

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

19 JAN 1943

Date of writing Report 14-11-1942 When handed in at Local Office

19

Port of

Sp. Smith

No. in Survey held at
Reg. Book.

Jarmouth

Date, First Survey

Hobart 2.

Last Survey

12-11-1942

on the

"EMPIRE SERAPH"

(Number of Visits)

21

Gross 129
Tons Net 710

Built at

By whom built

Richard Dunston Ltd.

Yard No. T374

When built 1942

Engines made at

Jarmouth

By whom made

Crabtree (1931) Ltd.

Engine No. 633

when made 1942

Boilers made at

By whom made

Boiler No.

when made

Registered Horse Power

Owners

Port belonging to

Nom. Horse Power as per Rule

94.8

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Trade for which Vessel is intended

ENGINES, &c.—Description of Engines.

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"

Crank webs

Mid. length breadth

Thickness parallel to axis 4 1/4"

Intermediate Shafts, diameter as per Rule 6 1/4"

as fitted 6 1/4"

Thrust shaft, diameter at collars

as per Rule 6 3/8"

Tube Shafts, diameter as per Rule 7 1/8"

Screw Shaft, diameter as fitted 7 1/8"

Is the tube screw shaft fitted with a continuous liner

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 shaft

Length of Bearing in Stern Bush next to and supporting propeller

Propeller, dia. 8'0"

Pitch 1'4"

No. of Blades 4

Material C.I.

whether Moveable No

Total Developed Surface 28 sq. feet

Feed Pumps worked from the Main Engines, No. 6m

Diameter 2 1/2"

Stroke 11"

Can one be overhauled while the other is at work

Bilge Pumps worked from the Main Engines, No. 6m

Diameter 2 1/2"

Stroke 11"

Can one be overhauled while the other is at work

Feed Pumps

No. and size

Pumps connected to the Main Bilge Line

No. and size

How driven

How driven

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

In Holds, &c.

Main Water Circulating Pump Direct Bilge Suctions, No. and size

Independent Power Pump Direct Suctions to the Engine Room Bilges,

No. and size

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

Are they fitted with Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stowchold plates

Are the Overboard Discharges above or below the deep water line

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

What Pipes pass through the bunkers

How are they protected

What pipes pass through the deep tanks

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

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

Is the Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

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

Is Forced Draft fitted

No. and Description of Boilers

Working Pressure

IS A REPORT ON MAIN BOILERS NOW FORWARDED?

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting 25-9-41 Main Boilers

Auxiliary Boilers

Donkey Boilers

(If not state date of approval)

Superheaters

General Pumping Arrangements

Oil fuel Burning Piping Arrangements

SPARE GEAR. State the articles supplied:— One pair main bearing houses, 2 main bearing bolts, One bottom end

Complete, One top end complete, One set feed pump valves & seats, One set HP, IP & LP piston

rings & springs, One set rings for HP piston valves, One set of blocks & springs for each valve & piston rod,

One set packs for Thrust, 12 condenser tubes & flanges, One set complete bolts, One set bilge

pump suction & delivery valves, One main & Aux. check valves, 12 Boiler tube stoppers,

Assorted bolts, nuts & iron.

The foregoing is a correct description,

FOR CRABTREE (1931) LTD.

-17 Smith

Manufacturer.

Managing Director



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Lloyd's Register
Foundation

007846 - 007856 - 0083

If not, state whether, and when, one will be sent?

Is a Report also sent on the Hull of the Ship?

NOTE.—The words which do not apply should be deleted.

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24.11.41, 31.1.42, 27.2.42, 10.3.42, 25.3.42, 3.4.42, 22.4.42, 6.5.42, 20.5.42, 29.5.42
11.6.42, 17.6.42, 26.6.42, 22.7.42, 7.8.42, 26.8.42, 21.9.42, 10.10.42
21.10.42, 6.11.42, 12.11.42.

Dates of Survey while building

During progress of work in shops --

During erection on board vessel ---

Total No. of visits *21*

10-10-42

82-7-42

7-8-42

7-8-42

Dates of Examination of principal parts—Cylinders 22-7-42 Slides 7-8-42 Covers 7-8-42

Pistons 7-8-42 Piston Rods 7-8-42 Connecting rods 7-8-42

Crank shaft 22-7-42 Thrust shaft 26-8-42 Intermediate shafts 25-8-42

Tube shaft 25-8-42 Screw shaft 25-8-42 Propeller 25-8-42

Stern tube 25-8-42 Engine and boiler seatings Engines holding down bolts

Completion of fitting sea connections

Completion of pumping arrangements Boilers fixed Engines tried under steam

Main boiler safety valves adjusted Thickness of adjusting washers

Crank shaft material *Steel* Identification Mark *N° 6372 J.F.C. 2/41* Thrust shaft material *Steel* Identification Mark *N° 6812 J.F.C. 2/41*

Intermediate shafts, material *Steel* Identification Mark *N° 6811 J.F.C. 2/41* Tube shaft, material Identification Mark

Screw shaft, material *Steel* Identification Mark *N° 6810 J.F.C. 2/41* Steam Pipes, material Test pressure Date of Test

Is an installation fitted for burning oil fuel Is the flash point of the oil to be used over 150°F.

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 so, have the requirements of the Rules been complied with

Is this machinery duplicate of a previous case *No* If so, state name of vessel *Engin N° 632*

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

The engine has been constructed under Special Survey in accordance with the approved plans & Rule requirements. The materials & workmanship are sound.

On the satisfactory installation on board the vessel, the machinery will be eligible for record of L.M.C. with date.

The machinery has been dispatched to Shipbuilders.

Certificate to be sent to

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

The amount of Entry Fee ... £	2 : 0 : 0	When applied for,
Special $\frac{2}{5} \times 3.5 = 14.10.0$		19.....
+ 25% $\frac{2}{5} \times 2.6 = 11.17.6$	11 : 17 : 6	
Donkey Boiler Fee ... £	:	When received,
Travelling Expenses (if any) £	3 : 15 : 3	19.....

A. J. Bell.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned *See Incl J.E. 51867*

FRI. 19 FEB 1943