

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 53768

Received at London Office

25 OCT 1946

Date of writing Report

When handed in at Local Office

Port of

HULL

No. in Survey held at
Reg. Book.

Beverley & Hull.

Date, First Survey

31-12-45

Last Survey

3-10-1946

Number of Visits

30

64208 on the Single
Turn
Triple
Quadruple Screw vessel

Motor Trawler "THORINA".

Tons { Gross 339
Net 116

Built at Beverley

By whom built Cook, Welton & Gemmell Ltd.

Yard No. 766

When built 1946

Engines made at Lincoln

By whom made Ruston & Hornsby Ltd.

Engine No.

When made 1946

Donkey Boilers made at Lincoln

By whom made Ruston & Hornsby Ltd.

Boiler No. 2573

When made 1946

Brake Horse Power 585

Owners Thornton Trawlers Ltd.

Port belonging to

Fleetwood.

Nom. Horse Power as per Rule 122.5

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

Trade for which vessel is intended Trawling.

C ENGINES, &c.—Type of Engines 8VEBOM Pressure charged Solid Injection. 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 7561bs

Diameter of cylinders 10 1/2"

Length of stroke 14 1/2"

No. of cylinders 8

No. of cranks 8

Mean Indicated Pressure 1351bs

No. of bearings, adjacent to the Crank, measured from inner edge to inner edge 12.5/16"

Is there a bearing between each crank

Yes

Revolutions per minute 450/128

Flywheel dia. 42 1/2"

Weight

28601bs

Means of ignition Compression

Kind of fuel used Heavy Oil.

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

Crank pin dia. 6 1/2"

Crank Webs

Mid. length breadth 11"
Mid. length thickness 3.7/16"Thickness parallel to axis
Thickness around eyeholeFlywheel Shaft, diameter
as per Rule
as fittedIntermediate Shafts, diameter
as per Rule
as fittedThrust Shaft, diameter at collars
as per Rule
as fittedsee Lon.
Cert. No.
MWD (M) 1.Main Shaft, diameter
as per Rule
as fittedScrew Shaft, diameter
as per Rule
as fittedIs the { tube
screw } shaft fitted with a continuous liner

Yes

Cylinder Liners, thickness in way of bushes
as per Rule
as fittedas per Rule
as fittedThickness between bushes
as per Rule
as fitted

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 one length.

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

If so, state type

Propeller, dia. 9'8"

Pitch 9'8 1/2"

No. of blades 4

Material C.I.

whether Moveable

No

Total Developed Surface

35

sq. feet

Method of reversing Engines SLM Gears Type

Is a governor or other arrangement fitted to prevent racing of the engine when declutched

Yes

Means of lubrication

Forced. Thickness of cylinder liners

7/8"

Are the cylinders fitted with safety valves

Yes

Are the exhaust pipes and silencers water cooled or lagged with

non-conducting 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

Cooling Water Pumps, No. 1 at 4 1/2" x 4 1/2", 4225 GPH.

Bilge Pumps worked from the Main Engines, No. One

Diameter 4 1/2"

Stroke 4 1/2"

Can one be overhauled while the other is at work

No

Pumps connected to the Main Bilge Line

No. and Size (a) One GSP: - 3" Mono Pump as above. (b) 1 - ME 4 1/2" x 4 1/2".

How driven (a) Aux. Oil eng. No. 233425 (b) ME.

If 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

4

(1-506GPH Gear pump.

(1-1000GPH Drysdale.

(2-2000GPH Hamworthy.

Are two independent means arranged for circulating water through the Oil Cooler

Pumps, No. and size:—In Machinery Spaces 3-2 1/2", 1-2" Oil cofferdam.

In Holds, &c. One 2" in each following spaces:—fore hold, aft end fishroom, slush well, fore'd cofferdam.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size one - 2 1/2"

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

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 they each fitted with a Discharge Valve always accessible on the plating of the vessel

What pipes pass through the bunkers

What pipes pass through the deep tanks

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

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.

Auxiliary Air Compressors, No. one

Small Auxiliary Air Compressors, No. one

What provision is made for first Charging the Air Receivers

Scavenging Air Pumps, No.

Auxiliary Engines crank shafts, diameter

Have the Auxiliary Engines been constructed under special survey

Is a report sent herewith

Nottingham. Cert. C. 4289

C. 4351

Foundation

015139-015154-0146

AIR RECEIVERS:—Have they been made under survey. ☒ Yes

State No. of Report or Certificate

Is each receiver, which can be isolated, fitted with a safety valve as per Rule ☒ YesCan the internal surfaces of the receivers be examined and cleaned ☒ YesIs 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 47 ft³

Internal diameter 2'6"

thickness 3/8"

Seamless, lap welded or riveted longitudinal joint -

Material Mild Steel plate.

