

# REPORT ON MACHINERY.

No. 20,378

Received at London Office

SAI 8 AUG 1908

Date of writing Report

4.8.1908 When handed in at Local Office

4.8.1908 Port of Hull

To. in Survey held at Hull

Date, First Survey Mar 28<sup>th</sup>

Last Survey July 30<sup>th</sup> 1908

Reg. Book. 801

on the *S/S Hauls PREMIER*

(Number of Visits 37)

Gross Tons 253

Net Tons 98.

Master

Built at Selby.

By whom built *Cochrane & Sons*

When built 1908.

Engines made at Hull

By whom made *Thos. D. Holmes & Co*

when made

Boilers made at

By whom made

when made

Registered Horse Power

Owners *The Anchor Steam Towing Co Ltd*

Port belonging to *Grimby*

Nom. Horse Power as per Section 28 69.

Is Refrigerating Machinery fitted for cargo purposes *No*

Is Electric Light fitted *No*

## ENGINES, &c.—Description of Engines

*Twin type expansion*

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders *12 1/2 - 22 - 35*

Length of Stroke 24

Revs. per minute 112

Dia. of Screw shaft as per rule 7.15

Material of screw shaft *Skel.*

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 *Yes*

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*

When liners are fitted, is the shaft lapped or protected between the liners *Yes*

Length of stern bush 31

Dia. of Tunnel shaft as per rule 6.4

Dia. of Crank shaft journals as per rule 6.7

Dia. of Crank pin 6.3

Size of Crank webs *4 1/2 x 15 1/2*

Dia. of thrust shaft under collars 7

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 2 1/2 x 5

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

In Engine Room 2-2 (Fore & Aft)

In Holds, &c. 2-2 (Fore hold & stow well)

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 2" *Yes*

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 *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 *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 *Hot Air Suction*

How are they protected *Wire 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 30.5.08

of Stern Tube 30.5.08

Screw shaft and Propeller 30.5.08.

Is the Screw Shaft Tunnel watertight *None*

Is it fitted with a watertight door *Yes*

worked from

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

Manufacturers of Steel *Wm Bevan & Co.*

Total Heating Surface of Boilers 1120.

Is Forced Draft fitted *No*

No. and Description of Boilers 1 SE. *Muchburner*

Working Pressure 180 lbs.

Tested by hydraulic pressure to 360 lbs.

Date of test 17.7.08.

No. of Certificate 1656.

Can each boiler be worked separately *Yes*

Area of fire grate in each boiler 33.2.

No. and Description of Safety Valves to each boiler 2 Spring loaded.

Area of each valve 3.97

Smallest distance between boilers or uptakes and bunkers or woodwork 7

Pressure to which they are adjusted 185 lbs.

Are they fitted with easing gear *Yes*

Thickness 1 1/2

Range of tensile strength 28-32

Are the shell plates welded or flanged *No*

Descrip. of riveting: cir. seams *Skel.*

long. seams 2 BS 5

Diameter of rivet holes in long. seams 1 1/2

Pitch of rivets 7 1/2

Gap of plates or width of butt straps 17 1/2

Per centages of strength of longitudinal joint rivets 85.2

plate 85.5

Working pressure of shell by rules 185.

