

## REPORT ON MACHINERY

No. 34234

WED. 7 NOV. 1917

Received at London Office

Date of writing Report

19

When handed in at Local Office

10

Port of

Glasgow

No. in Survey held at  
Reg. Book.

Glasgow

Date, First Survey 24-1-16 Last Survey October 25-1917

on the

S.S. "Actor"

(Number of Plates 63)

Master

Built at Glasgow

By whom built

J.W. Henderson &amp; Co. Ltd. (1917)

Tons

Gross

Net

When built

1917

Engines made at

Glasgow

By whom made

J.W. Henderson &amp; Co. Ltd. (1917)

when made

1917

Boilers made at

Glasgow

By whom made

J.W. Henderson &amp; Co. Ltd. (1917)

when made

1917

Registered Horse Power

Owners

Messrs J. Henderson &amp; Co.

Port belonging to Liverpool

Nom. Horse Power as per Section 28

536

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

24 1/2" x 22 1/2" x 22 1/2"

Length of Stroke

54"

Revs. per minute

75

Dia. of Screw shaft

as per rule 15 3/4"

as fitted 16"

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

between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

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

Dia. of Tunnel shaft

as per rule 14 1/2"

as fitted 14 1/2"

Dia. of Crank shaft journals

as per rule 14 1/2"

as fitted 15 1/4"

Dia. of Crank pin

15 1/4"

Size of Crank webs

collars

15 1/4"

Dia. of screw

18 0"

Pitch of Screw

19 0"

No. of Blades

4

State whether moveable

No. of Feed pumps

2

Diameter of ditto

4 1/4"

Stroke

27"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

4 3/4"

Stroke

27"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

4

Sizes of Pumps

9 x 10 x 10, 8 x 6 x 8, 5 x 5 x 6

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

In Engine Room

(4) 3 1/2"

In Holds, &amp;c. (2) 3 1/2" No. 1, (2) 3 1/2" No. 2, (2) 3 1/2" No. 3, (2) 3 1/2" from duct tank

No. of Bilge Injections

1 size 9"

Connected to condenser, or to circulating pump

pump

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

Yes 3 1/2"

Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes

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

What pipes are carried through the bunkers

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 1/8/17 of Stern Tube 1/8/17

Screw shaft and Propeller 1/8/17

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Top platform

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

(S) Manufacturers of Steel

J.W. Henderson &amp; Co. Ltd.

Total Heating Surface of Boilers

7575 sq. ft.

Is Forced Draft fitted

No

No. and Description of Boilers

2 double ended

Working Pressure

215

Tested by hydraulic pressure to

430

Date of test

12/8/17

No. of Certificate

13882

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

114.89 sq. ft.

No. and Description of Safety Valves to

each boiler

1 pair direct spring

Area of each valve

9.62 sq. in.

Pressure to which they are adjusted

Smallest distance between boilers or uptakes and bunkers or woodwork about 2 1/2"

Thickens 1 1/2"

Range of tensile strength 29-32 tons

Are the shell plates welded or flanged

long. seams

Per centages of strength of longitudinal joint

Size of compensating ring

Length of plain part

Working pressure of furnace by the rules

Pitch of stays to ditto: Sides

Material of stays

Thickens 1 1/2"

Diameter at smallest part

Thickens 1"

Diameter of tubes

Pitch across wide water spaces

Working pressure by rules

Superheater or Steam chest; how connected to boiler

separately

Diameter

Length

Thickens of shell plates

Material

Description of longitudinal joint

Diam. of rivets

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickens

If stiffened with rings

Distance between rings

Working pressure by rules

End plates: Thickens

How stayed

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

Lloyd's Register

Foundation

1660-0181



IS A DONKEY BOILER FITTED? *Yes*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied: *2 top end bolts & nuts 2 bottom end bolts & nuts 3 sets of coupling bolts & nuts 2 main bearing bolts & nuts and 1 bridge pump valves, iron, bolts & nuts of various sizes, also 1 propeller shaft, propeller iron & 1 bronze & 3 cast iron blades. 1 set of piston packing for H.P. & M.P. piston 1 set of span springs for each piston. Set of top & bottom end trunnions for our rod.*

The foregoing is a correct description,

For DAVID & WILKINSON & CO., LTD.

*H. J. Paterson*

Manufacturer.

Gen. Managers Engine Works

Dates of Survey while building  
During progress of work in shops - *1915 Jan. 14, Feb. 19, 16, Mar. 5, 10, 18, 27, June 18, July 2, 29, Aug. 6, Dec. 28, 1916, Jan. 25, Mar. 28, 31, July 17, Aug. 9, 14, 30.*  
During erection on board vessel - *Apr. 24, Oct. 2, 14, 19, 1917, Jan. 8, 14, Mar. 6, 21, 22, Apr. 14, 16, May 14, 19, 31, June 2, 8, 12, 15, 19, July 3, 14, 9, 24, 26, Aug. 14, 14, 15, 16, 20, 29.*  
Total No. of visits *Apr. 5, 12, 14, 24, Oct. 1, 3, 9, 11, 22, 26* *63*

Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts - Cylinders *4/4/17* Slides *26/7/17* Covers *4/4/17* Pistons *4/4/17* Rods *26/7/17*  
Connecting rods *26/7/17* Crank shaft *5/1/17* Thrust shaft *26/7/17* Tunnel shafts *26/7/17* Screw shaft *4/4/17* Propeller *11/4/17*  
Stern tube *4/7/17* Steam pipes tested *29/8/17* Engine and boiler seatings *4/8/17* Engines holding down bolts *12/9/17*  
Completion of pumping arrangements *22/10/17* Boilers fixed *9/10/14* Engines tried under steam *26/10/17*  
Main boiler safety valves adjusted *27/9/17* Thickness of adjusting washers *S.P. Bolts 3/8, P. Bolts 3/8, Tow Bolts 3/8, 5/16*  
Material of Crank shaft *Steel* Identification Mark on Do. *400 FAF 31/5/17* Material of Thrust shaft *Steel* Identification Mark on Do. *323 amg 4/4/17*  
Material of Tunnel shafts *Steel* Identification Marks on Do. *27009 26/7/17* Material of Screw shafts *Steel* Identification Marks on Do. *646 FAF 6/7/17*  
Material of Steam Pipes *Cap welded iron* Test pressure *64.5*

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 *yes* *✓* If so, state name of vessel *S.S. "Benefactor" & S.S. "Governor"*

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

*These engines and boiler have been built under special survey. The materials and workmanship are of good description. They have been well fitted on board and tried under steam.*

*This machinery is now in our opinion eligible to have notification of T.L.M.C. 10.17 (in red) and Carrying oil fuel T.P. above 150° in double bottom in the Register Book.*

*All the requirements for carrying oil fuel in the double bottom have been carried out.*

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 10.17.

*J.W.D. 9/11/17 J.M.*

The amount of Entry Fee ... £ 3 :  
Special *✓* ... £ 46 : 16 :  
Donkey Boiler Fee *✓*  
Travelling Expenses (if any) £

When applied for,

*5/11/1917*

When received,

*10.11.1917*

*A. M. McLeod & Wm. H. Capeman*  
Engineer-Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute *GLASGOW 6 - NOV. 1917*

Assigned *+ L.M.C. 10.17*

MACHINERY CERTIFICATE  
WRITTEN *7.11.17*

*Carrying oil fuel T.P. above 150°F in double bottom*

GLASGOW

Certificate (if required) to be sent to

The Surveyors are requested not to write on or below the space for Committee's Minute.

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