

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office.

Date of writing Report 19... When handed in at Local Office 1943. Port of Hull

No. in Survey held at Thorne Date, First Survey 22. 10. 42. Last Survey 28. 12. 1942.

Reg. Book on the Single Screw tug "EMPIRE SERAPH" (Number of Visits 7)

Built at Thorne By whom built Richard Dunston Ltd. Yard No. T 374 When built 1942

Engines made at Yarmouth By whom made Crabtree (1931) Ltd. Engine No. 633 When made

Boilers made at Stockton By whom made Stockton Chem. Eng. Works, Boiler No. 6586 When made

Registered Horse Power Owners Ministry of War Transport Port belonging to Goole

Nom. Horse Power as per Rule 85 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

Trade for which vessel is intended Towing Service

ENGINES, &c.—Description of Engines. See Spanish Rpt. N° 110,770. Triple Expansion Revs. per minute 150

Dia. of Cylinders 11 3/4, 19 1/4, 32 Length of Stroke 22 No. of Cylinders 3 No. of Cranks 3

Crank shaft, dia. of journals as per Rule 6 3/8 Crank pin dia. 6 3/8 Mid. length breadth Thickness parallel to axis 4 1/4

as fitted 6 3/8 Crank webs shrunk Thickness around eye-hole 2 1/2

Intermediate Shafts, diameter as per Rule 6 1/4 Thrust shaft, diameter at collars as per Rule 6 3/8

as fitted 6 1/4 as fitted 6 3/8

Tube Shafts, diameter as per Rule 7 1/8 Is the tube screw shaft fitted with a continuous liner no

as fitted 7 1/8 as fitted 7 1/8

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

as fitted 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

shaft YES If so, state type NEWARK Length of Bearing in Stern Bush next to and supporting propeller 29

Propeller, dia. 8'-0" Pitch 8'-4" No. of Blades 4 Material C.I. whether Moveable no Total Developed Surface 28 sq. feet

Feed Pumps worked from the Main Engines, No. One Diameter 2 1/2 Stroke 11 Can one be overhauled while the other is at work

Bilge Pumps worked from the Main Engines, No. One Diameter 2 1/2 Stroke 11 Can one be overhauled while the other is at work

Feed Pumps { No. and size One 6 1/2 x 4 1/2 x 10 Pumps connected to the Main Bilge Line { No. and size One 5 x 3 1/2 x 6 (Antux)

How driven Ind. Steam How driven Ind. 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 Suctions, connected to both Main Bilge Pumps and Auxiliary

Bilge Pumps:—In Engine and Boiler Room One each 2" dia. - also direct suction - see below

In Pump Room One each 2" dia. In Holds, &c. One each 2" dia. in fore & aft compartments

Peak fitted with drain valve controlled from upper deck

Main Water Circulating Pump Direct Bilge Suctions, No. and size One 3 1/2" dia. Independent Power Pump Direct Suctions to the Engine Room Bilges,

No. and size E. & B. opacs - one each 2 1/2" Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes

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

Are all Sea Connections fitted direct on the skin of the ship Yes or on robust steel boxes 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 Yes Is it fitted with a watertight door Access from above worked from

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 1367 sq. ft.

Which Boilers are fitted with Forced Draft The only boiler Which Boilers are fitted with Superheaters none

No. and Description of Boilers 155 Working Pressure 200 lb.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes

IS A DONKEY BOILER FITTED? no If so, is a report now forwarded? Yes

Can the donkey boiler be used for domestic purposes only

PLANS. Are approved plans forwarded herewith for Shafting 29-11-39 Main Boilers 16-7-41 Auxiliary Boilers Donkey Boilers

(If not state date of approval)

Superheaters General Pumping Arrangements 17. 3. 41 Oil fuel Burning Piping Arrangements

## SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied See attached list

The foregoing is a correct description.

Manufacturer.



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# "E. SERAPH"

During progress of work in shops - - -  
 Dates of Survey while building  
 During erection on board vessel - - -  
 Total No. of visits

Dates of Examination of principal parts—Cylinders  
 Pistons  
 Crank shaft  
 Tube shaft  
 Stern tube  
 Completion of fitting sea connections  
 Completion of pumping arrangements  
 Main boiler safety valves adjusted  
 Crank shaft material  
 Intermediate shafts, material  
 Screw shaft, material  
 Is an installation fitted for burning oil fuel  
 Have the requirements of the Rules for the use of oil as fuel been complied with  
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo  
 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  
 If so, state name of vessel

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

The machinery noted above has been installed on board EMPIRE SERAPH in accordance with the Rules, approved plans, and to the Specification. The workmanship and materials are good and when tested as prescribed in the Rules Specification the machinery was found satisfactory in every respect.  
 Eligible to have record of LMC 12.42. O.G. and notation of T. 3cy. 11 3/4" 19 1/4" 32" - 22". N.H.P. 85.  
 1 S.B. 2000 lb. 2 C.F. F.D.  
 G.S. 36.5 lb. H.S. 1367 lb

The amount of Entry Fee ... £ : :  
 Special .. (PART) ... £ 5 : 11/9 :  
 Donkey Boiler Fee ... £ : :  
 Travelling Expenses (if any) £ : :  
 When applied for, 10/1/1943  
 When received, 19

Committee's Minute ... FRI. 19 FEB 1943

Assigned ... 12.42  
 22, 09,

W. S. Shields  
 Engineer Surveyor to Lloyd's Register of Shipping.