

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

19 FEB 1945
Received at London Office 20 FEB 1945
HULL

Date of writing Report 19 When handed in at Local Office 19 Port of
No. in Survey held at Reg. Book on the STEAM TUG EMPIRE BARBARA Date, First Survey 27. 6. 44 Last Survey 13. 2. 19 45.
(Number of Visits 35)
A/MS. 932. Tons { Gross 274.35
Net Nil
Built at SELEX By whom built Cochrane & Sons Ltd Yard No. 1292 When built 1945
Engines made at HULL By whom made Amos & Smith Ltd Engine No. 758. When made "
Boilers made at HULL By whom made Amos & Smith Ltd Boiler No. 758. When made "
Registered Horse Power Owners Ministry of War Transport. Port belonging to Goole
Nom. Horse Power as per Rule 132. Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.
Trade for which vessel is intended Towing Services.

GINES, &c.—Description of Engines TRIPLE EXPANSION. Contract Revs. per minute 122. ✓
ia. of Cylinders 15"-25"-42" ✓ Length of Stroke 27" ✓ No. of Cylinders 3 ✓ No. of Cranks 3 ✓
ank shaft, dia. of journals as per Rule 8.05" ✓ Crank pin dia. 8 1/4" ✓ Mid. length breadth 15 1/2" ✓ Thickness parallel to axis 5 1/4" ✓
as fitted 8 1/4" ✓ Crank webs Mid. length thickness 5 1/2" ✓ shrunk Thickness around eye-hole 3 5/8" ✓
Intermediate Shafts, diameter as per Rule 7.665" ✓ Thrust shaft, diameter at collars as per Rule 8.05" ✓
as fitted 8" ✓ as fitted 8 1/4" ✓
ube Shafts, diameter as per Rule 8.865" ✓ Is the {tube} shaft fitted with a continuous liner { No. ✓
as fitted NONE ✓ Screw Shaft, diameter as fitted 9 1/4" ✓
ronze Liners, thickness in way of bushes as per Rule Thickness between bushes as per Rule Is the after end of the liner made watertight in the
as fitted as fitted as fitted as fitted
propeller boss — If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner —
f 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 —
f 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: Yes. If so, state type NEWARK ✓ Length of Bearing in Stern Bush next to and supporting propeller 3'-2 1/2" ✓
propeller, dia. 10'-0" Pitch 11'-9" No. of Blades 4 ✓ Material C.I. whether Moveable SOLID ✓ Total Developed Surface 38 ✓ sq. feet
eed Pumps worked from the Main Engines, No. 2 ✓ Diameter 2 3/4" ✓ Stroke 15" ✓ Can one be overhauled while the other is at work Yes ✓
Bilge Pumps worked from the Main Engines, No. 2 ✓ Diameter 2 3/4" ✓ Stroke 15" ✓ Can one be overhauled while the other is at work Yes ✓
Feed { No. and size One 6" x 4 1/2" x 6" ✓ Pumps connected to the { No. and size One Duplex 7 1/2" x 5" x 6" ✓
umps { How driven Independent Steam ✓ Main Bilge Line { How driven Independent Steam ✓
Ballast Pumps, No. and size NONE ✓ 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 2 @ 2 1/2" D. ✓ Boiler Room 2 @ 2 1/2" D. ✓
In Pump Room NONE ✓ In Holds, &c. One @ 2" Dia in each of the following:— ✓
Fore Peak Tank. Fore Hold. Aft Hold. Aft Peak Tank ✓
Main Water Circulating Pump Direct Bilge Suctions, No. and size One @ 5" Dia. ✓ Independent Power Pump Direct Suctions to the Engine Room Bilges,
No. and size Two @ 3" D. ✓ Included above ✓ 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 Both ✓
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 Above ✓
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 —

AIN BOILERS, &c.—(Letter for record 5 ✓) Total Heating Surface of Boilers 2390 sq. ft. ✓
Which Boilers are fitted with Forced Draft NONE ✓ Which Boilers are fitted with Superheaters NONE ✓
No. and Description of Boilers One S.B. ✓ Working Pressure 200 lb./sq. in. ✓
IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes ✓
IS A DONKEY BOILER FITTED? No. ✓ If so, is a report now forwarded? —
Can the donkey boiler be used for domestic purposes only —
PLANS. Are approved plans forwarded herewith for Shafting 28-7-41 Main Boilers 3-7-41 Auxiliary Boilers NONE Donkey Boilers NONE
(If not state date of approval)
Superheaters NONE General Pumping Arrangements 3-9-41 Oil fuel Burning Piping Arrangements 8-5-42.

SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes ✓
State the principal additional spare gear supplied See attached list.

The foregoing is a correct description.

For AMOS & SMITH LTD.

Manufacturer.

A. S. Gentry
DIRECTOR



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008925-008937-0120

EMPIRE BARBARA.

During progress of work in shops - - { 1944 June 28, July 8, Aug 10, Oct 5, 17, Nov 13, 16, 18, 20, Dec. 9, 11, 12, 20.
1945 Jan. 2, 23.
During erection on board vessel - - { 1944 SEP 12, 14, OCT 9, NOV 22 DEC 15, 20.
1945 Jan 4, 11, 12, 13, 18, 22, 24, 26, 30, 31 Feb 2, 6, 13.
Total No. of visits. 35.

Dates of Examination of principal parts—Cylinders 13/11/44 16/11/44 18/11/44 Slides 20/12/44. Covers 13/11/44 16/11/44 18/11/44
Pistons 12-12-44. Piston Rods 12-12-44. Connecting rods 5-10-44.
Crank shaft 17-10-44. Thrust shaft 8-7-44. Intermediate shafts 23-1-45.
Tube shaft None. Screw shaft 29-6-44. Propeller 14-9-44.
Stern tube 12-9-44. Engine and boiler seatings 15-12-44. Engines holding down bolts 19-1-45.
Completion of fitting sea connections 14-9-44.
Completion of pumping arrangements 30-1-45. Boilers fixed 19-1-45. Engines tried under steam 30/1/45. 13/2/45.
Main boiler safety valves adjusted 30/1/45. Thickness of adjusting washers P 13/32 S 5/16
Crank shaft material F-1. Steel Identification Mark 926FW 20/6/44 Thrust shaft material F-1. Steel Identification Mark 968FW 9/6/44
Intermediate shafts, material F-1. Steel Identification Marks 928.FW 9/6/44 Tube shaft, material None Identification Mark —
Screw shaft, material F-1. Steel Identification Mark 925.FW 9-6-44 Steam Pipes, material Steel Test pressure 600 lb/sq. in. Date of Test 29-1-45
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 —

Is this machinery duplicate of a previous case Yes. If so, state name of vessel EMPIRE JOSEPHINE HUL Rpt 52588.

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

The Machinery of this Vessel has been constructed in accordance with the approved plans, the Rules and the Specification, of tested material made by firms accredited by the Society.

The Workmanship and Materials are good.

The Machinery and auxiliaries have been fitted on board and, when tried under steam at full power in the River Humber was found satisfactory in every respect.

The amount of Entry Fee ... £ 3 : 0 :
Special ... £ 33 : 0 :
SPECIFICATION 25%
Boiler Fee ... £ 8 : 5 :
Travelling Expenses (if any) £ : :
When applied for, 19 FEB 1945
When received, 19

FRI. 2 MAR 1945

Committee's Minute

Assigned +LMC 2.45 OG

FITTED FOR OIL FUEL. 2.45 FLASH POINT ABOVE 160° F.

W. L. Shields & J. P. Mearns
Engineer Surveyors to Lloyd's Register of Shipping.



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