

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report

10

When handed in at Local Office

31.10.1927 Port of Glasgow

No. in Survey held at

Glasgow

Date, First Survey

9.5.27

Last Survey

24.10.1927

Reg. Book.

on the

S. Astra 111

(Number of Visits)

36

Gross 5640

Net 3322

Built at

Monfalcone Italy By whom built Cantiere Navale Triestino

Yard No. 186

When built 1927

Engines made at

Glasgow

By whom made David Rowan &amp; Co. Ltd

Engine No. 866

when made 1927

Boilers made at

Glasgow

By whom made David Rowan &amp; Co. Ltd

Boiler No. 866

when made 1927

Registered Horse Power

Owners

Port belonging to

Nom. Horse Power as per Rule

651

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

Trade for which Vessel is intended

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

Triple expansion

Revs. per minute

Dia. of Cylinders

27 1/2 - 46 - 77

Length of Stroke

54"

No. of Cylinders

3

No. of Cranks

3

Crank shaft, dia. of journals

as per Rule 15.183"

as fitted 15 1/2"

Crank pin dia.

15 1/2"

Crank webs

Mid. length breadth 22 1/2"

Mid. length thickness 9 3/4"

Thickness parallel to axis 9 3/4"

Thickness around eye-hole 7"

Intermediate Shafts, diameter

as per Rule 14.46"

as fitted 14 1/2"

Thrust shaft, diameter at collars

as per Rule 15.18"

as fitted 15 1/2"

Tube Shafts, diameter

as per Rule

as fitted

Screw Shaft, diameter

as per Rule 15.96"

as fitted 16"

Is the tube screw shaft fitted with a continuous liner

yes

Bronze Liners, thickness in way of bushes

as per Rule 7.87"

as fitted 13/16"

Thickness between bushes

as per Rule 59"

as fitted 3/4"

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

no

Is an approved Oil Gland or other appliance fitted at the after

end of the tube shaft

no

Length of Bearing in Stern Bush next to and supporting propeller

5'-4"

Propeller, dia.

18'-0"

Pitch

18'-0"

No. of Blades

4

Material

Bronze

Whether Moveable

yes

Total Developed Surface

99

sq. feet

Feed Pumps worked from the Main Engines, No.

none

Diameter

Stroke

Can one be overhauled while the other is at work

no

Bilge Pumps worked from the Main Engines, No.

none

Diameter

Stroke

Can one be overhauled while the other is at work

no

Feed Pumps

No. and size

2 @ 12 1/2 x 9 x 12

How driven

Steam

Pumps connected to the

Main Bilge Line

No. and size

10 @ 6 1/2 x 8 x 8 duplex

How driven

Steam

also Ballast pump

Steam

Ballast Pumps, No. and size

1 @ 10 x 12 x 12

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

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

no

Suctions, connected to both Main Bilge Pumps and Auxiliary

Bilge Pumps, In Engine and Boiler Room

In Holds, &amp;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 man-holes, 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 stowhold 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 bulkers

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, &amp;c.—(Letter for record)

S

Total Heating Surface of Boilers

9615 sq. ft.

Is Forced Draft fitted

yes

No. and Description of Boilers

three single ended

Working Pressure

200

IS A REPORT ON MAIN BOILERS NOW FORWARDED?

yes

IS A DONKEY BOILER FITTED?

no

If so, is a report now forwarded?

PLANS.

Are approved plans forwarded herewith for Shafting

no

Main Boilers

yes

Auxiliary Boilers

no

Donkey Boilers

no

Superheaters

(If not state date of approval)

General Pumping Arrangements

No. Copies in Ldn &amp; Trin

Oil fuel Burning Piping Arrangements

No. Copies in Ldn &amp; Trin

SPARE GEAR.

State the articles supplied:—

As per Rules and in addition:— one screw shaft,

two bronze propeller blades, one 3 crankshaft, one piston rod, one top end bush

one bottom end bush, one complete set of rings for main engine pistons, one thrust

chase, one eccentric strap, One set of piston rings for each donkey (Steam and water)

one set of valves for each donkey.

The foregoing is a correct description.

For David Rowan &amp; Co. Ltd

Arch. W. Grierson

Manufacturer.



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Lloyd's Register Foundation

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39154

1927 May 9-11 Jun 2-20-21-24-27 July 7 Aug 5-8-9-11-16-19-23-25 Sep 2-7-8-9-12-15-16-19-29-30 Oct

Dates of Survey while building

During progress of work in shops - - 3-5-7-11-12-14-17-18-24-25

During erection on board vessel - - -

Total No. of visits 36

Dates of Examination of principal parts—Cylinders 11-8-27 Slides 11-10-27 Covers 9-9-27

Pistons 19-9-27 Piston Rods 29-9-27 Connecting rods 7-9-27

Crank shaft 2-9-27 Thrust shaft 30-9-27 Intermediate shafts 8-9-27

Tube shaft - Screw shaft 12-9-27 Propeller 12-9-27

Stern tube 7-9-27 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 I. Steel Identification Mark LLOYD'S NO 866 J.M. 2-9-27 Thrust shaft material I. Steel Identification Mark LLOYD'S NO 2017 L.C.O. 2-9-27

Intermediate shaft material Identification Marks LLOYD'S NO 2018 L.C.O. 8-9-27 Tube shaft, material - Identification Mark

Screw shafts material I. Steel Identification Mark LLOYD'S NO 2074 L.C.O. 12-9-27 Steam Pipes, material Steel Test pressure 600 Date of Test 3-10-27

Is an installation fitted for burning oil fuel yes 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 in accordance with the Rules. It is about to be dispatched to Trieste to be fitted in the vessel.

A.B.  
25/10/27

GLASGOW

Certificate to be sent to

The amount of Entry Fee ... £ 6 : -

Special ... £ 86 : 1

Donkey Boiler Fee ... £ :

Travelling Expenses (if any) £ :

When applied for, 27/10/27

When received, 1/11/27

L. Schanis.

Engineer Surveyor to Lloyd's Register of Shipping.

TUES. 13 MAR 1928

Committee's Minute GLASGOW 1 - NOV 1927

Assigned Deferres.

Lloyd's Register Foundation