REPORT ON MACHINERY.

No. 6569

Port of MIDDLESBROUGH-ON-TEES   Received at London Office   SAT. 10 DEC 1910

No. in Survey held at *Middlesbrough*   Date, first Survey *12th May*   Last Survey *2nd Decr.* 19 10
(Number of Visits 49)

. Book.   on the   S.S. *"London Queen"*   Tons { Gross / Net

ter   Built at *Hardinxveld* By whom built *Van Vliet & Co.*   When built 1910

gines made at *Middlesbrough* By whom made *Richardsons, Westgarth & Co. Ld.* when made 1910

ilers made at *do*   By whom made   *do*   when made 1910

gistered Horse Power   Owners *London & Channel Islands S.S. Co. Ld.* Port belonging to *London*

m. Horse Power as per Section 28 *100*   Is Refrigerating Machinery fitted for cargo purposes *No*   Is Electric Light fitted *No*

GINES, &c.—Description of Engines *Triple Expansion*   No. of Cylinders 3   No. of Cranks 3

a. of Cylinders *14", 23, 39"* Length of Stroke *27"* Revs. per minute *90* Dia. of Screw shaft as per rule *8.68"* as fitted *9"* Material of screw shaft *Iron*

ew shaft fitted with a continuous liner the whole length of the stern tube *No liner*   Is the after end of the liner made water tight

opeller boss ✓   If the liner is in more than one length are the joints burned ✓   If the liner does not fit tightly at the part

e bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ✓   If two

fitted, is the shaft lapped or protected between the liners ✓   Length of stern bush *3' - 2"*

nnel shaft as per rule *7.13"* as fitted *7½"* Dia. of Crank shaft journals as per rule *7.48"* as fitted *7½"* Dia. of Crank pin *7½"* Size of Crank webs *11½" x 5"* Dia. of thrust shaft under

7½" Dia. of screw *10'-6"* Pitch of Screw *13'-3"*   No. of Blades 4   State whether moveable *No* Total surface *38 sq. ft.*

eed pumps 2   Diameter of ditto *2½"* Stroke *14"* Can one be overhauled while the other is at work *yes*

lge pumps 2   Diameter of ditto *3"* Stroke *14"* Can one be overhauled while the other is at work *yes*

onkey Engines *Two* Sizes of Pumps *6 x 8½ x 6" 6 x 4 x 6"* No. and size of Suctions connected to both Bilge and Donkey pumps

e Room *Three 2"*   In Holds, &c. *Ford. hold two 2" dia.*   After

d two 2" dia.   Tunnel well one 3" dia.

Injections 1 sizes *3½"* Connected to condenser, or to circulating pump *Pump* Is a separate Donkey Suction fitted in Engine room & size *Yes 2½"*

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*

nnections with the sea direct on the skin of the ship *yes*   Are they Valves or Cocks *Both*

ed 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*

h 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

are carried through the bunkers *None*   How are they protected ✓ *See attached report*

pes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times *yes*

lge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges *yes*

amination of completion of fitting of Sea Connections ✕   of Stern Tube *24.11.10* Screw shaft and Propeller *24.11.10.*

w Shaft Tunnel watertight *yes* Is it fitted with a watertight door *yes*   worked from *Top grating*

S, &c.—(Letter for record (S) Manufacturers of Steel *John Spencer & Sons Ld.*

ting Surface of Boilers *1735 ☐* Is Forced Draft fitted *No* No. and Description of Boilers *One S.E. Cylr. Multr.*

Pressure *180 lbs* Tested by hydraulic pressure to *360 lbs* Date of test *30.9.10.* No. of Certificate *4508*

oiler be worked separately ✓   Area of fire grate in each boiler *55 sq. ft.*   No. and Description of Safety Valves to

Two direct spring Area of each valve *7 ☐"* Pressure to which they are adjusted *180 lbs* Are they fitted with easing gear *yes*

stance between boilers or uptakes and bunkers or woodwork *10"* Mean dia. of boilers *14'-0"* Length *10'-6"* Material of shell plates *Steel*

1¼" Range of tensile strength *28¾ - 32* Are the shell plates welded or flanged *No* Descrip. of riveting : cir. seams *D.R. Lap*

