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DEC 1943

# REPORT ON OIL ENGINE MACHINERY.

No 11696.  
20 DEC 1943

of writing Report 9th Dec 1943. When handed in at Local Office 18th Dec 1943. Port of MANCHESTER.  
in Survey held at OPENSHAW. Date, First Survey 22.9.43 Last Survey 29.11. 1943.  
Book. Number of Visits Seven.

on the ~~Triple~~ <sup>Single</sup> Screw vessel "EMPIRE GUERNSEY" A/MS 680. Tons Gross Net  
Built at KNOTTINGLEY. By whom built J. Harker Ltd. Yard No. 168 When built 1943.  
Engines made at OPENSHAW. By whom made Crossley Bros. Ltd. Engine No. 132220 When made 1943.  
Main Boilers made at - By whom made - Boiler No. - When made -  
Horse Power 330. Owners - Port belonging to -  
Horse Power as per Rule 116. Is Refrigerating Machinery fitted for cargo purposes - Is Electric Light fitted -  
made for which vessel is intended

ENGINES, &c. Type of Engines Direct Injection. Heavy Oil. 2 or 4 stroke cycle 2 Single or double acting Single.  
Maximum pressure in cylinders 850 lbs/sq.in. Diameter of cylinders 10 1/2" Length of stroke 13 1/2" No. of cylinders 6 No. of cranks 6  
Indicated Pressure 76 lbs/sq.in. 14.11/16 Is there a bearing between each crank Yes.  
Revolutions per minute 300 Flywheel dia. 37 1/2" Weight 2166 Means of ignition Compression Kind of fuel used Diesel Oil.  
Crankshaft, Solid forged dia. of journals as per Rule approved. 7 1/2" Crank pin dia. 7 1/2" Crank Webs Mid. length breadth 9 1/4" Thickness parallel to axis -  
Flywheel Shaft, diameter as per Rule Flywheel mounted on Crankshaft coupling. Intermediate Shafts, diameter as per Rule - Thrust Shaft, diameter at collars as per Rule Approved. 4 3/4"  
Screw Shaft, diameter as fitted Thickness between bushes as per Rule Is the after end of the liner made watertight in the

Monze Liners, thickness in way of bushes as fitted If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner  
Propeller boss Is 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  
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  
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 Direct. Is a governor or other arrangement fitted to prevent racing of the engine Yes. Means of lubrication  
Forced Manifold Water cooled 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  
conducting material 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 on M.E. 4 1/4" .3" stroke the sea suction provided with an efficient strainer which can be cleared within the vessel Bilge and Cooling Water Pumps Interchangeable.  
Bilge Pumps worked from the Main Engines, No. One Diameter 4 1/4" Stroke 3" Can one be overhauled while the other is at work Yes

Pumps connected to the Main Bilge Line No. and Size - How driven -  
If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping  
Arrangements Two in Series on M.E. including Spare Pump, No. and size 1 3/8" & 1 1/2" x 2" Stroke.  
Ballast Pumps, No. and size - Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge  
Are two independent means arranged for circulating water through the Oil Cooler In Pump Room -  
Pumps, No. and size: - In Machinery Spaces -

Holds, &c. dependent Power Pump Direct Suctions to the Engine Room Bilges, No. and size - Are the Bilge Suctions in the Machinery Spaces  
Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes -  
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 -  
On 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 2 Diameters 5 3/4" & 2 1/2" Stroke 4" Driven by Main Engine.  
Auxiliary Air Compressors, No. - No. of stages - Diameters - Stroke - Driven by -  
Small Auxiliary Air Compressors, No. - No. of stages - Diameters - Stroke - Driven by -  
What provision is made for first Charging the Air Receivers Tandem Diameter 20 1/2" Stroke 9 1/4" Driven by Main Engine.  
Savenging Air Pumps, No. One Double Acting Position -  
Auxiliary Engines crank shafts, diameter as per Rule as fitted -  
Have the Auxiliary Engines been constructed under special survey - Is a report sent herewith -



To follow later.

AIR RECEIVERS:

Have they been made under survey

State No. of Report or Certificate

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

Is a drain fitted at the lowest part of each receiver

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.

Total cubic capacity

Internal diameter

thickness

Seamless, lap welded or riveted longitudinal joint

Material

Range of tensile strength

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

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

As per Rule Requirements.

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 - -  
During erection on board vessel - -  
Total No. of visits

1943. 22nd Sept. 1, 18 Oct. 11, 25, 26, 29 Nov.

Dates of Examination of principal parts—Cylinders

18.10.43

Covers

22.9.43

Pistons

29.11.43

Rods

Connecting rods

29.11.43

Crank shaft

18.10.43

Flywheel shaft

-

Thrust shaft

29.11.43

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.Steel.

Identification Mark

ELK.1.10.43.

Thrust shaft, Material

O.H.Steel.

Identification Mark

WTM. 15.1.43.

Thrust shaft, Material

O.H.Steel.

Identification Mark

WTM. 18.6.40

Intermediate shafts, Material

-

Identification Marks

-

Tube shaft, Material

-

Identification Mark

-

Screw shaft, Material

-

Identification Mark

-

Identification Marks on Air Receivers

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 Yes. If so, state name of vessel Manchester Report No. 11,555.

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 RULE REQUIREMENTS. THE MATERIALS AND WORKMANSHIP ARE GOOD AND THE ENGINE WHEN TESTED IN THE SHOP UNDER FULL LOAD CONDITIONS GAVE SATISFACTORY RESULTS. THIS ENGINE IS SUITABLE, IN MY OPINION, FOR ITS INTENDED SERVICE AND WHEN SATISFACTORILY INSTALLED AND REPORTED ON WILL BE ELIGIBLE TO RECEIVE THE NOTATION OF LMC (WITH DATE).

The amount of Entry Fee .. £ 3 : 0 : 0 When applied for,

& 25% Special ... £ 24 : 0 : 0 18.12.43.

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

Travelling Expenses (if any) £ 1 : 0 : 0 19

Committee's Minute

FRI. 13 APR 1945

Assigned

Su F.E. machy. rph.

Engineer Surveyor to Lloyd's Register of Shipping.



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