

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

20 AUG 1941

Date of writing Report

When handed in at Local Office

Port of HULL.

No. in Survey held at HULL.

Date, First Survey 30. 8. 40 East Survey 27. 6. 1941

Reg. Book.

(Number of Visits 33 27)

on the STEAM TUG. **EMPIRE OAK.**

Tons { Gross 482 Net 40

Built at GOOLE.

By whom built Messrs Goole Shipbuilding & Repairing Co. Ltd. Ward No. 534. When built 1941-6

Engines made at HULL.

By whom made Messrs. Amos & Smith Ltd. Engine No. 679. When made 1941-6

Boilers made at HULL.

By whom made Messrs. Amos & Smith Ltd. Boiler No. 679. When made 1941-6

Registered Horse Power

Owners Ministry of Shipping Port belonging to Goole

Nom. Horse Power as per Rule 175 200

Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which Vessel is intended Towing Services

ENGINES, &c.—Description of Engines Vertical Triple Expansion Engine

Dia. of Cylinders 16 1/2" - 28 1/2" - 47" Length of Stroke 30" No. of Cylinders 3 Revs. per minute

Crank shaft, dia. of journals as per Rule 9.114" as fitted 9 3/8" Crank pin dia. 9 3/8" Crank webs Mid. length breadth 1 6/8" Thickness parallel to axis 5 3/16" shrunk

Intermediate Shafts, diameter as per Rule 8.68" as fitted 9" Thrust shaft, diameter at collars as per Rule 9.114" as fitted 9 3/8"

Tube Shafts, diameter as per Rule None as fitted None Screw Shaft, diameter as per Rule 10.14 as fitted 1 1/2" Is the tube shaft fitted with a continuous liner None

Bronze Liners, thickness in way of bushes as per Rule 2.1 as fitted None Thickness between bushes as per Rule 1.1 as fitted None Is the after end of the liner made watertight in the propeller boss Yes

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 Yes

If two liners are fitted, is the shaft lapped or protected between the liners Yes Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft Yes

If so, state type Oil sealing Rubbe Compression. Length of Bearing in Stern Bush next to and supporting propeller 4'-0"

Propeller, dia. 12'-2" Pitch 12'-9" No. of Blades 4 Material C.I. whether Moveable Solid Total Developed Surface 56 sq. feet

Feed Pumps worked from the Main Engines, No. 2 Diameter 3" Stroke 18" Can one be overhauled while the other is at work Yes

Bilge Pumps worked from the Main Engines, No. 2 Diameter 3" Stroke 18" Can one be overhauled while the other is at work Yes

Feed Pumps { No. and size 6" x 4" x 6" Duplex. Pumps connected to the Main Bilge Line { No. and size 8 x 6 x 8 Duplex 3" Steam Main Engine

How driven Independent Mean. How driven Ind. Mean. Ejector Pumps

Ballast Pumps, No. and size The above two Duplex pumps and one 12" x 12" x 12" Duplex Lubricating Oil Pumps, including Spare Pump, No. and size None

Are two independent means arranged for circulating water through the Oil Cooler None Suctions, connected to both Main Bilge Pumps and Auxiliary

Bilge Pumps;—In Engine and Boiler Room Engine Rm. 2 @ 2 1/2" Dia. 1 @ 3" Dia. 1 @ 2 1/2" Dia. in Cofferdam. Bl. Rm. 1 @ 2 1/2" Dia. + 1 @ 3" Dia. in

In Pump Room F & A Cofferdam, each @ 2 1/2" Dia. In Holds, &c. None Rm. 1 @ 2 1/2" Dia. F. Cofferdam 1 @ 2 1/2" Dia.

Pipe duct 1 @ 2 1/2" Dia. Ballast Line F & A Peels. 1 @ 3" Dia. each to after feed pump. After O.F. Tank 1 @ 3" Dia. to Salvage Pump.

