

## REPORT ON MACHINERY.

No. 44248

Received at London Office

24 DEC 1924

Date of writing Report

19

When handed in at Local Office

15. 12. 24 Port of

Glasgow

No. in Survey held at  
Reg. Book.

Glasgow

Date, First Survey

11. 6

24 Last Survey

13-12-

1924

on the

S.S. "HISTORIAN"

(Number of Visits 51)

Tons { Gross 5074  
Net 3450

Master

Built at

Glasgow

By whom built

Chas. Connell &amp; Co. Ltd. (No 400)

When built

1924

Engines made at

Glasgow

By whom made

David Rowan &amp; Co. Ltd. (No 799)

when made

1924

Boilers made at

Glasgow

By whom made

David Rowan &amp; Co. Ltd. (No 799)

when made

1924

Registered Horse Power

Owners

J. G. Harrison Ltd.

Port belonging to

Liverpool

Nom. Horse Power as per Section 28

464

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

26"-43"-73"

Length of Stroke

48"

Revs. per minute

77

Dia. of Screw shaft

as per rule 14.81  
as fitted 15.4

Material of screw shaft

Steel

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

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

charged

If two

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

Length of stern bush

5'-10"

Dia. of Tunnel shaft

as per rule 13.5"  
as fitted 13.5"

Dia. of Crank shaft journals

as per rule 14.206"  
as fitted 14.4"

Dia. of Crank pin

14.5"

Size of Crank webs

9'-22.34"

Dia. of thrust shaft under

collars 14.3/8"

Dia. of screw

17'-6"

Pitch of Screw

16'-6"

No. of Blades

4

State whether moveable

yes

Total surface

98.5

No. of Feed pumps

2

Diameter of ditto

4"

Stroke

24"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

2

Diameter of ditto

4.2"

Stroke

24"

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

3

Sizes of Pumps

BALLAST DONKEYS  
One 7" one 10" one 12" one 10" one 12" one 9" one 9"

GENERAL

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

In Engine Room

4 C 3 1/2"

In Holds, &amp;c. Nos 1, 2 &amp; 3 Holds 2 C 3 1/2" each; Deep Tank 2 C 3 1/2"

No. of Bilge Injections

One size 8"

Connected to condenser, or to circulating pump

pump

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

1 C 4 1/2"

Are all the bilge suction pipes fitted with roses

yes

Are the MUD BOXES &amp; STRAIGHT TAIL PIPES in Engine room always accessible

yes

Are the sluices on Engine room bulkheads always accessible

none

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

both

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

yes

What pipes are carried through the bunkers

none

How are they protected

-

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

Is the Screw Shaft Tunnel watertight

yes

Is it fitted with a watertight door

yes

worked from

Upper Deck

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

Manufacturers of Steel Wm. Beardmore &amp; Co. Ltd., The Steel Co. of Scotland Ltd., The Lanarkshire Steel Co. Ltd.

Total Heating Surface of Boilers

7706.5

Is Forced Draft fitted

no

No. and Description of Boilers

Two double-ended

Working Pressure

200 lbs./sq.

Tested by hydraulic pressure to

350 lbs./sq.

Date of test

24.10.24

No. of Certificate

16640

Can each boiler be worked separately

yes

Area of fire grate in each boiler

105.5

No. and Description of Safety Valves to

each boiler

2 Spring loaded

Area of each valve

12.56 sq.

Pressure to which they are adjusted

205

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

2'-0"

Mean dia. of boilers

15'-2.32"

Length

16'-6"

Material of shell plates

Steel

Thickness

13/16" + 1/8"

Range of tensile strength

28/32 tons/sq.

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

ENDS - D.R. LAP  
MID - T.R. LAP

long. seams

T.R. D.B.S.

Diameter of rivet holes in long. seams

1 1/4"

Pitch of rivets

9 1/2" + 9 3/2"

width of butt straps

21 1/4"

Per centages of strength of longitudinal joint

rivets 93.6 + 92.6  
plate 85.3 + 86.3  
comb. 89.4 + 89.1

Working pressure of shell by rules

200 lbs./sq.

Size of manhole in shell

19 1/2" x 15 1/2"

Size of compensating ring

36 1/2" x 32 1/2"

No. and Description of Furnaces in each boiler

6 Morrison

Material

Steel

Outside diameter

3'-7 3/16"

Length of plain part

top 19"  
bottom 32"

Thickness of plates

crown 19"  
bottom 32"

Description of longitudinal joint

weld

No. of strengthening rings

none

Working pressure of furnace by the rules

200 lbs./sq.

