

Rpt. 4.

## REPORT ON MACHINERY.

No. 24280

Port of

Glasgow

Received at London Office

THUR. 9 AUG 1906

No. in Survey held at  
Reg. Book.

Glasgow

Date, first Survey 4 Oct 05

Last Survey 28 July 1906

on the

J J Luristan

(Number of Visits)

Gross

Tons

Net

Master

Built at

Port Glasgow

By whom built

W Hamilton &amp; Co

When built 1906

Engines made at

Glasgow

By whom made

David Rowan &amp; Co (7-446)

when made 1906

Boilers made at

do

By whom made

do

when made 1906

Registered Horse Power

Owners

F C Huch &amp; Co

Port belonging to Swansea

Nom. Horse Power as per Section 28 364

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

Yes

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

Triple Expansion

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 25 1/2 - 41 - 67

Length of Stroke 45

Revs. per minute 65

Dia. of Screw shaft

as per rule 13 0/1

Material of screw shaft

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 water tight

in the propeller boss

Yes

If the liner is in more than one length are the joints burned

No

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

No

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

No

Length of stern bush 4-9"

Dia. of Tunnel shaft

as per rule 12-39"

Dia. of Crank shaft journals

as per rule 13-01"

Dia. of Crank pin 13 1/4"

Size of Crank webs 8 1/2"

Dia. of thrust shaft under

collars 1 1/4"

Dia. of screw 16-3"

Pitch of Screw 17-0"

No. of Blades 4

State whether moveable

Yes

No. of Feed pumps 2

Diameter of ditto 4 3/8"

Stroke 24"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps 2

Diameter of ditto 4

Stroke 24"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines 3

Field Sizes of Pumps 8x5x4, 9x12x10, 5 1/2x3 1/2x6

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

In Engine Room 3 - 3 1/2"

In Holds, &amp;c.

7 - 3 1/2"

Tunnel 2 3/4"

No. of Bilge Injections 1 sizes 6"

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

Yes

Are the roses in Engine room always accessible

Yes

Are the sluices on Engine room bulkheads always accessible

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

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

Yes

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

What pipes are carried through the bunkers

Ford suction

How are they protected

Wood covering stank

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

Yes

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

Yes

Dates of examination of completion of fitting of Sea Connections

9

of Stern Tube

8

Screw shaft and Propeller

Kept at

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from Top grating

## BOILERS, &amp;c.—(Letter for record (5))

Manufacturers of Steel

The Clyde Bridge Steel Works

Total Heating Surface of Boilers 4906

Is Forced Draft fitted

Yes

No. and Description of Boilers

Two Single Ended

Working Pressure 180 lb

Tested by hydraulic pressure to

360 lb

Date of test 18.6.06

No. of Certificate 8188

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

59.3

No. and Description of Safety Valves to

each boiler 2 Spring

Area of each valve 9.6

Pressure to which they are adjusted

160 lb

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

all 3"

Mean dia. of boilers 15-0"

Length 11-6"

Material of shell plates

Steel

Thickness 1 1/2"

Range of tensile strength 28 1/2 - 32

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

D. R. L.

long. seams

D. B. S.

Diameter of rivet holes in long. seams 17/16"

Pitch of rivets 9 7/8"

Lap of plates or width of butt straps 21"

Per centages of strength of longitudinal joint

rivets 93.2

plate 85.06

Working pressure of shell by rules

204 lb

Size of manhole in shell

16x12"

Size of compensating ring 2-7x2-3

No. and Description of Furnaces in each boiler

3 Adamson Ring

Material

Steel

Outside diameter

3-8 3/8"

Length of plain part

top 3-49"

Thickness of plates

crown 3/4"

bottom 3/4"

Description of longitudinal joint

weld

No. of strengthening rings

1

Working pressure of furnace by the rules

190

Combustion chamber plates: Material

Steel

Thickness: Sides

7/8"

Back 2 1/32"

Top 7/8"

Bottom 1"

Pitch of stays to ditto: Sides 8 1/4x8

Back 7x8 3/4

Top 8 1/4x8 3/4

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

187 lb

Material of stays Steel

Area at smallest part 2.07

Area supported by each stay 7 1/8"

Working pressure by rules

210

End plates in steam space:

Material Steel

Thickness 1 3/16"

Pitch of stays 18 3/4x15

How are stays secured

nuts

Working pressure by rules

240

Material of stays

Steel

Area at smallest part 6.44

Area supported by each stay 26.5"

Working pressure by rules

240

Material of Front plates at bottom

Steel

Thickness 7/8"

Material of Lower back plate

Steel

Thickness 7/8"

Greatest pitch of stays 14"

Working pressure of plate by rules

194

Diameter of tubes 2 1/2"

Pitch of tubes 3 7/8x3 3/4"

Material of tube plates

Steel

Thickness: Front 3 1/32"

Back 3/4"

Mean pitch of stays 11 1/2"

