

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

4 MAY 1944

Received at London Office.

Date of writing Report 19 When handed in at Local Office 19 Port of HULL.
No. in Survey held at HULL. Date, First Survey 23. 10. 43 Last Survey 21. 4. 1943
Reg. Book (Number of Visits 28)
on the STEAM TUG EMPIRE SILAS Tons Gross 274.35 Net Nil
Built at SELBY By whom built Cochrane & Sons Ltd Yard No. 1279 When built 1944
Engines made at HULL By whom made Amos & Smith Ltd Engine No. 737 When made "
Boilers made at HULL By whom made Amos & Smith Ltd Boiler No. 737 When made "
Registered Horse Power Owners Ministry of War Transport Port belonging to
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

ENGINES, &c.—Description of Engines TRIPLE EXPANSION CONTRACT Revs. per minute 122
Dia. of Cylinders 15"-25"-42" Length of Stroke 27" No. of Cylinders 3 No. of Cranks 3
Crank shaft, dia. of journals as per Rule 8.05" Crank pin dia. 8 1/2" Mid. length breadth 15 1/2" Thickness parallel to axis 5 1/4"
as fitted 8 1/4" Crank webs Mid. length thickness 5 1/4" 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"
Tube Shafts, diameter as per Rule — Screw Shaft, diameter as per Rule 8.865"
as fitted — as fitted 9 1/4" Is the {tube/screw} shaft fitted with a continuous liner {No. }
Bronze 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
propeller boss. — If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner. —
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. — Is an approved Oil Gland or other appliance fitted at the after end of the tube
Sharp 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 Slid Total Developed Surface 38 sq. feet
Feed 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 Pumps No. and size One 6" x 4 1/2" x 6" Pumps connected to the Main Bilge Line {No. and size One duplex 7 1/2" x 5" x 6"
How driven Independent Steam How driven Independent Steam
Ballast Pumps, No. and size — Lubricating Oil Pumps, including Spare Pump, No. and size —
Are two independent means arranged for circulating water through the Oil Cooler — Suctions, connected to both Main Bilge Pumps and Auxiliary
Bilge Pumps:—In Engine and Boiler Room 2 @ 2 1/2", 2 @ 3" dia, 2 @ 2 1/2"
In Pump Room — In Holds, &c. One @ 2" dia in each of the following:—
Fore peak Tank, Fore Hold, 4th Hold, 4th Peak Tank
Main Water Circulating Pump Direct Bilge Suctions, No. and size One @ 5" Independent Power Pump Direct Suctions to the Engine Room Bilges,
No. and size Two @ 3" 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 —

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 2390 ft.²
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 lbs / 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 28-74 Main Boilers 3/7/41 Auxiliary Boilers NONE Donkey Boilers NONE
(If not state date of approval)
Superheaters — General Pumping Arrangements 3-9-41 Oil fuel Burning Piping Arrangements 8-5-42

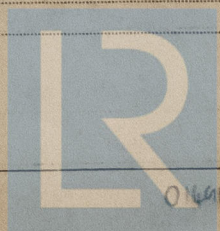
SPARE GEAR.

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. Steadley
DIRECTOR



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Lloyd's Register
Foundation

EMPIRE SILAS.

Dates of Survey while building	During progress of work in shops --	1943 Oct 23. Nov. 20. Dec. 9. 13. <u>1944</u> Jan. 1. 13. 31. Feb. 3. 4. 21. 23. 24. Mar. 4. 22. Apr. 4.
	During erection on board vessel --	1943 Nov. 20, 22, 26. 1944 MAR 14, APR 3, 5, 7, 11, 13, 14, 19, 20, 21. X
	Total No. of visits.	28.

Dates of Examination of principal parts—Cylinders 31/1/44 3/2/44 Slides 7/3/44 Covers 31/1/44 3/2/44
Pistons 3/2/44 Piston Rods 1/1/44 Connecting rods 3/2/44
Crank shaft 21/2/44 Thrust shaft 9/12/43 Intermediate shafts 13/12/43
Tube shaft NONE Screw shaft 25/10/43 Propeller 20/11/43
Stern tube 29/11/43 Engine and boiler seatings 22/3/44 Engines holding down bolts 22/3/44
Completion of fitting sea connections 20/11/43
Completion of pumping arrangements 14/4/44 Boilers fixed 22/3/44 Engines tried under steam 14/4/44
Main boiler safety valves adjusted 14/4/44 Thickness of adjusting washers P. 1/32 S. 5/16
Crank shaft material F. I. Steel Comply 313. FW. 4-11-43 Identification Mark P. H. 43 Thrust shaft material F. I. Steel Identification Mark 313. FW. 4/1/43
Intermediate shafts, material F. I. Steel Identification Marks 416. FW. 15/7/43 Tube shaft, material NONE Identification Mark —
Screw shaft, material F. I. Steel Identification Mark 140 FW. 7-9-43 Steam Pipes, material Steel ✓ Test pressure 600 lb./sq. in. ✓ Date of Test 7/4/44 ✓
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 S. M. Tug EMPIRE PAT HULL No. 51723

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 & the Specifications, of tested material made by firms accredited by the Society.

The Workmanship and Materials are good.

The Machinery & auxiliaries have been fitted a board and, when tried under steam at as near full power as practicable in the basin, were found satisfactory in every respect.

The Vessel is eligible, in our opinion, when classed to have the record of
* LMC 4, 44. and O.G. and the Notation T. 3 C. 15". 25". 42" - 27".

132 N.H.P. 200 lbs / n: 150. 3. cf. ~~G.S. 6.3~~ HS. 2390.

Fitted for Oil Fuel.

K_p above $150^\circ K$.

The amount of Entry Fee	... £	3	:	0	:	When applied for, 4 MAY 1944 19
Special ... <i>Lanc</i>	... £	33	:	0	:	
Donkey Boiler Fee £	8	:	5	:	
Travelling Expenses (if any)	£		:		:	

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

Committee's Minute

Assigned 7 Line 4.44

FRI. 12 MAY 1944

of Line 4.44

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