

## REPORT ON MACHINERY.

No. 45466

Received at London Office

2 JUN 1926

Date of writing Report

19

When handed in at Local Office

4.3.1926 Port of

Glasgow

No. in Survey held at  
Reg. Book.

Glasgow

Date, First Survey 26<sup>th</sup> Mar 1924 Last Survey

1926

(Number of Visits 54)

on the

S. S. "Ulmus"

Tons

Gross 1697

Net 1672

Master

Built at Port Glasgow

By whom built Dunlop Bremner &amp; Co Ltd (351)

When built 1926

Engines made at

Glasgow

By whom made D. Rowan &amp; Co Ltd

(N<sup>o</sup> 797)

when made 1926

Boilers made at

Glasgow

By whom made D. Rowan &amp; Co Ltd

(N<sup>o</sup> 797)

when made 1926

Registered Horse Power

Owners Robert Shipping Co Ltd

Port belonging to London

Nom. Horse Power as per Section 28

250

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

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

Triple expansion

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 22", 36", 59" Length of Stroke 39" Revs. per minute

Dia. of Screw shaft as per rule 12.26" Material of screw shaft as fitted 12.26" steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube yes No OG Is the after end of the liner made water tight in the propeller boss yes If the liner is in more than one length are the joints burned — 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

Length of stern bush 4.3"

Dia. of Tunnel shaft as per rule 10.85" Dia. of Crank shaft journals as per rule 11.39"

Dia. of Crank pin 11.5" Size of Crank webs 7.5" x 7.5" Dia. of thrust shaft under

collars 11.5" Dia. of screw 16.0" Pitch of Screw 16.0"

No. of Blades 4 State whether moveable no Total surface 78 sq ft

No. of Feed pumps 2 Diameter of ditto 3.5" Stroke 21"

Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 3.5" Stroke 21"

Can one be overhauled while the other is at work yes

No. of Donkey Engines 3 Sizes of Pumps 8x10x8 8x5x6 6x4x6

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room

In Holds, &amp;c.

No. of Bilge Injections

sizes

Connected to condenser, or to circulating pump

Is a separate Donkey Suction fitted in Engine room &amp; size

Are all the bilge suction pipes fitted with roses

Are the roses in Engine room always accessible

Are the sluices on Engine room bulkheads always accessible

Are all connections with the sea direct on the skin of the ship

Are they Valves or Cocks

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

Are the Discharge Pipes 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 are carried through the bunkers

How are they protected

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

Is the Screw Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

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

Manufacturers of Steel The Port Talbot Steel Co Ltd Wm Beames &amp; Co Ltd Llanabes Steel Co Ltd

Total Heating Surface of Boilers 4062 sq ft Is Forced Draft fitted no

No. and Description of Boilers two single ended

Working Pressure 180

Tested by hydraulic pressure to 320

Date of test 13-11-24

No. of Certificate 16654

Can each boiler be worked separately yes

Area of fire grate in each boiler 58.75 sq ft

No. and Description of Safety Valves to

each boiler two direct spring

Area of each valve 7.06 sq ft

Pressure to which they are adjusted 185

Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 12"

Mean dia. of boilers 15.0"

Length 10.6" Material of shell plates steel

Thickness 1.5" Range of tensile strength 28-32 tons

Are the shell plates welded or flanged no Descrip. of riveting: cir. seams DR

long. seams DBS, TR Diameter of rivet holes in long. seams 1.4"

Pitch of rivets 8.5"

Lap of plates or width of butt straps 18.5"

Per centages of strength of longitudinal joint

rivets 87 plate 86

Working pressure of shell by rules 180

Size of manhole in shell 19.5" x 15.5"

Size of compensating ring 2.10 x 2.6 x 1.2"

No. and Description of Furnaces in each boiler 3 Deighton

Material Steel Outside diameter 3.75"

Length of plain part top

Thickness of plates bottom 3.5"

Description of longitudinal joint welded

No. of strengthening rings

Working pressure of furnace by the rules 181

Combustion chamber plates: Material steel

Thickness: Sides 1.6"

Back 3.5" Top 1.6" Bottom 1.6"

Pitch of stays to ditto: Sides 8.5 x 10.5"

Back 8.5 x 9.5"

Top 8.5 x 10.5"

If stays are fitted with nuts or riveted heads nuts

Working pressure by rules 180

Material of stays steel

Area at smallest part 1.5"

