

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

-8 OCT 1927

Date of writing Report

10

When handed in at Local Office

-7 OCT. 1927

Port of

Sunderland

No. in Survey held at

Sunderland

Date, First Survey

5<sup>th</sup> Feb

Last Survey

29<sup>th</sup> Sept 1927

Reg. Book.

on the

S. S. "IRENE S. EMBIRICOS"

(Number of Visits 46)

Built at

Sunderland

By whom built

Messrs Short Bros Ltd

Yard No.

426

Tons

Gross 4164

Net 3754

When built

1927

Engines made at

Sunderland

By whom made

Messrs J. Dickinson &amp; Sons Ltd

Engine No.

884

when made

1927

Boilers made at

Sunderland

By whom made

Messrs J. Dickinson &amp; Sons Ltd

Boiler No.

884

when made

1927

Registered Horse Power

Owners

S. S. Embiricos.

Port belonging to

Athens.

Nom. Horse Power as per Rule

396

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

## ENGINES, &amp;c.—Description of Engines

Triple Expansion.

Dia. of Cylinders 25 $\frac{1}{2}$ " - 42 $\frac{1}{2}$ " - 72"

Length of Stroke 48"

Revs. per minute 58

No. of Cylinders 3

No. of Cranks 3

Dia. of Crank shaft journals

as per rule 13.419"

as fitted 13.5"

Dia. of Crank pin

13 $\frac{1}{2}$ "

Crank webs

Mid. length breadth 2' 2 $\frac{1}{2}$ "Mid. length thickness 8 $\frac{1}{2}$ "

shrunk

Thickness parallel to axis 8 $\frac{1}{2}$ "

Thickness around eye-hole 6"

Diameter of Thrust shaft under collars

as per rule 12.78"

as fitted 13.5"

Diameter of Tunnel shaft

as per rule 12.78"

as fitted 12 $\frac{3}{4}$ "

Diameter of Screw shaft

as per rule 14.24"

as fitted 14 $\frac{3}{8}$ "

Is the Screw shaft

fitted with a continuous liner the whole length of the stern tube

Yes

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 joints burned

Yes

If the liner does not fit tightly at the part

between the bearings in the stern tube, is the space charged with plastic material insoluble in water and non-corrosive

If two liners are fitted, is the shaft lapped or protected between the liners

of it being efficiently lubricated

Pitch of Propeller

18' 0"

No. of Blades

4

Length of Stern Bush

5' 0"

Diameter of Propeller

17' 6"

No. of Feed Pumps fitted to the Main Engines

2

Diameter of ditto

4"

Stroke 25 $\frac{1}{2}$ "

Can one be overhauled while the other is at work

Yes

No. of Bilge Pumps fitted to the Main Engines

2

Diameter of ditto

4 $\frac{1}{2}$ "Stroke 25 $\frac{1}{2}$ "

Can one be overhauled while the other is at work

Yes

Total number and size of power driven Feed and Bilge Auxiliary Pumps

Two Weir's 7"x 9 $\frac{1}{2}$ " x 21" and Feed Donkey 7"x 5" x 8"

No. and size of Pumps connected to the Main Bilge Line

One 9" x 11" x 10"

No. and size of Ballast Pumps

One 9" x 11" x 10"

No. and size of Lubricating Oil Pumps, including Spare Pump

Are two independent means arranged for circulating water through the Oil Cooler

Bilge Pumps;—In Engine and Boiler Room

3 - 2 $\frac{1}{2}$ " in Engine Room

No. and size of suction connected to both Main Bilge Pumps and Auxiliary

and in Holds, &c. No 1, 2-3"; No 2, 2-3 $\frac{1}{2}$ "No 3, 2-3 $\frac{1}{4}$ " No 4, 2-2 $\frac{3}{4}$ " aft Tunnel Well 1-2 $\frac{1}{2}$ "

No. and size of Main Water Circulating Pump Bilge Suctions

1 @ 6" Dia

No. and size of Donkey Pump Direct Suctions

to the Engine Room Bilges

1 @ 4 $\frac{1}{2}$ " 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 connections with the sea direct on the skin of the ship

Yes

Are they 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 Discharge Pipes above or below the deep water line

Yes

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel

Are the Blow Off Cocks fitted with a spigot and brass covering plate

Yes

What Pipes are carried through the bunkers

None

How are they protected

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 Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

## MAIN BOILERS, &amp;c.—(Letter for record (S))

Total Heating Surface of Boilers

618.6 sq ft

Is Forced Draft fitted

No

No. and Description of Boilers

Two Single Ended Marine type

Working Pressure

180 lbs sq in

IS A REPORT ON MAIN BOILERS NOW FORWARDED?

