

# REPORT ON OIL ENGINE MACHINERY.

No 12697.

pt. 4b.

46.

Received at London Office

29 OCT 1946

22nd October, 46

28th October, Port of MANCHESTER.

Hazel Grove, Nr. Stockport. Date, First Survey 24.7.46.

Last Survey 22nd October, 46.

Number of Visits 15.

o. in Survey held at

g. Book.

Single

Screw vessel "TEDDY."

Tons: Gross 789.58  
Net 454.30

uilt at Greenock.

By whom built George Brown & Co. Ltd.

Yard No. 241. When built 1947.

Engines made at Hazel Grove.

By whom made Mirrlees, Bickerton & Day

Engine No. When made 1946.

Monkey Boilers made at -

By whom made -

Boiler No. When made -

Brake Horse Power 750

Owners Hans Svenningsen.

Port belonging to Copenhagen.

Norm. Horse Power as per Rule 170.

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

Trade for which vessel is intended

ENGINES, &c. Type of Engines Airless Injection Direct Reversing, 4 stroke cycle 4. Single or double acting Single.

Maximum pressure in cylinders 750 lbs per sq. in. Diameter of cylinders 13 3/4" Length of stroke 21" No. of cylinders 6 No. of cranks 6.

Mean Indicated Pressure 138 lbs per sq. in. Is there a bearing between each crank Yes.

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 15 1/4" Means of ignition Compression Kind of fuel used Heavy Oil.

Revolutions per minute 280. Flywheel dia. 4' - 6" Weight 3360 lbs. Mid. length breadth 11 1/4" Thickness parallel to axis -

Crank Shaft, Solid forged dia. of journals as per Rule Approved. as fitted 9 1/4" Crank pin dia. 8 3/4" Crank Webs Mid. length thickness 4 5/8" Thickness around eye-hole -

Flywheel Shaft, diameter as per Rule Flywheel Mounted Intermediate Shafts, diameter as per Rule Approved. as fitted on Crankshaft Coupling. fitted Thrust Shaft, diameter at collars as per Rule Approved. as fitted 9 1/4".

Tube Shaft, diameter as per Rule - as fitted - Screw Shaft, diameter as per Rule - as fitted - Is the shaft fitted with a continuous liner -

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 - 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 Compressed Air. Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes. Means of lubrication

Forced. Thickness of cylinder liners 13/16" 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 -

Cooling Water Pumps, No. One 4 3/4" x 5 1/2" Engine Driven Bilge Pump can Circulate C.W. System if required. Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Bilge Pumps worked from the Main Engines, No. One. Diameter 4 3/4" Stroke 5 1/2" Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line No. and Size - How driven -

Is the cooling water led to the bilges - 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 - Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size Two 3" Bore x 3 1/2" stroke.

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 - In Pump Room -

In Holds, &c. -

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size -

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

Are all Sea Connections fitted direct on the skin of the ship - Are they fitted with Valves or Cocks -

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates - Are the Overboard Discharges above or below the deep water line

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel - Are the Blow Off Cocks fitted with a spigot and brass covering plate

What pipes pass through the bunkers - How are they protected -

What pipes pass through the deep tanks - 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 -

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 - Is the Shaft Tunnel watertight - 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. - No. of stages - Diameters - Stroke - Driven by -

Auxiliary Air Compressors, No. - No. of stages - Diameters - Stroke - Driven by -

Small Auxiliary Air Compressors, No. One. No. of stages Two. Diameters 5" & 5 5/8" Stroke 5 1/2" Driven by Crank Extension on Main Engine.

What provision is made for first Charging the Air Receivers -

Scavenging Air Pumps, No. - Diameter - Stroke - Driven by -

Auxiliary Engines crank shafts, diameter as per Rule - as fitted - Position -

Have the Auxiliary Engines been constructed under special survey - Is a report sent herewith -

**AIR RECEIVERS:** — Have they been made under survey Yes. State No. of Report or Certificate Nottingham C.4051.  
 Is each receiver, which can be isolated, fitted with a safety valve as per Rule Fusible Plug in Air Receiver and safety valve on Air Compressor.  
 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.** Two. Total cubic capacity 46 cu. ft. Internal diameter 21-6" thickness 3/8"  
2 dished ends riveted and welded circumferentially.  
 Seamless, lap welded or riveted longitudinal joint - Material S.M. Steel Range of tensile strength 26/30. Working pressure by Rules - Actual -

**IS A DONKEY BOILER FITTED?** - If so, is a report now forwarded? -

Is the donkey boiler intended to be used for domestic purposes only 26.1.46.