Main Water Circulating Pump Direct Bilge Suctions, No. and size 5 1/2" Independent Power Pump Direct Suctions to the Engine Room Bilges,

No. and size 1 each Bl. + Engine 3" Dia. Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes Yes

Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes.

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

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes. Are the Overboard Discharges above or below the deep water line At. W.L.

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 Yes.

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. Is the Shaft Tunnel watertight None. Is it fitted with a watertight door

worked from

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 3020 sq. ft.

Which Boilers are fitted with Forced Draft One Which Boilers are fitted with Superheaters None

No. and Description of Boilers One single ended 2 furnace Scotch Oil Burning Working Pressure 215 lbs / sq. in.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes

IS A DONKEY BOILER FITTED? None If so, is a report now forwarded?

Can the donkey boiler be used for domestic purposes only Yes

PLANS. Are approved plans forwarded herewith for Shafting Main Boilers. Auxiliary Boilers None Donkey Boilers None

(If not state date of approval) Superheaters None. General Pumping Arrangements 11-9-40. Oil fuel Burning Piping Arrangements 26-6-41.

SPARE GEAR.

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

State the principal additional spare gear supplied.

The foregoing is a correct description.

AMOS & SMITH LTD. A. R. Leadley DIRECTOR

Manufacturer.



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Lloyd's Register Foundation

W243-0277

1940
 During progress of work in shops - - Aug. 30. Sep. 13. Oct. 25. 28. Nov. 1. 6. 13. 28. Dec. 2. 30. - 1941
 During erection on board vessel - - 25. May. 12. 21. 24. June. 5. 17. 18. 19. 21. 24. 27.
 Total No. of visits 22

Dates of Examination of principal parts - Cylinders 26-2-41 Slides 26-2-41 Covers 20/12/40. 2/1/41
 Pistons 26-2-41 Piston Rods 15/1/41 Connecting rods 15/1/41
 Crank shaft 28/2/41 Thrust shaft 8-1-41 Intermediate shafts 6-11-40
 Tube shaft ✓ Screw shaft 15/1/41 Propeller 11-3-41
 Stern tube 11-3-41 Engine and boiler seatings 11-3-41 Engines holding down bolts 5-6-41
 Completion of fitting sea connections 11-3-41 Boilers fixed 5-6-41 Engines tried under steam 27-6-41
 Completion of pumping arrangements 27-6-41 Thickness of adjusting washers 5/16" both
 Main boiler safety valves adjusted 27-6-41 Identification Mark 289 T.T. 110. 12-10-40. P. 4. 4. 8 T.T. 164
 Crank shaft material M.S. Identification Mark 269 T.T. 87. Thrust shaft material M.S. Identification Mark 241 T.T. 141
 Intermediate shafts, material M.S. Identification Marks 9-9-40. Tube shaft, material Identification Mark
 Screw shaft, material M.S. Identification Mark 288 T.T. 109. Steam Pipes, material M.S. Test pressure 660. Date of Test 26-4-41
 Is an installation fitted for burning oil fuel Yes. Is the flash point of the oil to be used over 150°F. Yes.
 Have the requirements of the Rules for the use of oil as fuel 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 No
 Is this machinery duplicate of a previous case Yes If so, state name of vessel EMPIRE LARCH.

General Remarks (State quality of workmanship, opinions as to class, &c.)
 The vessel's machinery has been constructed & fitted on board in accordance with the Society's Rules & the approved plans. The workmanship & material are good & when tried under as near full power as practicable in the basin it was found satisfactory in every respect & is eligible, in our opinion, to have the records of SA L.M.C. 6-41 + 09.

The amount of Entry Fee ... £ 5 : 0 :
 Special ... £ 15 : 15 :
 Donkey Boiler Fee ... £ 30 : :
 Travelling Expenses (if any) £ : :
 When applied for, 19 41
 When received, 19

D. J. ...
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute
 Assigned 3 + 1/2 hrs. 6.41
 Fitt. for oil fuel 6.41
 22. 09.



The Surveyors are requested not to write on or below the space for Committee's Minute.