Yes

IS A DONKEY BOILER FITTED?

Yes

If so, is a report now forwarded?

Yes

## PLANS.

Are approved plans forwarded herewith for Shafting

Yes

Main Boilers

Yes

Auxiliary Boilers

Yes

Donkey Boilers

Yes

General Pumping Arrangements

Oil fuel Burning Piping Arrangements

## SPARE GEAR. State the articles supplied:—

One C.I. Propeller, One Set of Coupling Bolts and Nuts,  
 Two Main Bearing Bolts and Nuts, Two Connecting Rod Bolts and Nuts,  
 Two Piston Rod Bolts and Nuts, Two Feed Pump Valves, Two Bilge Pump Valves,  
 Fifty Assorted Bolts and Nuts, One Hundred Condenser Nipples, Three Bars of Assorted Iron,  
 Two Feed Check Valves, Two Safety Valve Springs, Two Escape Valve Springs, Six Tube Stoppers,  
 One Set of Air Pump Valves, Six Boiler Tubes, Six Condenser Tubes.  
 One Set of H.P. and M.P. Piston Rings.

The foregoing is a correct description,

J. Dickinson

Manufacturer.



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Lloyd's Register Foundation

005056-005060-018



During progress of work in shops -- 1927. Feb 5. Mar 2, 21, 25, 30. Apr 1, 5, 14, 23, 27. May 2, 11, 12, 31. June 8, 15, 17, 21, 24, 27. July 2, 7, 13, 18, 20, 22, 26, 27. Aug 3, 4, 5, 8, 11, 16, 17, 19.  
 During erection on board vessel -- Aug. 22, 25, 31. Sep. 2, 5, 8, 10, 23, 27, 29.  
 Total No. of visits 46

Dates of Examination of principal parts -- Cylinders 27-6-27 Slides 26-7-27  
 Covers 26-7-27 Pistons 20-7-27 Rods 20-7-27  
 Connecting rods 31-5-27 Crank shaft 18-7-27 Thrust shaft 18-7-27  
 Tunnel shafts 18-7-27 Screw shaft 19-8-27 Propellers 22-8-27  
 Stern tube 16-8-27 Engine and boiler seatings 8-9-27 Engines holding down bolts 8-9-27  
 Completion of pumping arrangements 29-9-27 Boilers fixed 10-9-27 Engines tried under steam 10-9-27  
 Completion of fitting sea connections 17-8-27 Stern tube 25-8-27 Screw shaft and propeller 23-9-27  
 Main boiler safety valves adjusted 10-9-27 Thickness of adjusting washers P.F.  $\frac{3}{8}$ " P.A.  $\frac{3}{8}$ " S.F.  $\frac{3}{8}$ " S.A.  $\frac{1}{32}$ " Dry P.  $\frac{7}{16}$ " S.  $\frac{5}{16}$ "  
 Material of Crank shaft Ingot Steel Identification Mark on Do. LLOYDS N° 704. D. 18-7-27. A.T.G.  
 Material of Thrust shaft Ingot Steel Identification Mark on Do. LLOYDS N° 1011. 18-7-27. A.T.G.  
 Material of Tunnel shafts Ingot Steel Identification Marks on Do. LLOYDS N° 593, 972. 18-7-27. A.T.G.  
 Material of Screw shafts Ingot Steel Identification Marks on Do. LLOYDS N° 971. D. 19-8-27. A.T.G.  
 Material of Steam Pipes S.D. Copper. ✓ Test pressure 360 lbs. □" ✓ Date of Test 8-9-27.  
 Is an installation fitted for burning oil fuel No ✓ Is the flash point of the oil to be used over 150°F. ✓  
 Have the requirements of the Rules for carrying and burning oil fuel been complied with ✓  
 Is this machinery duplicate of a previous case No ✓ If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c. The Materials and Workmanship are good. The Machinery has been constructed under Special Survey and satisfactorily fitted in the vessel.  
 It is eligible in my opinion for classification and the notation  
 ✱ L.M.C. 9, 27

It is submitted that  
 this vessel is eligible for  
 THE RECORD. + LMC 9. 27. CL

[Signature]  
 13/10/27  
 [Signature]

A. T. Griffith.  
 Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 5 : : When applied for,  
 Special ... £ 84 : 8 : -7 OCT. 1927  
 Donkey Boiler Fee ... £ 9 : 12 : : When received,  
 Travelling Expenses (if any) £ : : 11-10-27

Committee's Minute 10ES. 18 OCT 1927  
 Assigned + Lmc 9. 27 CL