Pitch across wide water spaces 13 1/2"

Working pressures by rules

197 lb

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre 9x1x2

Length as per rule 33 1/2"

Distance apart 8 3/4"

Number and pitch of stays in each

3 - 8 1/4"

Working pressure by rules

216

Superheater or Steam chest; how connected to boiler

none

Can the superheater be shut off and the boiler worked

separately

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet

holes

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

If stiffened with rings

Distance between rings

Working pressure by rules

End plates: Thickness

How stayed

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

Yes

Working pressure by rules

End plates: Thickness

How stayed

Working pressure by rules

End plates: Thickness

How stayed

Working pressure by rules

End plates: Thickness

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

Yes

Working pressure by rules

End plates: Thickness

How stayed

Working pressure by rules

End plates: Thickness

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Working pressure by rules

End plates: Thickness

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Yes

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Area of safety valves to superheater

Are they fitted with easing gear

Yes

Working pressure by rules

End plates: Thickness

How stayed

Working pressure by rules

End plates: Thickness

How stayed

Working pressure by rules

End plates: Thickness

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

Yes



# VERTICAL DONKEY BOILER-

Manufacturers of Steel

Multitubular.

See Rpt. 5.

No. 1 Description Fixed in the hold

Made at By whom made

Working pressure tested by hydraulic pressure to Date of test When made Where fixed

Valves No. of Safety Valves Area of each Pressure to which they are adjusted Fire grate area Description of Safety

If fitted with easing gear If steam from main boilers can enter the donkey boiler Date of adjustment

Material of shell plates Thickness Range of tensile strength Descrip. of riveting long. seams Length

Dia. of rivet holes Whether punched or drilled Pitch of rivets Lap of plating Per centage of strength of joint Rivets

Working pressure of shell by rules Thickness of shell crown plates Radius of do. No. of stays to do. Dia. of stays

Diameter of furnace Top Bottom Length of furnace Thickness of furnace plates Description of joint

Working pressure of furnace by rules Thickness of furnace crown plates Stayed by

Diameter of uptake Thickness of uptake plates Thickness of water tubes Dates of survey

SPARE GEAR. State the articles supplied:— Propeller shaft, 2 propeller blades, set bottom end brasses, set top end brasses, 1 valve spindle, 24 condenser tubes, 12 boiler tubes etc & the bolts, nuts etc, required by the Rules.

The foregoing is a correct description,

David Nowan & Co

Manufacturer.

Dates of Survey while building  
During progress of work in shops— 1905 Oct 4 19 Nov 15 21 Dec 7 16 24 30 1906 Jan 12 19 Feb 6 13 Mar 15 22  
During erection on board vessel— 12 16 20 Apr 13 21 24 27 May 24 31 June 1 6 10 15 20 25 28 July 2 9 11 12 28  
Total No. of visits 37

Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Cylinders 1. 3. 06 etc Slides 1. 3. 06 etc Covers 1. 3. 06 etc Pistons 1. 3. 06 etc Rods 1. 3. 06 etc  
Connecting rods 24. 4. 06 etc Crank shaft 1. 3. 06 etc Thrust shaft 30. 3. 06 etc Tunnel shafts 30. 3. 06 etc Screw shaft 22. 11. 05 etc Propeller 24. 5. 06  
Stern tube 24. 5. 06 Steam pipes tested 28/6/11/7/06 Engine and boiler seatings 28. 6. 06 Engines holding down bolts 28. 6. 06  
Completion of pumping arrangements 12. 7. 06 Boilers fixed 12. 7. 06 Engines tried under steam July 28<sup>th</sup> 1906  
Main boiler safety valves adjusted 18<sup>th</sup> 06 Thickness of adjusting washers Steel Boiler 1/2 Bar 1/2 Bar Port Boiler 1/2 Bar 1/2 Bar  
Material of Crank shaft Steel Identification Mark on Do. YES Material of Thrust shaft Steel Identification Mark on Do. YES  
Material of Tunnel shafts Steel Identification Marks on Do. YES Material of Screw shafts Iron Identification Marks on Do. YES  
Material of Steam Pipes Copper Test pressure 360 lbs.

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

These engines & boilers have been constructed under Special Survey & are of good materials & workmanship. They have been satisfactorily tried under steam.

This vessel is in our opinion eligible to have notation \* L M C 7-06 in the Register Book

It is submitted that this vessel is eligible for THE RECORD L M C 7-06. F.D. ELEC. LIGHT

The amount of Entry Fee... £ 3 : 4 :  
Special ... £ 38 : 4 :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ : :  
When applied for...  
When received...

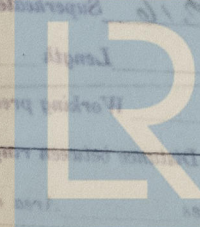
Committee's Minute Glasgow - 8 AUG 1906

Assigned + L M C 7.06

When fee is paid

MACHINERY CERTIFICATE

WRITTEN 9.8.06



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