

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. S3633.

17 AUG 1946

Date of writing Report

19

When handed in at Local Office

19

Port of

HULL

No. in Survey held a
Reg. Book.

Selby & Hull

Date, First Survey 19.

12.

45.

Last Survey 24-7.

19 46

Number of Visits

16

57445 on the Single
Triple
Quadruple Screw vessel Tug "FOSSA"Tons { Gross 66.42
Net Nil

Built at Selby

By whom built Cochrane & Sons Ltd.

Yard No. 1316 When built 1946

Engines made at Glasgow

By whom made British Polar Engines Ltd.

Engine No. E.618 When made -do-

Donkey Boilers made at -

By whom made -

Boiler No. - When made -

Brake Horse Power 450

Owners Gaselee & Sons Ltd.

Port belonging to London

Nom. Horse Power as per Rule 116

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted Yes

Trade for which vessel is intended Towing services on the River Thames.

OIL ENGINES, &c. Type of Engines Heavy Oil engine (see Glasgow Report No. 70775) 2 or 4 stroke cycle 2 Single or double acting S.A.

Maximum pressure in cylinders 853 lbs

Diameter of cylinders 9.13/16"

Length of stroke 16.16"

No. of cylinders 6

No. of cranks 6

Mean Indicated Pressure 97 lbs

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 366 m.m.

Is there a bearing between each crank Yes

Revolutions per minute 300

Flywheel dia. 900 mm

Weight 420 Kgs.

Means of ignition Compression

Kind of fuel used Pool Diesel

Crank Shaft, { Solid forged
Semi built dia. of journals
All builtas per Rule 166 mm
as fitted 170 mm

Crank pin dia. 170 mm

Crank Webs

Mid. length breadth 215 mm
Mid. length thickness 226.5 mmThickened parallel to axis -
Thickened around eye hole -Flywheel Shaft, diameter as per Rule 166 mm
as fitted 170 mmIntermediate Shafts, diameter as per Rule approx.
as fitted 4.75"Thrust Shaft, diameter at collars as per Rule 170 mm
as fitted 124 mmTube Shaft, diameter as per Rule -
as fitted -Screw Shaft, diameter as per Rule approx.
as fitted 5 1/2"Is the tube shaft fitted with a continuous liner { no liner }
cone, 6" body, 5 1/2" for'd end.Bronze Liners, thickness in way of bushes as per Rule -
as fitted -Thickness between bushes as per Rule -
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 the tube

shaft Yes

If so, state type Newark

Length of Bearing in Stern Bush next to and supporting propeller 2'6"

Propeller, dia. 5'6"

Pitch 4'0"

No. of blades 4

Material C.I.

whether Moveable No

Total Developed Surface 12 1/2

sq. feet

Method of reversing Engines Diesel by Air

Is a governor or other arrangement fitted to prevent racing of the engine when de-clutched Yes

Means of lubrication

Forced

Thickness of cylinder liners 19.5 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

exhaust led thro' funnel

Cooling Water Pumps, No. 2

Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

Bilge Pumps worked from the Main Engines, No. 1

Diameter 110 mm

Stroke 60 mm

Can one be overhauled while the other is at work -

Pumps connected to the Main Bilge Line { No. and Size One 110 mm x 60 mm

20 tons/hr.

How driven M.E.

Ind Oil Eng.

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 none

Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2- 2375 galls./hr. each working in series but may be used independently.

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 PAER 1 - 2"

PETER 1 - 2"

from ME

SAER 1 - 2" from aux. set.

In Pump Room none

In Holds, &c. F.P., cabin, crew space, A.P. each 1 - 2".

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 - 2" to PER Aft - see above.

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes

Are the Bilge Suctions 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

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 above

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 -

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 (NRV) Is the Shaft Tunnel watertight Part ER Is it fitted with a watertight door No 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. one

No. of stages two

Diameters 140 & 55

Stroke 240 mm

Driven by ME

Auxiliary Air Compressors, No. one

No. of stages two

Diameters see Inswick

Stroke -

Driven by Ind. Aux. Oil eng.

