

REPORT ON MACHINERY.

No. 24801
TUE. APR. 9 - 1912

Received at London Office

Date of writing Report 25-3-12 When handed in at Local Office 4-4-10 1/2 Port of Hull

No. in Survey held at Hull Date, First Survey Jan 18th 1912 Last Survey Mar 22nd 1912

Reg. Book. on the Machinery for S.S. 7094 "Vlieshoom" (Number of Visits) 3 Gross Tons 3 Net Tons 3

Master Van Fleet Built at Harbinault By whom built Van Fleet When built 1912-3

Engines made at Hull By whom made Earles & Co. Ltd when made 1912-3

Boilers made at Hull By whom made Earles & Co. Ltd when made 1912-3

Registered Horse Power 104 Owners Port belonging to

Nom. Horse Power as per Section 28 104 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders Three No. of Cranks Three

Dia. of Cylinders 15"-25"-40" Length of Stroke 27" Revs. per minute 100 Dia. of Screw shaft 8.9" Material of screw shaft steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube no liners 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 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 yes Length of stern bush 42"

Dia. of Tunnel shaft 7.46" Dia. of Crank shaft journals 7.83" Dia. of Crank pin 4 7/8" Size of Crank webs 15" x 5 1/2" Dia. of thrust shaft under collars 7 7/8" Dia. of screw 10-6" Pitch of Screw 12'-0" No. of Blades 4 State whether moveable no Total surface 36 ft²

No. of Feed pumps two Diameter of ditto 2 1/4" Stroke 18" Can one be overhauled while the other is at work yes

No. of Bilge pumps two Diameter of ditto 2 1/4" Stroke 18" Can one be overhauled while the other is at work yes

No. of Donkey Engines Two Sizes of Pumps 6" x 4" x 6" 6" x 7 1/2" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Two 2" dia In Holds, &c. Aft two 2" Fore two 2" Ballast

Fore Peak 3" Aft two 3" A.P. Tank 3"

No. of Bilge Injections one sizes 3 1/2" Connected to condensers, or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes 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 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 none How are they protected yes

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 8-3-12 of Stern Tube 8-3-12 Screw shaft and Propeller 8-3-12

Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from top platform

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Steel Co of Scotland

Total Heating Surface of Boilers 1800 ft² Is Forced Draft fitted no No. and Description of Boilers one Return Tube Single Ended

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 22-11-17 No. of Certificate 1589

Can each boiler be worked separately yes Area of fire grate in each boiler 54 ft² No. and Description of Safety Valves to each boiler two spring loaded Area of each valve 5.95 ft² 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 12" Mean dia. of boilers 14'-0" Length 10'-6" Material of shell plates steel

Thickness 1 9/32" Range of tensile strength 28-32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double

long. seams Y.P.D.B.S. Diameter of rivet holes in long. seams 1 5/16" Pitch of rivets 8 3/4" Lap of plates or width of butt straps 19 1/2"

Per centages of strength of longitudinal joint rivets 89.4 Working pressure of shell by rules 206 lbs Size of manhole in end 16" x 12"

Size of compensating ring 3 1/2" No. and Description of Furnaces in each boiler 3 plain Material steel Outside diameter 40 9/16"

Length of plain part top 79 1/16" Thickness of plates bottom 2 1/32" Description of longitudinal joint welded No. of strengthening rings yes

Working pressure of furnace by the rules 191 Combustion chamber plates: Material steel Thickness: Sides 2 1/32" Back 1 1/16" Top 2 1/32" Bottom 2 1/32"

Pitch of stays to ditto: Sides 9 1/4" x 8" Back 9 1/8" x 8 1/2" Top 8 1/4" x 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 191

Material of stays steel Diameter at smallest part 1 1/2" Area supported by each stay 77.66 ft² Working pressure by rules 182 End plates in steam space:

Material steel Thickness 1 7/32" Pitch of stays 16 3/4" x 1 1/2" How are stays secured to T. Working pressure by rules 192 Material of stays steel

Diameter at smallest part 2 13/16" Area supported by each stay 310 ft² Working pressure by rules 207 Material of Front plates at bottom steel

Thickness 1 5/16" Material of Lower back plate steel Thickness 7/8" Greatest pitch of stays 18 1/2" x 9 1/8" Working pressure of plate by rules 199

Diameter of tubes 3 1/2" Pitch of tubes 4 7/8" x 4 3/4" Material of tube plates steel Thickness: Front 1 5/16" Back 1 3/16" Mean pitch of stays 9 5/8"

Pitch across wide water spaces 13 1/2" Working pressures by rules 185 lbs Girders to Chamber tops: Material steel Depth and thickness of girder at centre 9 1/2" x 1 5/8" Length as per rule 2'-9 1/16" Distance apart 8 1/4" Number and pitch of stays in each three 8"