Combustion chamber plates: Material

Steel

Thickness: Sides

23/32"

Back

-

Top

23/32"

Bottom

23/32"

Pitch of stays to ditto: Sides

10 5/8" x 8 7/8"

Back

-

Top

10 5/8" x 8 7/8"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

200 lbs./sq.

Material of stays

Iron

DIA. OVER THREADS  
Area at smallest part

1 3/4"

Area supported by each stay

89.8 sq.

Working pressure by rules

202 lbs./sq.

End plates in steam space:

Material

Steel

Thickness

1 3/8"

Pitch of stays

22 x 20

How are stays secured

D. nuts

Working pressure by rules

200 lbs./sq.

Material of stays

Steel

Area at smallest part

DIA. AT BODY  
3 1/4" x 3"

Area supported by each stay

460 sq.

385 sq.

Working pressure by rules

201 lbs./sq.

Material of Front plates at bottom

Steel

Thickness

1"

Material of Lower back plate

-

Thickness

-

Greatest pitch of stays

-

Working pressure of plate by rules

-

Diameter of tubes

3 1/2"

Pitch of tubes

4 13/16" x 4 5/8"

Material of tube plates

Steel

Thickness: Front

1"

Back

7/8"

Mean pitch of stays

11 3/4"

Pitch across wide water spaces

14 5/8"

Working pressures by rules

F. 230 lbs./sq. B. 200 lbs./sq.

Orders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

10 3/4" x 2 C 7 1/8"

Length as per rule

3'-6 1/4"

Working pressure by rules

200 lbs./sq.

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

Smoke tube

Date of Approval of Plan

See Manchester Report

Tested by Hydraulic Pressure to

600 + 1250 lbs./sq.

Date of Test

3.10.24

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

yes



IS A DONKEY BOILER FITTED? *Yes.*

If so, is a report now forwarded? *Yes.*

SPARE GEAR. State the articles supplied:— *All as per rule requirements and, in addition, one propeller shaft and a quantity of small gear.*

The foregoing is a correct description,

*For David Rowan & Co Ltd*  
*Archd. W. Grierson*

Manufacturer.

Dates of Survey while building { During progress of work in shops -- *1924 Jun 11 July 10 15 30 Aug 7 4 11 15 22 27 Sep 12 19 23 26 Oct. 1 2 3 7 9 10 13 14 15 20 21 22 24 27 28*  
During erection on board vessel -- *29 30 31 Nov 3 5 9 10 11 12 14 15 19 20 21 24 27 Dec 1 2 4 8 10 13*  
Total No. of visits *51*

Is the approved plan of main boiler forwarded herewith *Yes.*

" " " donkey " " " *Yes.*

Dates of Examination of principal parts—Cylinders *2.10.24* Slides *13.10.24* Covers *2.10.24* Pistons *13.10.24* Rods *13.10.24*

Connecting rods *13.10.24* Crank shaft *3.10.24* Thrust shaft *13.10.24* Tunnel shafts *10.10.24* Screw shaft *10.10.24* Propeller *10.10.24*

Stern tube *7.10.24* Steam pipes tested *Nov 1924* Engine and boiler seatings *13.10.24* Engines holding down bolts *2-12.24*

Completion of pumping arrangements *4-12.24* Boilers fixed *5-11.24* Engines tried under steam *13-12.24*

Completion of fitting sea connections *14.10.24* Stern tube *13.10.24* Screw shaft and propeller *14.10.24*

Main boiler safety valves adjusted *10-12.24* Thickness of adjusting washers *Port 14-P 2 3/4" S 1/2" Star 14-P 3" S 2 3/4"*

Material of Crank shaft *Steel* Identification Mark on Do. *LLOYD'S No 6919 H.C.F. 3.10.24* Material of Thrust shaft *Steel* Identification Mark on Do. *LLOYD'S No 6919 H.C.F. 13.10.24*

Material of Tunnel shafts *Steel* Identification Marks on Do. *LLOYD'S No 6919 H.C.F. 10.10.24* Material of Screw shafts *Steel* Identification Marks on Do. *LLOYD'S No 6919 H.C.F. 10.10.24*

Material of Steam Pipes *Lapwelded wrought iron* Test pressure *600 lbs*

Is an installation fitted for burning oil fuel *No* 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 *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 has been satisfactorily fitted in the vessel tried, and found good.*

*It is eligible in our opinion for Classification and the Record + LMC 12, 24*

It is submitted that  
this vessel is eligible for  
THE RECORD. + LMC 12. 24. CL.

*AWD*  
*3/12/24*  
*ARK*

The amount of Entry Fee ... £ *5* : *0* : *0* When applied for.  
Special ... £ *94* : *12* : *0* 20/12/24  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ : : 21/12/24

*A. B. Forster* *L. C. Davis*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned *+ LMC 12, 24*