

# REPORT ON MACHINERY.

No. 24634

Received at London Office

TUE. FEB. 6 - 1912

Date of writing Report

19

When handed in at Local Office

3.2.12 Port of

Hull

Date, First Survey

Sep 19<sup>th</sup>

Last Survey

Jan 24<sup>th</sup> 1912

Reg. Book

77 Supp on the Steel S. K. "MANX ADMIRAL".

Master

Built at

Selly

By whom built

Bohman & Sons

When built

1911

Engines made at

By whom made

Mosses

when made

(1911)

Boilers made at

Hull

By whom made

Charles D. Holmes & Coy. Ltd.

when made

(1911)

Registered Horse Power

Owners

M. H. Beeley

Port belonging to

Grimby

Tom. Horse Power as per Section 28

64

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

No

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

12" - 21" - 34"

Length of Stroke

24"

Revs. per minute

109

Dia. of Screw shaft

as per rule 6.999  
as fitted 4 3/8"

Material of

2 1/2"

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

Is the propeller boss

Yes

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

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

Length of stern bush

31"

Dia. of Tunnel shaft

as per rule 6.26

Dia. of Crank shaft journals

as per rule 6.544

as fitted 6 3/4"

Dia. of Crank pin

6 3/4"

Size of Crank webs

13 1/2" x 4 1/2"

Dia. of thrust shaft under

collars

6 3/8"

Dia. of screw

8' - 6"

Pitch of Screw

10' - 3" / 11' - 3"

No. of Blades

4

State whether moveable

No

Total surface

24 1/2 sq ft

No. of Feed pumps

1

Diameter of ditto

2 1/2"

Stroke

24"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

1

Diameter of ditto

2 1/2"

Stroke

24"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

1

Sizes of Pumps

5" x 2 1/2" x 5"

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

In Engine Room Two 2", one 2 1/2" & one 3"

In Holds, &c. Two 2" / 10 each, four 6 main holds

No. of Bilge Injections

1

sizes

3"

Connected to condenser, or to circulating pump

Yes

Is a separate Donkey Suction fitted in Engine room & size

Yes 2 1/2"

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

Yes

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

Yes

Are they Valves or Cocks

Both

Yes

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

Above

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

Hold suction

How are they protected

Wood casing

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

20.11.11

of Stern Tube

20.11.11

Screw shaft and Propeller

20.11.11

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

OILERS, &c.—(Letter for record

S)

Manufacturers of Steel

Phoenix Ltd. Gröndschaff Akt. Hovden Vering of Hovden

Total Heating Surface of Boilers

1020 sq ft

Is Forced Draft fitted

No

No. and Description of Boilers

1 Cyl. Hull. Single Ended.

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

22.12.11

No. of Certificate

1864

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

32.5 sq ft

No. and Description of Safety Valves to

each boiler

Two Spring

Area of each valve

3.94 sq in

Pressure to which they are adjusted

185 lbs

Are they fitted with easing gear

Yes

Smallest distance between boilers on uptakes and bunkers on woodwork

6"

EXT.

Mean dia. of boilers

12' - 0"

Length

10' - 0"

Material of shell plates

S

Thickness

3/32"

Range of tensile strength

29 tons

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

W.P.L.

long. seams

W.P.S. & P.

Diameter of rivet holes in long. seams

1/16"

Pitch of rivets

4 1/2"

Lap of plates or width of butt straps

15"

Per centages of strength of longitudinal joint

84.5%

Working pressure of shell by rules

185 lbs

Size of manhole in shell

16" x 12"

Material

S

Size of compensating ring

4" x 3 1/2"

No. and Description of Furnaces in each boiler

2 Plain

Material

S

Outside diameter

3' - 6"

Length of plain part

top 6' - 3 1/2"

bottom 6' - 1"

Thickness of plates

3/32"

Description of longitudinal joint

Welded

No. of strengthening rings

One partial

23" x 15"

Working pressure of furnace by the rules

183 lbs

Pitch of stays to ditto: Sides

9" x 9 1/2"

Back

9 1/2" x 9 1/2"

Top

9 1/2" x 8"

If stays are fitted with nuts or riveted heads

N

Working pressure by rules

186 lbs

Material of stays

S

Diameter at smallest part

2 1/4"

Area supported by each stay

115.4 sq in

Working pressure by rules

185 lbs

Material of stays

S

Thickness

1"

Pitch of stays

16" x 16"

How are stays secured

W.P.S. & P.