Small Auxiliary Air Compressors, No. -

No. of stages -

Diameters -

Stroke -

Driven by

What provision is made for first Charging the Air Receivers as above.

Scavenging Air Pumps, No. one

Diameter 720 mm

Stroke 240 mm

Driven by ME

Auxiliary Engines crank shafts, diameter as per Rule approx.

as fitted 2 3/4"

No. 3998

Position STEER

Have the Auxiliary Engines been constructed under special survey Yes

see attached rpts.

Is a report sent herewith See Mch. Rpt. No. 3998

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See Glasgow Rpt. No. 70775

AIR RECEIVERS:—Have they been made under survey Yes State No. of Report or Certificate 57645

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 — Actual —

Starting Air Receivers, No. 2 Total cubic capacity 36 cu.ft. Internal diameter 21" thickness 9/16"

Seamless, lap welded or riveted longitudinal joint Riveted Material Steel Range of tensile strength 26/30 ton sq.in Working pressure by Rules 355 lbs Actual 355 lbs

IS A DONKEY BOILER FITTED? No 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 Brit. Polar E. 618 Receivers see Gls. Rpt. No. 70775 Separate Fuel Tanks —

Donkey Boilers — General Pumping Arrangements 6.11.45. Pumping Arrangements in Machinery Space —

Oil Fuel Burning Arrangements —

SPARE GEAR.

Has the spare gear required by the Rules been supplied As per attached list.

State the principal additional spare gear supplied —

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops — see Glasgow Rpt. No. 70775
During erection on board vessel — 1945 Dec. 19. 1946 Jan. 22. Feb. 15. May 6. June 15. 18. 19. 20. 26. 28. July 10. 17. 19. 23. 24.
Total No. of visits 16.

Dates of Examination of principal parts—Cylinders — See Glasgow Rpt. No. 70775
Covers — Pistons — Rods — Connecting rods —

Crank shaft — Flywheel shaft — Thrust shaft — Intermediate shafts 31.1.46. Tube shaft —

Screw shaft 31.1.46. Propeller 15.2.46. Stern tube 15.2.46. Engine seatings 6.5.46. Engines holding down bolts 20.6.46.

Completion of fitting sea connections 15.2.46. Completion of pumping arrangements 23.7.46. Engines tried under working conditions 19.7.46. & 23.7.46.

Crank shaft, Material See Gls. Rpt. No. 70775 Identification Mark LR 3720 FH Flywheel shaft, Material See Gls. Rpt. No. 70775 Identification Mark —

Thrust shaft, Material —do— Identification Mark LR 330 FS Intermediate shafts, Material steel Identification Marks LR 7190 CP

Tube shaft, Material — Identification Mark 4358 18.9.45. Screw shaft, Material —do— Identification Mark LR 6310 CP

Identification Marks on Air Receivers 57645 LR TP 555/355 lbs NK 30.4.46.

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

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo No 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 Yes If so, state name of vessel "WASP"

General Remarks (State quality of workmanship, opinions as to class, &c.)

The above machinery has been installed by Messrs. Charles D. Holmes & Co. Ltd., their No. 1722 under Special Survey in accordance with the Secretary's letters, approved plans and the Rules

The materials and workmanship are good.

Machinery eligible in my opinion to be recorded in the Register Book +LMC 7,46. O.G. M.N.1

Oil engine 2 SC SA 6 cyl. 9.13/16" x 16.9/16".

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

see Glasgow Rpt. No. 70775

The amount of Entry Fee .. £	When applied for,
Special £	19
Donkey Boiler Fee ... £	When received,
Travelling Expenses (if any) £	19

Committee's Minute

Assigned +LMC 7.46 O-G.

FRI. 6 SEP 1946

W. Shields
Engineer Surveyor to Lloyd's Register of Shipping.



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