Range of tensile strength 26/30 tons

Working pressure -

by Rules -

Actual 3001bs

IS A DONKEY BOILER FITTED? ☒ YesIf so, is a report now forwarded? ☒ Yes + Nott. No.129.Is the donkey boiler intended to be used for domestic purposes only ☒ Yes

PLANS. Are approved plans forwarded herewith for Shafting 30.7.45.

Receivers

Standard Approp.

Separate Fuel Tanks

12.3.46.

Donkey Boilers 12.11.45.

General Pumping Arrangements 28.2.46.

Pumping Arrangements in Machinery Space 28.2.46.

Oil Fuel Burning Arrangements -

SPARE GEAR.

Has the spare gear required by the Rules been supplied ☒ Yes

State the principal additional spare gear supplied As per attached list.

The foregoing is a correct description, and the particulars of the installation as fitted are approved for torsional vibration characteristics.

Manufacturer.

Dates of Survey while building

During progress of work in shops-- See Nottingham Report No.135

During erection on board vessel-- 1945. Dec. 31. Jan 8.21.26. Feb 9.11. Mar 1.8.19. May 8.20. June 5.26.28. July 17.26. Aug 7.14.22.28.

Total No. of visits 30.

Dates of Examination of principal parts—Cylinders see Nottingham Report No. 135. Rods Connecting rods

Crank shaft see Nott. Flywheel shaft - Thrust shaft 22.8.46. Intermediate shafts 21.1.46. Tube shaft -

Screw shaft 11.2.46. Propeller 24.9.46. Stern tube 8.3.46. Engine seatings 25.4.46. Engines holding down bolts 11.9.46.

Completion of fitting sea connections 8.3.46. Completion of pumping arrangements 30.9.46. Engines tried under working conditions 27/9/46.

Crank shaft, Material F I Steel Identification Mark IR 327 JNB Flywheel shaft, Material F I Steel Identification Mark 28 & 30/9/46

Thrust shaft, Material -do- Identification Mark GAS. 11WD H Intermediate shafts, Material F I Steel Identification Marks LR 6277

Tube shaft, Material - Identification Mark 10,010. Screw shaft, Material -do- Identification Mark 17/12/45.

Identification Marks on Air Receivers 17.3.45.

TDS 19.8.46.

S.16751

LLOYD'S TEST.

6001bs

WP.3001bs.

B.3235.

LLOYD'S TEST.

6001bs

WP.3001bs.

TDS 19.8.46.

B.3236

LLOYD'S TEST.

6001bs

WP.3001bs

TDS 19.8.46.

Is the flash point of the oil to be used over 150° F. ☒ YesHave the requirements of the Rules for oil fuel pipes and tank fittings been complied with ☒ YesIs 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 ☒ No

If so, state name of vessel -

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

The machinery of this vessel has been installed in accordance with the Secretary's letters, the approved plans and the Rules. The materials and workmanship are good.

Eligible in my opinion to be classed in the Register Book +LMC 10,46. C.L. when survey is completed as below.

Oil engine 8 cyl. 10 1/2", 14 1/2" 4 SC SA 122.5.

1 vertical boiler 100 lbs. H.S. 67 ft²

(Fitted for oil fuel 10,46 F.P. above 150° F.)

Please Note: Ref.E. dated 24.5.46.

To complete the survey the torsiongraph readings still to be taken to confirm the estimated value of the vibration stress in crankshaft, arising from the 8th order 3 node critical speed. It was

stated on behalf of Ruston & Hornsby at the loaded trial that Ruston & Hornsby apparatus was in elsewhere but that the tests would be carried out at the first opportunity. A copy of the results (see below)

The amount of Entry Fee £ : : When applied for,

Nott. claimed 3 fee 24 10 -

Special ... £ 19

Hull F.O. 1/2 fee 12 5 -

Donkey Boiler Fee ... £ : : When received,

Travelling Expenses (if any) £ : : 19

Committee's Minute FRI. 3 JAN 1947

Assigned + LMC 10,46 Oil Eng. C.L. D.B. 1001bs

W.S. Shields

Engineer Surveyor to Lloyd's Register of Shipping. obtained on the ship tests bed already forwarded.



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