

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 20 AUG 1941

Date of writing Report 29 AUG 1941 When handed in at Local Office 19 Port of HULL.

No. in Survey held at HULL. Date, First Survey 30. 8. 40 East Survey 27. 6. 1941  
Reg. Book. on the STEAM TUG. EMPIRE OAK. (Number of Visits 33 27. 6. 1941  
Gross 482  
Net 40

Built at GOOLE. By whom built Messrs Gode Shipbuilding & Repairing Co. Ltd. Yard 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

Net 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 16½"-28½"-47" Length of Stroke 30" No. of Cylinders 3 Revs. per minute  
Crank shaft, dia. of journals as per Rule 9.114" Crank pin dia. 9 3/8" Crank webs Mid. length breadth 16 1/8" No. of Cranks 3  
as fitted 9 3/8" Mid. length thickness 5 3/16" Thickness parallel to axis 5 3/16" Thickness around eye-hole 4 3/8"

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

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

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 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. 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 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 @ 2½" Dia. 1 @ 3" Dia. 1 @ 2½" Dia. in Affordan. Bl. Rm. 1 @ 2½" Dia. 1 @ 3" Dia. in Affordan.

In Pump Room F & A Affordan, each @ 2½" Dia. In Holds, &c. None Rm. 1 @ 2½" Dia. F. Affordan 1 @ 2½" Dia.

Pipe duct 1 @ 2½" Dia. Ballast line F & A Peaks. 1 @ 3" Dia. each to feed pump. After O.F. Tank 1 @ 3" Dia. to Salvage Pump.

Main Water Circulating Pump Direct Bilge Suctions, No. and size 5½" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 each Bl. & Eng. Rm. 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

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.

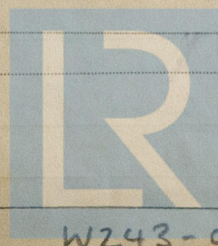
The foregoing is a correct description.

For AMOS & SMITH LTD.

A. E. Clewley

DIRECTOR

Manufacturer.



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Lloyd's Register Foundation

W243-0277



1940		1941	
Dates of Survey while building	During progress of work in shops - -	Aug. 30. Sep. 13. Oct. 25. 28. Nov. 1. 6. 13. 28. Dec. 2. 30. - Jan. 3. 8. 15. 18. 30. Feb. 26. 28. Mar. 11. 21. 24. 25. Apr. 23.	
	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		Slides		Covers	
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	Completion of pumping arrangements	27-6.41	Boilers fixed	5-6.41
Main boiler safety valves adjusted	27-6-41	Thickness of adjusting washers	5/16" both	Engines tried under steam	27.6.41
Crank shaft material	M.S.	Identification Mark	289 T.T. 110. 12-10-40.	Thrust shaft material	M.S.
Intermediate shafts, material	M.S.	Identification Marks	269 T.T. 87.	Tube shaft, material	
Screw shaft, material	M.S.	Identification Mark	288 T.T. 109	Test pressure	660.
Is an installation fitted for burning oil fuel	Yes.	Is the flash point of the oil to be used over 150°F.	Yes.	Date of Test	26-4-41
Have the requirements of the Rules for the use of oil as fuel been complied with	Yes	If so, have the requirements of the Rules been complied with	Yes		
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo	No	If so, state name of vessel	EMPIRE LARCH.		
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				

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

The <sup>Machine</sup> Vessel's 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 L.M.C. 6.41 + 09.

The amount of Entry Fee	...	£	5	:	0	:	When applied for, <del>18</del> 15 19 4
Special	...	£	<del>48</del>	:	15	:	
Donkey Boiler Fee	...	£	50	:		:	5 Sept. When received,
Travelling Expenses (if any)	£			:		:	
							19 .....

Committee's Minute

*Assigned*

*Engineer Surveyor to Lloyd's Register of Shipping.*