

4b.

## REPORT ON OIL ENGINE MACHINERY.

No. 9883

Received at London Office

FEB 15 1940

Writing Report 3-2-40 When handed in at Local Office 15-2-40 Port of MANCHESTER. Date, First Survey 13-9-1939. Last Survey 1-2-1940

in Survey held at Book.

34 on the Single Motor Jug "M.S.E. Merlin" LEITH.

By whom built MESSRS. H. ROBB. LTD Yard No. 295 When built 1940

By whom made MESSRS. CROSSLEY BROS. LTD Engine No. 127903/3 When made 1940

Boilers made at By whom made - Boiler No. - When made -

Horse Power 385. Owners THE MANCHESTER SHIP CANAL CO. Port belonging to MANCHESTER

Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted YES.

Type of Engines VERTICAL SOLID INJECTION 2 or 4 stroke cycle 2. Single or double acting SINGLE

Minimum pressure in cylinders 680. LBS/SQ. IN. Diameter of cylinders 10 1/2" Length of stroke 13 1/2" No. of cylinders 7 EACH ENGINE No. of cranks 7 EACH ENGINE

Indicated Pressure 62.1. LBS/SQ. IN. 14 1/16" Is there a bearing between each crank YES.

Revolutions per minute 300. Flywheel dia. 37 1/2" Weight 2166 LBS Means of ignition COMPRESSION Kind of fuel used HEAVY OIL.

Crank pin dia. 1 1/4" Crank Webs Mid. length breadth 9 1/4" Mid. length thickness 3 23/32" shrunk Thickness parallel to axis SOLID.

Intermediate Shafts, diameter as per Rule as fitted Thrust Shaft, diameter at collars as per Rule APPROVED as fitted 5 1/4"

Screw Shaft, diameter as per Rule as fitted Is the tube screw shaft fitted with a continuous liner

Thickness between bushes as per Rule as fitted Is the after end of the liner made watertight in the

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner

Is an approved Oil Gland or other appliance fitted at the after end of the tube

Length of Bearing in Stern Bush next to and supporting propeller

No. of blades Material whether Moveable Total Developed Surface sq. feet

Method of reversing Engines DIRECT Is a governor or other arrangement fitted to prevent racing of the engine when decelerated YES Means of lubrication

Are the cylinders fitted with safety valves YES Are the exhaust pipes and silencers water cooled or lagged with

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

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

Can one be overhauled while the other is at work

Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size TWO 1 3/4" x 2 3/16" STROKE.

Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

In Pump Room

Are the Bilge Suctions in the Machinery Spaces

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

Are they fitted with Valves or Cocks

Are the Overboard Discharges above or below the deep water line

Are the Blow Off Cocks fitted with a spigot and brass covering plate

How are they protected

Have they been tested as per Rule

all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Is it fitted with a watertight door worked from

Is the Shaft Tunnel watertight

Driven by MAIN ENGINE

Driven by AUX. ENGINES.

Driven by

Driven by MAIN ENGINE.

Is a report sent herewith YES



**AIR RECEIVERS:**—Have they been made under survey

Is each receiver, which can be isolated, fitted with a safety valve as per Rule

Can the internal surfaces of the receivers be examined and cleaned

Injection Air Receivers, No.

Cubic capacity of each

State No. of Report or Certificate

Is a drain fitted at the lowest part of each receiver

Seamless, lap welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure

by Rules

Actual

Starting Air Receivers, No.

FOUR

Total cubic capacity

62.2 cu. ft.

Internal diameter

18 1/4"

thickness

3/8"

Seamless, lap welded or riveted longitudinal joint

SEAMLESS

STEEL

Range of tensile strength

28-32 TONS

Working pressure

by Rules

Actual

APPROVED 500 LBS/SQ

**IS A DONKEY BOILER FITTED?**

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

(If not, state date of approval)

Receivers

Separate Fuel Tanks

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

State the principal additional spare gear supplied

The foregoing is a correct description,  
**CROSSLEY BROTHERS LIMITED,**

Manufacturer.

Dates of Survey while building { During progress of work in shops-- } 1939. SEPT. 13. 19. 20. 29. OCT. 19. 22. 25. NOV. 7. 8. DEC. 18. 1940. JAN. 13. 1941.  
During erection on board vessel-- }  
Total No. of visits 12.

Dates of Examination of principal parts—Cylinders 22.10.39. 20.9.39. Covers 7.11.39. 19.10.39. Pistons 22.10.39. 7.11.39. Rods — Connecting rods 8.11.39. 13.9.39.

Crank shaft 29.9.39. Flywheel shaft — Thrust shaft 25.10.39. Intermediate shafts — Tube shaft —  
Screw shaft — Propeller — 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. / NGOT STEEL Identification Mark LLOYDS 1140 985 Flywheel shaft, Material — Identification Mark —

Thrust shaft, Material O.H. / NGOT STEEL Identification Mark LLOYDS Intermediate shafts, Material — Identification Marks —

Tube shaft, Material — Identification Mark — Screw shaft, Material — Identification Mark —

Identification Marks on Air Receivers CTC. CTC.

Nº 890381. Nº 890382

Nº 890386 Nº 890387

LLOYDS TEST. DRW. 9.10.39

LLOYDS TEST. CSP. 11-1-40.

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

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

MCH REPORT Nº 9804.

HR 1000 29

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

THESE ENGINES HAVE BEEN CONSTRUCTED UNDER SPECIAL SURVEY OF TESTED MATERIALS AND ARE IN ACCORDANCE WITH THE SECRETARY'S LETTERS, APPROVED PLANS AND RULE REQUIREMENTS. THE MATERIALS AND WORKMANSHIP ARE OF A GOOD QUALITY AND THE ENGINES WHEN TESTED IN SHOP UNDER FULL LOAD CONDITIONS SHOWN SATISFACTORY RESULTS. IN MY OPINION THESE ENGINES ARE SUITABLE FOR THE PURPOSE INTENDED AND WHEN SATISFACTORILY INSTALLED ON BOARD AND REPORTED UPON BY THE SOCIETY'S SURVEYORS WILL BE ELIGIBLE TO HAVE THE NOTATION OF LLOYDS MACHINERY CERTIFICATE (WITH DATA

The amount of Entry Fee .. £ 4 : 0 : 0

2/3 Special ... .. £ 43 : 17 : 6

Donkey Boiler Fee ... .. £ : : :

Travelling Expenses (if any) £ : 18 : 6

When applied for,

14-2-1940

When received,

11.3.1940

Committee's Minute

Assigned

Engineer Surveyor to Lloyd's Register of Shipping.

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