

REPORT ON OIL ENGINE MACHINERY.

No. 110,099

Received at London Office

15 DEC 1941

Date of writing Report 6-12-1941 When handed in at Local Office

15 DEC 1941 Port of

Ip Swich

No. in Survey held at
Reg. Book.

Lewistoft.

Date, First Survey

17-7-41

Last Survey

4-12-1941

Number of Visits

18.

Tons
Gross
Neton the ^{Single}~~Triple~~ Screw vessel m.v. "EMPIRE SOUND"

Built at Lewistoft.

By whom built Richards Ironworks, Ltd.

Yard No. 281 When built 1941.

Engines made at Manchester.

By whom made Crossley Bros. Ltd.

Engine No. 125889 When made 1941.

Donkey Boilers made at

By whom made

Boiler No. When made

Brake Horse Power 330

Owners

Port belonging to Lewistoft.

Nom. Horse Power as per Rule 116.

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

Trade for which vessel is intended Coasting.

OIL ENGINES, &c. Type of Engines

2 or 4 stroke cycle Single or double acting

Maximum pressure in cylinders

Diameter of cylinders

Length of stroke

No. of cylinders

No. of cranks

Mean Indicated Pressure

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge

Is there a bearing between each crank

Revolutions per minute

Flywheel dia.

Weight

Means of ignition

Kind of fuel used

Crank Shaft, { Solid forged
Semi built dia. of journals
All builtas per Rule
as fitted

Crank pin dia.

Crank Webs

Mid. length breadth
Mid. length thickness

shrunk

Thickness parallel to axis
Thickness around eyehole

Flywheel Shaft, diameter

as per Rule
as fitted

Intermediate Shafts, diameter

as per Rule
as fittedapproved
4 3/4"

Thrust Shaft, diameter at collars

as per Rule
as fitted

Tube Shaft, diameter

as per Rule
as fitted

Screw Shaft, diameter

as per Rule
as fittedapproved
5 3/8"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

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

No

If so, state type

Length of Bearing in Stern Bush next to and supporting propeller 20"

Propeller, dia. 65"

Pitch 46"

No. of blades 4

Material Bronze

whether Moveable

No

Total Developed Surface 10.98 sq. feet

Method of reversing Engines

Is a governor or other arrangement fitted to prevent racing of the engine when declutched

Means of lubrication

Thickness of cylinder liners

Are the cylinders fitted with safety valves

Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material

Yes

If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine

Cooling Water Pumps, No.

Is the sea suction provided with an efficient strainer which can be cleared within the vessel

No

Bilge Pumps worked from the Main Engines, No.

Diameter

Stroke

Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line

No. and Size

One 4 1/4" x 3" (main engine)

One 2" self priming Centrifugal pump.

How driven

Main engine

Aux. engine

Is the cooling water led to the bilges

No

If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping

arrangements

Ballast Pumps, No. and size One S.P. Centrifugal Pump. Power Driven 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, No. and size:—In Machinery Spaces

3 — 2 — 2" + One 2 1/2"

In Pump Room

In Holds, &c. 3 — 2"

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One 2 1/2"

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes

No

Are the Bilge Suctions in the Machinery Spaces

led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges

No

Are all Sea Connections fitted direct on the skin of the ship

No

Are they fitted with Valves or Cocks

Valves

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

No

Are the Overboard Discharges above or below the deep water line

Both

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

No

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

No

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

No

Is the Shaft Tunnel watertight

None

Is it fitted with a watertight door

worked from

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Main Air Compressors, No.

No. of stages

Diameters

Stroke

Driven by

Auxiliary Air Compressors, No.

No. of stages

Diameters

Stroke

Driven by

Small Auxiliary Air Compressors, No. One

No. of stages

One

Diameters

3 1/4"

Stroke

3 1/4"

Driven by

Aux. engine.

What provision is made for first Charging the Air Receivers

Compressor driven by Aux. engine — Hand Starting

Driven by

Scavenging Air Pumps, No.

Diameter

No.

One

Auxiliary Engines crank shafts, diameter

as per Rule
as fittedapproved
3 1/2" journals

3 1/4" pin

Position

Port Side

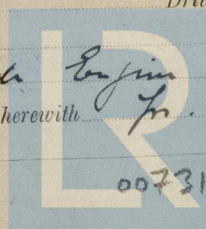
Engine Room

Have the Auxiliary Engines been constructed under special survey

No

Is a report sent herewith

Yes



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AIR RECEIVERS: — Have they been made under survey.....

Is each receiver, which can be isolated, fitted with a safety valve as per Rule

Can the internal surfaces of the receivers be examined and cleaned

Injection Air Receivers, No.

Cubic capacity of each

Seamless, lap welded or riveted longitudinal joint

Material

Starting Air Receivers, No.

Total cubic capacity

Seamless, lap welded or riveted longitudinal joint

Material

IS A DONKEY BOILER FITTED?

Is the donkey boiler intended to be used for domestic purposes only

PLANS. Are approved plans forwarded herewith for Shafing

(If not, state date of approval)

Donkey Boilers

General Pumping Arrangements

Oil Fuel Burning Arrangements

Receivers

Separate Fuel Tanks

Pumping Arrangements in Machinery Space

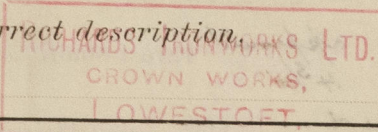
SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

The foregoing is a correct description.

C. Richards



Manufacturer.

Dates of Survey while building
During progress of work in shops - July 1.15
During erection on board vessel - 17.7.41, 9.8.41, 1.9.41, 10.9.41, 16.9.41, 18.9.41, 26.9.41, 3.10.41, 10.10.41, 14.10.41, 3.11.41, 11.11.41, 17.11.41
Total No. of visits 18.20

Dates of Examination of principal parts—Cylinders ✓ Covers ✓ Pistons ✓ Rods ✓ Connecting rods ✓
Crank shaft ✓ Flywheel shaft ✓ Thrust shaft ✓ Intermediate shafts 17.7.41 Tube shaft ✓
Screw shaft 17.7.41 Propeller 9.8.41 Stern tube 17.7.41 Engine seatings 10.8.41 Engines holding down bolts 3.9.41
Completion of fitting sea connections 9.8.41 Completion of pumping arrangements 17.11.41 Engines tried under working conditions 4.12.41
Crank shaft, Material ✓ Identification Mark ✓ Flywheel shaft, Material ✓ Identification Mark
Thrust shaft, Material ✓ Identification Mark ✓ Intermediate shafts, Material *Shil* Identification Marks 440YDS. N°263
Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material *Stul* Identification Marks 440YDS. N°262
Identification Marks on Air Receivers ✓ Identification Mark 440YDS. N°262

Is the flash point of the oil to be used over 150° F.

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with

Description of fire extinguishing apparatus fitted

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

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 has been fitted on board this vessel in accordance with the approved plan & Rule requirements. (Mancheste Report k² 10646 & 10696)
The materials & workmanship are sound & of good description.
The machinery has been examined under working conditions and in my opinion is eligible to be classed & have notation + L.M.C. 12.41. Oil Engine.

The amount of Entry Fee .. £

Special ... + 25% £

Donkey Boiler Fee ... £

Travelling Expenses (if any) £

When applied for,

When received,

Committee's Minute

Assigned

Engineer Surveyor to Lloyd's Register of Shipping.



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