power *5000* Owners *Imperial Oil Co. Ltd.* Port belonging to *Middlebrough*
 Horse Power as per Rule *1496* Is Refrigerating Machinery fitted for cargo purposes *No* Is Electric Light fitted *Yes*
 for which vessel is intended

ENGINES, &c.—Type of Engines *Krupp* 2 or 4 stroke cycle *2* Single or double acting *Single*
 pressure in cylinders *35 Kg. Cmp.* Diameter of cylinders *680 mm* Length of stroke *1300 mm* No. of cylinders *12* No. of cranks *12*
 bearings, adjacent to the Crank, measured from inner edge to inner edge *1010 mm* Is there a bearing between each crank *Yes*
 revolutions per minute *90* Flywheel dia. *2360 mm* Weight *12000 Kg.* Means of ignition *Compression* Kind of fuel used *Diesel oil*
 Shaft, dia. of journals as per Rule *449.5 mm* as fitted *420 mm* Crank pin dia. *450 mm* Crank Webs Mid. length breadth *720 mm* Thickness parallel to axis *280 mm*
 as per Rule *approved* as fitted *440 mm* Intermediate Shafts, diameter as per Rule *13.5"* as fitted *14.0"* Thrust Shaft, diameter at collars as per Rule *approved*
 as fitted *440 mm* Is the { *tube* } shaft fitted with a continuous liner { *Yes*
 as per Rule *14.83"* as fitted *15.3/8"* Is the { *screw* } shaft fitted with a continuous liner { *Yes*
 as per Rule *756* as fitted *812* Thickness between bushes as per rule *567* as fitted *625* Is the after end of the liner made watertight in the
 bass *Yes* If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner *Yes*
 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*
 liners are fitted, is the shaft lapped or protected between the liners *Yes* Is an approved Oil Gland or other appliance fitted at the after
 end of the shaft *No* Length of Bearing in Stern Bush next to and supporting propeller *5'-1 1/2"*
 dia. *16'-0"* Pitch *16'-6"* No. of blades *3* Material *Brongze* whether Moveable *Yes* Total Developed Surface *75* sq. feet
 of reversing Engines *Direct* Is a governor or other arrangement fitted to prevent racing of the engine when declutched *Yes* Means of lubrication
 Thickness of cylinder liners *50 mm* Are the cylinders fitted with safety valves *Yes* Are the exhaust pipes and silencers water cooled or lagged with
 insulating material *Yes* If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine *Yes*
 Water Pumps, No. *2 and 1 spare* Is the sea suction provided with an efficient strainer which can be cleared within the vessel *Yes*
 pumps worked from the Main Engines, No. *None* Diameter *✓* Stroke *✓* Can one be overhauled while the other is at work *✓*
 connected to the Main Bilge Line { No. and Size *2-58 ton* : *1. G.S.*
 How driven *Hand*
 Pumps, No. and size *2-320 mm x 220 mm x 350 mm* Steam Lubricating Oil Pumps, including Spare Pump, No. and size *2-30 ton Rotary*
 independent means arranged for circulating water through the Oil Cooler *Yes* Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge
 No. and size:—In Machinery Spaces *4-3 1/2"* also *1-4"* to piston bilge well; *4-2 1/2"* to sky blk. flat; *1-2 1/2"* to D.B. drain tank
 &c. *2 Engine Room pump; 2-2 1/2"* aft store flat; *2 Forward pump 1-2 1/2"* to fwd. store *1-2 1/2"* fwd pump room *1-2 1/2"* to oil fuel transfer pump
1-2 1/2" to chain locker *2-2 1/2"* Tween deck store; *2-2 1/2"* Cofferdam.
 Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size *1-6"* & *1-4"*
 the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes *Yes* Are the Bilge Suctions in the Machinery Spaces
 easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges *Yes*
 sea Connections fitted direct on the skin of the ship *Yes* Are they fitted with Valves or Cocks *both*
 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 *above*
 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*
 as pass through the bunkers *Cofferdam suction* How are they protected *✓*
 as pass through the deep tanks *✓* Have they been tested as per Rule *✓*
 pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times *Yes*
 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 *none* Is it fitted with a watertight door *✓* worked from *✓*
 vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork *✓*
 Air Compressors, No. *2 (one on each engine)* No. of stages *3* Diameters *800/700/175 mm* Stroke *900 mm* Driven by *Main engines*
 Auxiliary Air Compressors, No. *2* No. of stages *3* Diameters *220/280/80 mm* Stroke *300 mm* Driven by *Diesel engines*
 Auxiliary Air Compressors, No. *1* No. of stages *2* Diameters *160/65 mm* Stroke *160 mm* Driven by *Electric motor*
 Air Pumps, No. *6* Diameter *780 mm* Stroke *1300 mm* Driven by *Main engine*
 Engines crank shafts, diameter as per Rule *130 mm* - *167 mm*
 as fitted *140 mm* - *170 mm*