Size of manhole in shell 16 x 12

Size of compensating ring 7 x 1 1/2

Length of plain part top 4

Thickness of plates bottom 4

Description of longitudinal joint *Welded*

No. of strengthening rings

Working pressure of furnace by the rules 198

Pitch of stays to ditto: Sides 9 x 9

Back 4 1/2 x 8 1/2

Top 8 1/2 x 8 1/2

If stays are fitted with nuts or riveted heads *Nuts*

Working pressure by rules 220

End plates in steam space: Material of stays *Skel.*

Diameter at smallest part 3

Area supported by each stay 306.25

Working pressure by rules 215

Material of Front plates at bottom *Skel.*

Thickness 3/32

Material of Lower back plate *Skel.*

Thickness 15

Greatest pitch of stays 16 1/2 x 8 1/2

Working pressure of plate by rules 212

Diameter of tubes 3 1/4

Pitch of tubes 4 1/2 x 5

Material of tube plates *Skel.*

Thickness: Front 29/32

Back 7

Mean pitch of stays 9 1/2

Pitch across wide water spaces 15

Working pressures by rules 279

Girders to Chamber tops: Material *Skel.*

Depth and thickness of girder at centre 9 x 1 1/2

Length as per rule 32 1/2

Distance apart 8 1/2

Number and pitch of stays in each 308 1/2

Working pressure by rules 239

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

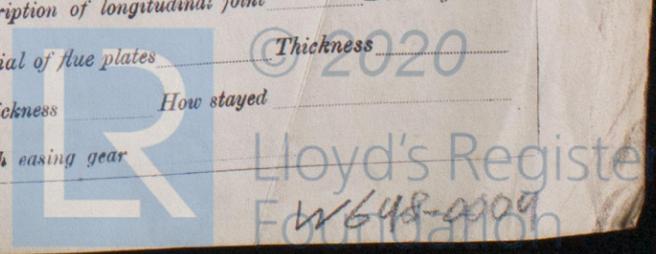
End plates: Thickness

How stayed

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear



VERTICAL DONKEY BOILER— Manufacturers of Steel

No. \_\_\_\_\_ Description \_\_\_\_\_

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 \_\_\_\_\_ No. of Certificate \_\_\_\_\_ Fire grate area \_\_\_\_\_ Description of Safety \_\_\_\_\_

If fitted with easing gear \_\_\_\_\_ If steam from main boilers can enter the donkey boiler \_\_\_\_\_ Pressure to which they are adjusted \_\_\_\_\_ Date of adjustment \_\_\_\_\_

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 \_\_\_\_\_ Stayed by \_\_\_\_\_

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

SPARE GEAR. State the articles supplied:— *Two top & two bottom end connecting rod bolts, two main bearing bolts, one set of coupling bolts & nuts, one set of air & circulating pump valves, one set of feed & high pump valves, one main & one donkey feed check valve, assorted bolts & nuts etc.*

The foregoing is a correct description,

PER PRO CHARLES D. HOLMES & Co. Manufacturer.

*H. Allon*

Dates of Survey while building	During progress of work in shops—	1908: Mar 28, 30, Apr 6, 8, 10, 13, 16, 24, 28, May 1, 2, 6, 9, 11, 12, 16, 19, 21, 23, 26, 30, Jun 3, 6, 19, 27, 29.
	During erection on board vessel—	July 2, 4, 7, 11, 13, 17, 22, 23, 25, 27, 30.
	Total No. of visits	37.

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

Dates of Examination of principal parts—Cylinders *30.5.08*, Slides *7.7.08*, Covers *27.6.08*, Pistons *27.6.08*, Rods *30.5.08*, Connecting rods *30.5.08*, Crank shaft *14.5.08*, Thrust shaft *14.5.08*, Tunnel shafts *✓*, Screw shaft *26.5.08*, Propeller *26.5.08*, Stern tube *26.5.08*, Steam pipes tested *23.7.08*, Engine and boiler seatings *30.5.08*, Engines holding down bolts *22.7.08*, Completion of pumping arrangements *30.7.08*, Boilers fixed *22.7.08*, Engines tried under steam *25.7.08*, Main boiler safety valves adjusted *25.7.08*, Thickness of adjusting washers *F 7/8 A 3*

Material of Crank shaft *Steel*, Identification Mark on Do. *426 J.W.G 2.7.08*, Material of Thrust shaft *Steel*, Identification Mark on Do. *426 J.W.G 2.7.08*, Material of Tunnel shafts *✓*, Identification Marks on Do. *2.7.08*, Material of Screw shafts *Steel*, Identification Marks on Do. *426 J.W.G 2.7.08*, Material of Steam Pipes *Solid drawn Copper*, Test pressure *350 lbs.*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery & boiler of this vessel have been constructed under Special Survey, are of good material & workmanship & have been fitted & secured on board in accordance with the Rules; They are now in good working condition & eligible in my opinion to have record of T.L.M.C. 7-08 in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 7.08.

*J.W.D. 8/8/08*  
*J.W.D. 10.8.08*  
*John. W. Gymer*  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

The amount of Entry Fee .. £	1 : 0 : 0	When applied for,	10.8.08
Special .. .. . £	10 : 7 : 9	When received,	19.08
Donkey Boiler Fee .. .. £	:		
Travelling Expenses (if any) £	8 : 2 : 31		19.08

Committee's Minute  
Assigned  
*thmc 7.08*

MACHINERY CERTIFICATE WRITTEN.



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