

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 on the STEAM TUG EMPIRE SILAS (Number of Visits 28) 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" as fitted 8 1/4" Crank pin dia. 8 1/4" Crank webs Mid. length breadth 15 1/2" Mid. length thickness 5 1/4" Thickness parallel to axis 5 1/4" Thickness around eye-hole 3 5/8" shrunk

Intermediate Shafts, diameter as per Rule 7.665" as fitted 8" Thrust shaft, diameter at collars as per Rule 8.05" as fitted 8 1/4" ✓

Tube Shafts, diameter as per Rule — as fitted — Screw Shaft, diameter as per Rule 8.865" 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 — as fitted — Thickness between bushes as per Rule — as fitted — 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

Propeller, dia. 10'-0" Pitch 11'-9" No. of Blades 4 Material C.I. whether Moveable Stia 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 1/4" 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

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:—

Five peak tank, Five Hold, 4 M. Hold, 4 M. 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" Induced alone 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 BUT ✓

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. ✓

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.
A. S. Bradley DIRECTOR
Manufacturer.

NOTE.—The words which do not apply should be deleted. Is a Report also sent on the Hull of the Ship? If not, state whether, and when, one will be sent.



EMPIRE SILAS.

1943 Oct 23, Nov. 20, Dec. 9-13. 1944 Jan. 1, 13, 31, Feb. 3, 4, 21, 23, 24, Mar. 4, 22, Apr. 4.

Dates of Survey while building: During erection on board vessel --- 1943 Nov. 20, 22, 26. 1944 MAR 14, APR 3, 5, 7, 11, 12, 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 20/11/43 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.1. Steel Identification Mark 313-FW-4-11-43 Coupler 313-FW-4-11-43 Thrust shaft material F.1. Steel Identification Mark 313-FW-4/43

Intermediate shafts, material F.1. Steel Identification Marks 416-FW-15/14/43 Tube shaft, material NONE Identification Mark ---

Screw shaft, material F.1. Steel Identification Mark 140-FW-7-9-43 Steam Pipes, material Steel Test pressure 600 lb. 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 SRM 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 on 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 Cy. 15", 25", 42" - 27".

132 N.H.P. 200 lb. D. 1 S.B. 3. C.F. ~~6.5.6.3~~ HS. 2390.

Fitted for Oil Fuel. F.P. above 150° F.

The amount of Entry Fee	£	3	:	0	:	0	When applied for,
Special LMC Spec.	£	33	:	0	:	4	MAY 1944
Donkey Boiler Fee	£	8	:	5	:		When received,
Travelling Expenses (if any)	£		:		:	19	

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

FRI. 12 MAY 1944

Committee's Minute

Assigned H Lmc 4.44

OG



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Certificate to be sent to

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

LLOYD'S REGISTER OF SHIPPING (MADE AND PRINTED IN ENGLAND)