

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

*Emp Stella*

10 NOV 1945

Received at London Office

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

No. in Survey held at *Silly Gool* Date, First Survey *9.3.45* Last Survey *Oct 23. 1945*  
 Reg. Book on the **"EMPIRE CLARA"** A/M S 1150 (Number of Visits *26*)

Built at *Silly* By whom built *Cochran & Sons Ltd.* Yard No. *1300* When built *1945*

Engines made at *Providence, Rhode Is USA* By whom made *Franklin Mach. & Foundry Co.* Engine No. *1018* When made *1943*  
*installed by Amos Smith 762* installed *1945*

Boilers made at *Glasgow* By whom made *Barclay Curle & Co. Ltd.* Boiler No. *42/21* When made *1944*  
*installed 1945*

Registered Horse Power... Owners *Ministry of War Transport* Port belonging to *Hull*

Nom. Horse Power as per Rule *109* 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 Engine *Triple Expansion - Bu USA cut no. B-638* Revs. per minute *130*

Dia. of Cylinders *12", 20", 33"* Length of Stroke *24"* No. of Cylinders *3* No. of Cranks *3*

Crank shaft, dia. of journals as per Rule... as fitted *7 3/4"* Crank pin dia. *7 3/4"* Crank webs Mid. length breadth *15 1/16"* Thickness parallel to axis *5"*  
 as fitted... Mid. length thickness *5 1/8"* shrunk Thickness around eye-hole *3 1/2"*

Intermediate Shafts, diameter as per Rule... as fitted *6 5/8"* Thrust shaft, diameter at collars as per Rule... as fitted *8 1/2"*

Tube Shafts, diameter as per Rule... as fitted... Screw Shaft, diameter as per Rule... as fitted *8"* 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 *Yes* If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner *Yes*

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 *Yes*

If two liners are fitted, is the shaft lapped or protected between the liners *Yes* Is an approved Oil Gland or other appliance fitted at the after end of the tube *Yes*

Propeller, dia. *9'-0"* Pitch *9'-6"* No. of Blades *4* Material *Cast Iron* whether Moveable *No* Total Developed Surface *31.5* sq. feet

Feed Pumps worked from the Main Engines, No. *None* Diameter... Stroke... Can one be overhauled while the other is at work *Yes*

Bilge Pumps worked from the Main Engines, No. *None* Diameter... Stroke... Can one be overhauled while the other is at work *Yes*

Feed Pumps { No. and size *Two 7" x 5" x 12"* How driven *Ind. Stm.* Pumps connected to the Main Bilge Line { No. and size *One 7 1/2", 5", 6" One 12", 9", 12"* How driven *Ind. Stm. Ind. Stm. Stm.* Ejector *Stm.*

Ballast Pumps, No. and size *One 7 1/2", 5", 6" as above.* (Lubricating Oil Pumps, including Spare Pump, No. and size *One 2 1/2"* ) *One hand pump to filter & one to ME bearings*

Are two independent means arranged for circulating water through the Oil Cooler *One only* Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps:—In Engine and Boiler Room *ER 3-2 1/2" & 1-3"* *BR 2-2 1/2"*

In Pump Room *Yes* In Holds, &c. *1-2"*

Main Water Circulating Pump Direct Bilge Suctions, No. and size *1-4"* Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size *1-3"* 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 *Yes*

What pipes pass through the deep tanks *None* Have they been tested as per Rule *Yes*

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 *Part of ER* Is it fitted with a watertight door *—* worked from *—*

MAIN BOILERS, &c.—(Letter for record *S*) Total Heating Surface of Boilers *1786 sq ft*

Which Boilers are fitted with Forced Draft *SOLE BOILER* Which Boilers are fitted with Superheaters *NONE*

No. and Description of Boilers *1SB* Working Pressure *220 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 *Yes*

PLANS. Are approved plans forwarded herewith for Shafting *25.7.44* Main Boilers *14.9.42* Auxiliary Boilers *Yes* Donkey Boilers *Yes*  
 (If not state date of approval)

Superheaters *Yes* General Pumping Arrangements *19.7.44* Oil fuel Burning Piping Arrangements *11.5.45*