Diameter at smallest part

5' - 2 1/4"

Area supported by each stay

256 sq in

Working pressure by rules

215 lbs

Material of Front plates at bottom

S

Thickness

3/8"

Greatest pitch of stays

4 1/2" x 9 1/2"

Working pressure of plate by rules

190 lbs

Diameter of tubes

3 1/2"

Pitch of tubes

5" x 5"



# VERTICAL DONKEY BOILER—

Manufacturers of Steel

No.	Description				
Made at	By whom made	When made	Where fixed		
Working pressure	tested by hydraulic pressure to	Date of test	No. of Certificate	Fire grate area	Description of Safety
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted	Date of adjustment	
If fitted with easing gear	If steam from main boilers can enter the donkey boiler		Dia. of donkey boiler	Length	
Material of shell plates	Thickness	Range of tensile strength	Descrip. of riveting long. seams		
Dia. of rivet holes	Whether punched or drilled	Pitch of rivets	Lap of plating	Per centage of strength of joint	Rivets Plates
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	Radius of do.	Stayed by		
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey		

SPARE GEAR. State the articles supplied:— *Two each top & bottom end connecting rod bolts & nuts, two main bearing bolts & nuts, one set coupling bolts & nuts, one set each feed & bilge pump valves, iron of various sizes, a quantity of assorted bolts nuts etc.*

The foregoing is a correct description,

**p. pro CHARLES D. HOLMES & Co. Ltd.**

Manufacturer.

Dates of Survey while building  
 During progress of work in shops -- 1911:— Sep 19. 26. Oct 10. 19. 30 Nov 10. 13. 17. 20. 24. 27. 28. Dec 2. 7. 11. 14. 18. 20. 22  
 During erection on board vessel -- 1912:— Jan 1. 3. 8. 17. 18. 20. 22. 24  
 Total No. of visits 27

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

Dates of Examination of principal parts—Cylinders 11/12/11 Slides 1/1/12 Covers 1/1/12 Pistons 1/1/12 Rods 14/12/11  
 Connecting rods 1/1/12 Crank shaft 14/12/11 Thrust shaft 8/1/12 Tunnel shafts - Screw shaft 13/11/11 Propeller 10/11/11  
 Stern tube 10/11/11 Steam pipes tested 18/1/12 Engine and boiler seatings 20/11/11 Engines holding down bolts 14/1/12  
 Completion of pumping arrangements 22/1/12 Boilers fixed 14/1/12 Engines tried under steam 22/1/12  
 Main boiler safety valves adjusted 22/1/12 Thickness of adjusting washers FORWARD  $\frac{3}{8}$ " AFT  $\frac{1}{2}$ "  
 Material of Crank shaft I Identification Mark on Do. 14/12/11 Material of Thrust shaft S Identification Mark on Do. 4/1/12  
 Material of Tunnel shafts - Identification Marks on Do. 44/44 M.R. Material of Screw shafts I Identification Marks on Do. 4/1/12  
 Material of Steam Pipes Solid drawn copper Test pressure 360 lbs. ✓

General Remarks (State quality of workmanship, opinions as to class, &c. *The engines & boilers of this vessel have been constructed under special survey in accordance with the Rules. The materials & workmanship are sound & good. The boiler tested by hydraulic pressure, & with the engines secured on board & tested under steam they are now in good order & safe working condition & respectfully submitted as being eligible in my opinion to be classed with the notation of L.M.C. 1-12 in the Reptiles Book.*

It is submitted that this vessel is eligible for THE RECORD. + LMC 1-12

*JSM*  
6/2/12

The amount of Entry Fee .. £ 1 : : When applied for,  
 Special .. £ 9 : 12 : 5-2-12  
 Donkey Boiler Fee .. £ : : When received,  
 Travelling Expenses (if any) £ : 8/2 : 29-2-12

Committee's Minute

FRI. FEB. 9-1912

Assigned

+ LMC 1.12

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

FRI. FEB. 23. 1912

MACHINERY CERTIFICATE  
WRITTEN



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Lloyd's Register  
Foundation

Steel

Certificate (if required) to be sent to

(The Surveyor is requested not to write on or below the space for Committee's Minute.)