**PLANS.** Are approved plans forwarded herewith for Shafting 27.2.46. Receivers - Separate Fuel Tanks -  
 (If not, state date of approval)

Donkey Boilers - General Pumping Arrangements - Pumping Arrangements in Machinery Space -

Oil Fuel Burning Arrangements -

**SPARE GEAR.**

Has the spare gear required by the Rules been supplied To be to Rule Requirements. Not yet supplied.

State the principal additional spare gear supplied

The foregoing is a correct description, and the particulars of the installation as fitted are as approved for torsional vibration characteristics. *Wm. Lees Beckett & Co. Ltd. Manufacturer.*

Dates of Survey while building { During progress of work in shops - - } 1946. July 24, 29, 30. Aug. 1, 2, 7, 19, 27. Sept. 4, 12, 18, 30. Oct. 4, 7, 22.  
 { During erection on board vessel - - }  
 Total No. of visits

Dates of Examination of principal parts — Cylinders 24.7.46. Cover 1.8.46. Pistons 4.10.46. Rods - Connecting rods 29.7.

Crank shaft 4.9.46. Flywheel shaft - Thrust shaft 12.9.46. Intermediate shafts - Tube shaft -

Screw shaft 11.11.46 Propeller 11.11.46 Stern tube - Engine seatings - Engines holding down bolts -

Completion of fitting sea connections - Completion of pumping arrangements - Engines tried under working conditions -

Crank shaft, Material O.H. Steel. Identification Mark LLOYD'S 179 Flywheel shaft, Material - Identification Mark -

Thrust shaft, Material O.H. Steel. Identification Mark ELK. 12.9.46. Intermediate shafts, Material - Identification Marks -

Tube shaft, Material - Identification Mark - Screw shaft, Material - Identification Mark -

Identification Marks on Air Receivers LLOYD'S TEST 600 lbs W.P. 300 lbs. B.3222 JNB. 18.4.46.

LLOYD'S TEST 600 lbs W.P. 300 lbs. B.3223 JNB. 18.4.46.

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

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with -

Description of fire extinguishing apparatus fitted -

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 - If so, state name of vessel -

**General Remarks** (State quality of workmanship, opinions as to class, &c.) This engine has been constructed under special survey of tested materials and in accordance with the Secretary's letters approved plans and the Requirements of the Rules. The materials and workmanship are satisfactory and the engine when tested in the shop under full load conditions showed good results. The torsional vibration characteristics of the shafting installation of this machinery were approved on 13th June, 1946, provided a notice board is fitted at the control station stating that this engine is not to be run continuously between 167 and 196 R.P.M.

In our opinion this engine is suitable for installation on board a vessel to be classed with this Society, and when satisfactorily reported upon to receive the notation ELMC. with date.

Copies of Air Receiver Certificates C.4051-2, Crankshaft Report Sheffield No. 44069, and the shaft Report Birmingham F.6942 forwarded herewith.

*Greenock 7th May 1947*  
 This Engine has been efficiently & securely installed in vessel "TEDDY". Please refer to Greenock First Entry Report No. 23,493. for recommendations as to Class.  
 A brass plate has been securely attached at the Control Station stating that the engine is not to be run continuously between 167 & 196 R.P.M.

The amount of Entry Fee .. £ : : When applied for, 28. 10 1946  
 2/3 Special ... £ 34 : 0 0: 28. 10 1946  
 Donkey Boiler Fee ... £ : : When received,  
 Travelling Expenses (if any) £ 2 : 11 6. 19

Committee's Minute GLASGOW 13 MAY 1947

Assigned SEE ACCOMPANYING MACHINERY REPORT.



ML-D (The Surveyors are requested not to write on or below the space for Committee's Minute)