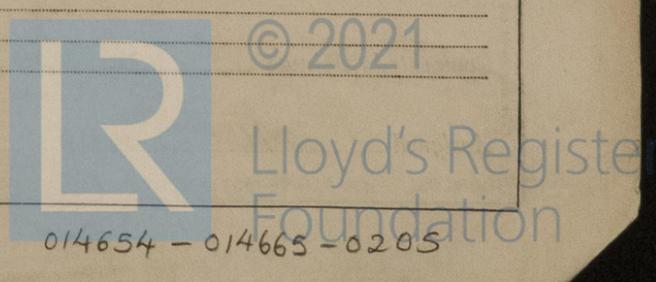
SPARE GEAR.

Has the spare gear required by the Rules been supplied *As per Specification.*

State the principal additional spare gear supplied

The foregoing is a correct description.

Manufacturer.



E. CLARA.

During progress of work in shops -- { main engines built in Providence, Rhode Island, U.S.A by Franklin Machine & Foundry Co and supplied to installers by Admiralty.

Dates of Survey while building { During erection on board vessel --- { 1945 MAR 8, 21 APR 3, 16 MAY 29 JULY 23 AUG 9, 21 SEP 3, 6, 11, 14, 15, 17, 18, 19, 20, 21, 22, 25, 28 OCT 1, 3, 4, 6, 23

Total No. of visits. 26.

Dates of Examination of principal parts—Cylinders \_\_\_\_\_ Slides \_\_\_\_\_ Covers N<sup>o</sup>. B-638.

Pistons \_\_\_\_\_ Piston Rods \_\_\_\_\_ Connecting rods \_\_\_\_\_

Crank shaft *Su American* Thrust shaft *Bureau of Shipping* Intermediate shafts 16.1.45.

Tube shaft \_\_\_\_\_ Screw shaft 15.12.44. Propeller 16.4.45.

Stern tube 14.3.45 Engine and boiler seatings 6.9.45 Engines holding down bolts 14.9.45.

Completion of fitting sea connections 16.4.45.

Completion of pumping arrangements 3.10.45 Boilers fired 17.9.45 Engines tried under steam 1/10/45 6/10/45

Main boiler safety valves adjusted 3.10.45 Thickness of adjusting washers P & S 3/8"

Crank shaft material *Su American* Identification Mark *Bureau* Thrust shaft material *Cut* N<sup>o</sup>. Identification Mark B-638.

Intermediate shafts, material *F.I. STL* Identification Marks *161, FW* Tube shaft, material \_\_\_\_\_ Identification Mark \_\_\_\_\_

Screw shaft, material *F.I. STL* Identification Mark *184, FW* Steam Pipes, material *Stal* Test pressure 660 lb Date of Test 28.9.45

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 Stella*

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

The main engines and boilers for this vessel supplied by Admiralty from reserve stock and installed by Amos Smith, Hull in accordance with the Specification, the Secretary's letters and the Rules.

The workmanship and materials appear to be good.

The machinery has been tried under working conditions and found satisfactory at completion of the trials.

Eligible in my opinion to have record of LMC *10.45* O.G.

T 3 Cy 12", 20", 33" - 24" M.N. 109. 15B 220 lb.

3 cf H 5 1786 φ F.D. Fitted for oil fuel 10.45. F.P. above 150° F.

NHP 109 @ 5/- = 27-5-0

FE 3-0-0

{ One fifth for fitting-out 5-9-0

{ 25% for Specification 1-7-3

{ F.E. 3-0-0

The amount of Entry Fee ... £ 3 : 0 : 0 When applied for, 6 NOV 1945

Special F.I.T. O.H.T ... £ 5 : 9 : 0

25% SPECIFICATION ... £ 1 : 7 : 3

Donkey Boiler Fee ... £ : : : When received, 19

Travelling Expenses (if any) £ : : : 19

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

Committee's Minute ... FRI. 30 NOV 1945

Assigned *LMC(R) 10.45*

FITTED FOR OIL FUEL 10.45 FLASH POINT ABOVE 150° F. F.D. O.G.