Working pressure by rules 218 Superheater or Steam chest; how connected to boiler yes Can the superheater be shut off and the boiler worked separately yes

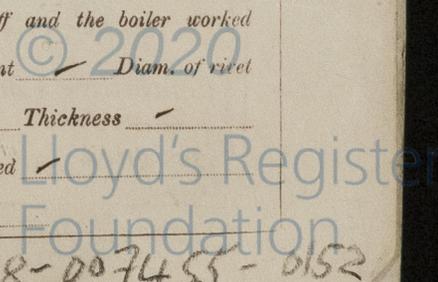
Diameter yes Length yes Thickness of shell plates yes Material yes Description of longitudinal joint yes Diam. of rivet holes yes Pitch of rivets yes Working pressure of shell by rules yes Diameter of flue yes Material of flue plates yes Thickness yes

If stiffened with rings yes Distance between rings yes Working pressure by rules yes End plates: Thickness yes How stayed yes

Working pressure of end plates yes Area of safety valves to superheater yes Are they fitted with easing gear yes

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THE MARGIN.

007448-007455-0152



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 _____ Size 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 connecting rod bolts (top end) Two connecting rod bolts (bottom end) Two main bearing bolts, one set of coupling bolts, one set of feed valve pump valves, a quantity of assorted bolts nuts & pins of various sizes

SHIPBUILDING & ENGINEERING CO. LIMITED.

The foregoing is a correct description,
J. J. Salethorpe SECRETARY, Manufacturer.

Dates of Survey while building	During progress of work in shops --	1911 - Jan 18 Feb 13 8. 15 Mar 6. 8. 13. 22. 23 Apr 5. 7. 13. 21 May 16. 25. 31 Jun 8. 12. 19. 26. 28.
	During erection on board vessel ---	July 3. 7. 11. 14. 22 Aug 14. 16. 23. 28 Sep 6. 12. 15. 20. Oct 3. 9. Nov. 6. 7. 20. 22. 29 Dec 6. 21. 28. 29.
	Total No. of visits	56

Is the approved plan of main boiler forwarded herewith *With # 24311*

" " " donkey " " " *Yes*

Dates of Examination of principal parts—Cylinders 12-9-11 Slides 12-9-11 Covers 20-9-11 Pistons 6-9-11 Rods 20-9-11

Connecting rods 20-9-11 Crank shaft 9-10-11 Thrust shaft 5-3-12 Tunnel shafts 5-3-12 Screw shaft 5-3-12 Propeller 5-3-12

Stern tube 5-3-12 Steam pipes tested 29-12-11 17/33-12 Engine and boiler seatings 6-3-12 Engines holding down bolts 16-3-12

Completion of pumping arrangements 18-3-12 Boilers fixed 16-3-12 Engines tried under steam 22-3-12

Main boiler safety valves adjusted 22-3-12 Thickness of adjusting washers *Proc 10/32 Lt 3/8"*

Material of Crank shaft *Steel* Identification Mark on Do. *2734 W.D.H* Material of Thrust shaft *Steel* Identification Mark on Do. *2932 W.D.H.*

Material of Tunnel shafts *Steel* Identification Marks on Do. *2932 W.D.H* Material of Screw shafts *Steel* Identification Marks on Do. *2932 W.D.H*

Material of Steam Pipes *Copper* Test pressure *360 lbs.*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery of this vessel has been constructed under special survey in accordance with the Rules of this Society, the materials & workmanship are good. The Boiler was tested by hydraulic pressure to 360 lbs & found sound tight. The machinery has been properly fitted on board & on completion was tried under steam & found satisfactory & in our opinion is eligible for the record + d. M. C. 3-12.*

The vessel has left for Dundee where the Electric Light Installation is to be completed. Surveyors at that port advised.

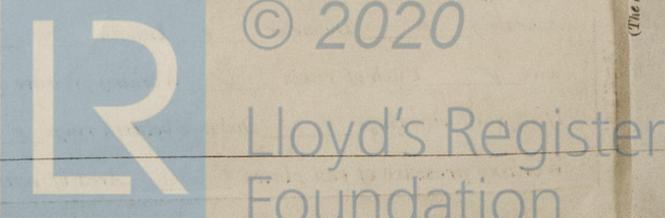
It is submitted that this vessel is eligible for THE RECORD + L.M.C. 3.12.

J.W.D.
9/4/12

The amount of Entry Fee	£ 2 : 0 :	When applied for.	4. 4. - 12
Special	£ 15 : 12 :		
Donkey Boiler Fee	£ - : - :	Paid	9/4/12
Travelling Expenses (if any)	£ - : - :		

Frank L. Sturgeon & James Barclay
 Engineer Surveyors to Lloyd's Register of British & Foreign Shipping

Committee's Minute *WED. APR 10 1912*
 Assigned *+ L.M.C. 3.12*



MACHINERY CERTIFICATE
 9.4.12

Certificate (if required) to be sent to

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