Area supported by each stay 85.3

Working pressure by rules 180

End plates in steam space:

Material steel Thickness 1.5"

Pitch of stays 19 x 21"

How are stays secured DN

Working pressure by rules 182

Material of stays steel

Area at smallest part 8.2 x 3.4"

Area supported by each stay 412.8 x 353.0"

Working pressure by rules 185

Material of Front plates at bottom steel

Thickness 3.5"

Material of Lower back plate steel

Thickness 3.5"

Greatest pitch of stays 13.5" x 8.5"

Working pressure of plate by rules 183

Diameter of tubes 3.5"

Pitch of tubes 4.5" x 4.5"

Material of tube plates steel

Thickness: Front 3.5"

Back 3.5" Mean pitch of stays 10.27"

Pitch across wide water spaces 13.8"

Working pressures by rules 180

Girders to Chamber tops: Material steel

Depth and

thickness of girder at centre 20.9" x 7.5"

Length as per rule 33.5"

Distance apart 10.5"

Number and pitch of stays in each 3 @ 8.5"

Working pressure by rules 186

Steam dome: description of joint to shell none

% of strength of joint

Diameter

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet holes

Pitch of rivets

Working pressure of shell by rules

Crown plates

Thickness

How stayed

SUPERHEATER. Type none

Date of Approval of Plan

Tested by Hydraulic Pressure to

Date of Test

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Diameter of Safety Valve

Pressure to which each is adjusted

Is Easing Gear fitted

003567-003571-0343



IS A DONKEY BOILER FITTED? no

If so, is a report now forwarded? —

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

For David Rowan & Co. Ltd

Arch. N. Grierson

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1924 Mar 26 May 14 28 June 2 3 4 5 11 16 July 13 15 30 Aug 4 5 7 11 12 22 27 Sep 5 12 19 23 26 Oct 1 2 4  
During erection on board vessel -- 9 16 21 24 Nov 12 13 26 Dec 2 5 12 (1923) Jan 12 28 Feb 2 9 Mar 3 Aug 4 Dec 21 (1926) Jan 26 Feb 3 4 9 15 22 Mar 1 14 19 25 May 10 13 14  
Total No. of visits 5 7

Is the approved plan of main boiler forwarded herewith yes

" " " donkey " " " " " "

Dates of Examination of principal parts—Cylinders 26-11-24 Slides 5-12-24 Covers 2-12-24 Pistons 2-12-24 Rods 5-12-24

Connecting rods 5-12-24 Crank shaft 24-10-24 Thrust shaft 26-11-24 Tunnel shafts 3-3-25 Screw shaft 28-1-25 Propeller 12-1-25

Stern tube 12-1-25 Steam pipes tested Engine and boiler seatings Engines holding down bolts

Completion of pumping arrangements Boilers fixed Engines tried under steam

Completion of fitting sea connections Stern tube Screw shaft and propeller

Main boiler safety valves adjusted 31-3-26. Thickness of adjusting washers P  $\frac{3}{8}$  S  $\frac{3}{8}$  P  $\frac{3}{8}$  B S  $\frac{3}{8}$

Material of Crank shaft steel Identification Mark on Do. LLOYDS No 525 H.C.F. 26-10-24 Material of Thrust shaft steel Identification Mark on Do. LLOYDS No 525 L.C.D. 26-11-24

Material of Tunnel shafts steel Identification Marks on Do. LLOYDS No 525 L.C.D. 3-3-25 Material of Screw shafts steel Identification Marks on Do. LLOYDS No 525 L.C.D. 28-1-25

Material of Steam Pipes Test pressure

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 Section 49 of the Rules 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 sent to Port Glasgow to be fitted in the vessel. Surveyors advise.

The workmanship and materials are good

The machinery has been constructed under Special Survey in accordance with the Rules and will be eligible in my opinion for Classification and the Rent & LMC when it has been satisfactorily fitted in the vessel.

The amount of Entry Fee ... £ 4 : : When applied for,

Special due 2/3 fee £ 50 : : 2/3 fee 1926

Donkey Boiler Fee ... £ 12 : 10 : When received,

Travelling Expenses (if any) £ : : 29-5-1926

S. C. Davis

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 1-JUN 1926

Assigned + L.M.C. 5.26.

CERTIFICATE WRITTEN 2-6-26



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