D.B.S.S. Rivets Diameter of rivet holes in long. seams *1 5/16"* Pitch of rivets *8¾"* Lap of plates or width of butt straps *1'- 7½"*

es of strength of longitudinal joint rivets *83.6* plate *85* Working pressure of shell by rules *202 lbs* Size of manhole in shell *16" x 12"*

pensating ring *35 x 29½ x 1¼* No. and Description of Furnaces in each boiler *3 Morisons* Material *Steel* Outside diameter *3'- 6¼"*

plain part top / bottom ✓ Thickness of plates crown 17"/ bottom 32 Description of longitudinal joint *Welded* No. of strengthening rings ✓

ressure of furnace by the rules *193* Combustion chamber plates: Material *Steel* Thickness: Sides *11/16"* Back *11/16"* Top *11/16"* Bottom *7/8"*

ays to ditto : Sides *9¼ x 9"* Back *10 x 8"* Top *9½ x 9"* If stays are fitted with nuts or riveted heads *Nuts* Working pressure by rules *191*

of stays *Steel* Diameter at smallest part *2.09 ☐"* Area supported by each stay *80 ☐"* Working pressure by rules *235* End plates in steam space :

aterial *Steel* Thickness *1 5/32"* Pitch of stays *22½ x 13¾"* How are stays secured *D.R. & N.* & fflg. ship Working pressure by rules *204 lbs* Material of stays *Steel*

rea at smallest part *7.06* Area supported by each stay *343.75* Working pressure by rules *213* Material of Front plates at bottom *Steel*

ckness *1"* Material of Lower back plate *Steel* Thickness *7/8"* Greatest pitch of stays *14 x 10"* Working pressure of plate by rules *180*

meter of tubes *3½"* Pitch of tubes *4¾ x 4⅝"* Material of tube plates *Steel* Thickness : Front *1"* Back *27/32"* Mean pitch of stays *11⅛ x 9¼"*

h across wide water spaces *14½"* Working pressures by rules *182 lbs* Girders to Chamber tops : Material *Steel* Depth and

kness of girder at centre *8 x 1¾"* Length as per rule *2'- 5 5/16"* Distance apart *9½"* Number and pitch of stays in each *2 @ 9"*

orking pressure by rules *207 lbs* Superheater or Steam chest; how connected to boiler *None* Can the superheater be shut off and the boiler worked

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

s ✓   Pitch of rivets ✓   Working pressure of shell by rules ✓   Diameter of flue ✓   Material of flue plates ✓   Thickness ✓

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 ✓

009702-009710-0078

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 _____ 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 & nuts. Two main bearing bolts & nuts. One set of coupling bolts & nuts. One set of feed & bilge pump valves. Main & donkey feed check valves. Assorted bolts & nuts etc.*

The foregoing is a correct description,

For and on behalf of   Manufacturer.
RICHARDSONS, WESTGARTH & Co Ltd

Dates of Survey while building	During progress of work in shops—	*[signature]* MANAGING DIRECTOR 1910 May 12 24 June 19 13 16 21 24 28 30. July 5 8 11 13 18 21 25 28 29 Aug 2 4 9 12 22
	During erection on board vessel - -	Sept 1 6 7 9 15 20 27 28 29 30 Oct 3 10 13 20 28 Nov 9 15 17 9 3 9 4 22 24 25 28 29 30 Dec 2.
	Total No. of visits 49	Is the approved plan of main boiler forwarded herewith *yes*
		" " " donkey " " "

Dates of Examination of principal parts— Cylinders **26.8.10** Slides **7.9.10** Covers **7.9.10** Pistons **31.8.10** Rods **31.8.10**

Connecting rods **31.8.10** Crank shaft **4.7.10** Thrust shaft **7.9.10** Tunnel shafts **7.9.10** Screw shaft **15.11.10** Propeller **9.11.10**

Stern tube **9.11.10** Steam pipes tested **29.11.10** Engine and boiler seatings _____ Engines holding down bolts **28.11.10**

Completion of pumping arrangements **30.11.10.** Boilers fixed **28.11.10** Engines tried under steam **30.11.10.**

Main boiler safety valves adjusted **30.11.10.** Thickness of adjusting washers P $\frac{15}{32}$" S $\frac{15}{32}$"

Material of Crank shaft **Steel** Identification Mark on Do. **4945 CJH** Material of Thrust shaft **Steel** Identification Mark on Do. **6591 J.K**

Material of Tunnel shafts **Iron** Identification Marks on Do. **6591 J.K** Material of Screw shafts **Iron** Identification Marks on Do. **6591 J.K**

Material of Steam Pipes **Solid drawn copper** Test pressure **450 lbs**

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

The Engines and Boiler of this vessel have been constructed under Special Survey, are of good material and workmanship and have been fitted and secured on board in accordance with the Rules. They are now in good working condition and in our opinion eligible to have the notation of + LMC 12, 10. in the Register Book.

It is submitted that
this vessel is eligible for
THE RECORD. + LMC 12.10.

J.W.R.
27/12/10

The amount of Entry Fee..	£ **2** : **0**	When applied for,	**1.12.19 10**
Special ...	£ **15** : **0**		
Donkey Boiler Fee .. .. £	:	When received,	**13/12/19**
Travelling Expenses (if any) £	:		**14.12**

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

Committee's Minute   FRI. 23 DEC 1910

Assigned   + LMC 12.10   MACHINERY CERTIFICATE WRITTEN.