

# 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

To. in Survey held at Hull & Selby.

Date, First Survey Sep 19<sup>th</sup>

Last Survey Jan 24<sup>th</sup> 1912

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

(Number of Visits 27)

Tons } Gross 219  
Net 107-

Master Built at Selby

By whom built Cochran & Sons

When built 1911

Engines made at } Hull.  
Boilers made at }

By whom made } Messrs.

when made (911)

By whom made } Charles D. Holmes & Coy. Ltd.

when made (911) 1912

Registered Horse Power

Owners M. H. Bealey

Port belonging to Grimsby

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 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

on 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

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 1/2"

Dia. of Crank pin 6 1/2"

Size of Crank webs 13 1/2" x 4 1/2" Dia. of thrust shaft under

collars 6 1/2" Dia. of screw 8'-6" Pitch of Screw 10'-3" / 10' 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

No. of Bilge pumps 1 Diameter of ditto 2 1/2" Stroke 24" Can one be overhauled while the other is at work

No. of Donkey Engines 1 Sizes of Pumps 5" x 2 3/4" 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 pump Is a separate Donkey Suction fitted in Engine room & size Yes 2 1/2" dia.

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 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 None Is it fitted with a watertight door worked from

OILERS, &c.—(Letter for record S.) Manufacturers of Steel Phoenix Act. Girderschiff Akt. Horden Verein of Horden

Total Heating Surface of Boilers 1020 sq ft Is Forced Draft fitted No No. and Description of Boilers 1 Cyl. built. 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 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 D.P.S.

long. seams D.P.S. Y.P. Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 4 1/2" Lap of plates or width of butt straps 15"

Per centages of strength of longitudinal joint rivets 84.5 plate 85.8 Working pressure of shell by rules 185 lbs. Size of manhole in shell 16" x 12"

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" Thickness of plates crown 49" Description of longitudinal joint Welded. No. of strengthening rings One partial

bottom 6'-1" Working pressure of furnace by the rules 183 lbs. Combustion chamber plates: Material S. Thickness: Sides 3/32" Back 1/16" Top 1/16" Bottom 3/32"

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 184 lbs.

Material of stays S. Diameter at smallest part 2 1/4" Area supported by each stay 115.4 Working pressure by rules 186 lbs. End plates in steam space:

Material S. Thickness 1" Pitch of stays 16" x 16" How are stays secured D.P. & W. Working pressure by rules 185 lbs. Material of stays S.

Diameter at smallest part 5.24 Area supported by each stay 256 sq in Working pressure by rules 215 lbs. Material of Front plates at bottom S.

Thickness 3/8" Material of Lower back plate S. Thickness 3/32" 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" Material of tube plates S. Thickness: Front 3/8" Back 3/8" Mean pitch of stays 10"

Pitch across wide water spaces 15" Working pressures by rules 249 Girders to Chamber tops: Material S. Depth and

thickness of girder at centre 8" x 1 1/2" Length as per rule 2'-8 1/2" Distance apart 8" Number and pitch of stays in each 2 - 9 1/2"

Working pressure by rules 199 lbs. Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked

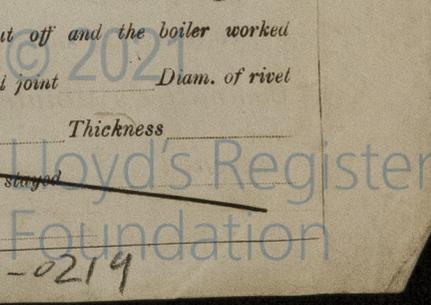
separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet

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

010174-010188-0219



**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 and 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.** *Manufacturers.*

*Arthur Holmes*  
 Dates of Survey while building: During progress of work in shops --- **BRISTOL** 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*—  
 " " " donkey " " "

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. *Nº 443 J.B.*  
 Material of Tunnel shafts Identification Marks on Do. *4444 M.R.* Material of Screw shafts *I* Identification Marks on Do. *414 M.B.*  
 Material of Steam Pipes *Solid drawn copper* Test pressure *360 lbs.* ✓ Identification Marks on Do. *Nº 443 J.B.*  
*13.11.11*  
*4444 M.R.*

**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 Register's Book.*

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

*J.S.M.*  
*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

*J.S.M.*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute FRI. FEB. 9-1912  
 Assigned + L.M.C. 1.12.

FRI. FEB. 23. 1912



© 2021 Lloyd's Register Foundation

MACHINERY CERTIFICATE WRITTEN

*Null*

Certificate (if required) to be sent to  
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)