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule *Yes*
 internal surfaces of the receivers be examined *Yes* What means are provided for cleaning their inner surfaces *manhole*
 drain arrangement fitted at the lowest part of each receiver *Yes*
 Pressure Air Receivers, No. *2* Cubic capacity of each *2720 litre* Internal diameter *1000 mm* thickness *24 mm*
 as welded or riveted longitudinal joint *2 seamless* Material *5 m. Steel* Range of tensile strength *46/52* Working pressure by Rules *66 Kg*
 Air Receivers, No. *4* Total cubic capacity *4 x 2720 litres* Internal diameter *1000 mm* thickness *24 mm*
 as welded or riveted longitudinal joint *riveted* Material *5 m. Steel* Range of tensile strength *46/52 Kg* Working pressure by Rules *66 Kg*

IS A DONKEY BOILER FITTED?

Yes

If so, is a report now forwarded?

Yes

PLANS. Are approved plans forwarded herewith for Shafting (If not, state date of approval)

23-5-28

Receivers

24-9-27

Separate Tanks

Donkey Boilers 1-2-28

General Pumping Arrangements

15-2-28

Oil Fuel Burning Arrangements

1-11-28

SPARE GEAR

See separate list

The foregoing is a correct description,

FURNESS SHIPBUILDING CO. LIMITED,

Manufacturer.

Jas. M. Robertson

Dates of Survey while building

During progress of work in shops -

During erection on board vessel -

Total No. of visits

Secretary

1927 Nov 28 1928 Aug 8 12 22 27 28 Sept 7 8 11 14 21 28 Oct 29 Nov 6 8 16 17 Dec

1929 Jan 29 Feb 13 20 Mar 15 Apr 4 22 29 May 3 7 10 12 17 27 31 June 5 7 19 20 July 1 2 4 6

40

Dates of Examination of principal parts - Cylinders

See Hamburg Report

Rods

Connecting rods

Crank shaft

See Hamburg report

Thrust shaft

Intermediate shafts 17-11-28

Tube shaft

Screw shaft 11-9-28

Propeller 11-9-28

Stern tube 14-9-28

Engine seatings 22-4-29

Engines holding down bolts

21-

Completion of fitting sea connections 7-9-28

Completion of pumping arrangements 1-7-29

Engines tried under working conditions

4.7

Crank shaft, Material

See Hamburg Report

Flywheel shaft, Material

Identification Mark

Thrust shaft, Material

Identification Mark

Intermediate shafts, Material S.M. Steel

Identification Marks

Tube shaft, Material

Identification Mark

Screw shaft, Material S.M. Steel

Identification Mark

Is the flash point of the oil to be used over 150° F.

Yes

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.)

The materials and workmanship are good.

This machinery has been securely fitted aboard under special survey and is in accordance with the Rules and approved plans. It has been tested under working conditions with satisfactory results and is, in my opinion, eligible for classification with record + L.M.C. 7.

For other particulars of machinery and boilers see Hamburg Rpt. No 18678 and Glasgow Rpt. No 48549.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 7.29. C-L.

Oil Engines 2 S.C.S.A. 120y. 26 3/4 - 51 3/16
2 W.T.D.B. 270 lb.

The amount of Entry Fee £ :
Special £ 23.5.29
Donkey Boiler Fee £ 10.17.0
Travelling Expenses (if any) £ :

When applied for,

15 July 1929

When received,

1.8.29

Committee's Minute

FRI. 26 JUL 1929

Assigned

+ L.M.C. 7.29. C.L.

Oil Engines
2 W.T.D.B. - 240 lbs

Engineer Surveyor to Lloyd's Register of Ship

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