

REPORT ON MACHINERY.

No. 26515

THU. JUL. 24. 1913

Received at London Office

Writing Report 19 When handed in at Local Office 16.7.13. Port of Hull
 Survey held at Hull & Goolle Date, First Survey Dec 3rd Last Survey July 16th 1913
 (Number of Visits 39) Gross Tons 726 Net Tons 351
 Built at Goolle By whom built Goolle & Ryper 602a When built 1913-7
 Made at Hull By whom made Earle & Co Ltd when made 1913-7
 Made at Hull By whom made Earle & Co Ltd when made 1913-7
 Owners (M. Fische) Port belonging to Bodo

Horse Power as per Section 28 109 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no
 Description of Engines Triple Expansion No. of Cylinders Three No. of Cranks 3

of Cylinders 15"-25"-40" Length of Stroke 27" Revs. per minute 95 Dia. of Screw shaft as per rule 9.065 Material of screw shaft steel
 as fitted 9 1/8" Is the after end of the liner made water tight
 the screw shaft fitted with a continuous liner the whole length of the stern tube no liners
 If the liner is in more than one length are the joints burned ✓ 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

are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 4'-0"
 Dia. of Tunnel shaft as per rule 7.46" Dia. of Crank shaft journals as per rule 7.83" Dia. of Crank pin 7 7/8" Size of Crank webs 5 1/2 x 15" Dia. of thrust shaft under
 as fitted 7 1/2" as fitted 7 7/8" State whether moceable no Total surface 40'-0"

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 duplex Sizes of Pumps 6 x 7 1/2 x 6 Bilge & Ballast No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room three 2' dia one 2' in tunnel well In Holds, &c. Two 2' dia in each compartment

No. of Bilge Injections one sizes 3 1/2" Connected to condenser, or to circulating pump pumps 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 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 ✓

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 1-4-13 of Stern Tube 14-6-13 Screw shaft and Propeller 16-6-13
 Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from top platform

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

Total Heating Surface of Boilers 1950^{sq} Is Forced Draft fitted no No. and Description of Boilers one single ended
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 4-4-13 No. of Certificate 1972

Can each boiler be worked separately ✓ Area of fire grate in each boiler 59^{sq} No. and Description of Safety Valves to
 each boiler two spring loaded Area of each valve 5.94^{sq} Pressure to which they are adjusted 185 lbs Are they fitted with easing gear yes

Smallest distance between boilers on stowage and bunkers or woodwork 9" Dia. of boilers 174" Length 10'-9" Material of shell plates steel
 Thickness 15/16" Range of tensile strength 28-32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double

long. seams J.R.D. 13.1 Diameter of rivet holes in long. seams 15/16" Pitch of rivets 9 1/8" lap of plates or width of butt straps 19 1/2"
 Per centages of strength of longitudinal joint rivets 83.8 Working pressure of shell by rules 201 Size of manhole in shell 12" x 16"

Size of compensating ring 8 1/2 x 15/16 No. and Description of Furnaces in each boiler 3 plain Material Steel Outside diameter 42 5/8"
 Length of plain part top 82 7/8" Thickness of plates crown 7 13/16" Description of longitudinal joint welded No. of strengthening rings ✓

Working pressure of furnace by the rules 189 Combustion chamber plates: Material S Thickness: Sides 2 1/32" Back 1 1/16" Top 2 1/32" Bottom 3 1/32"
 Pitch of stays to ditto: Sides 9 1/2 x 8" Back 9 3/4 x 8" Top 8 1/2 x 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 206

Material of stays steel Diameter at smallest part 1.76" Area supported by each stay 78^{sq} Working pressure by rules 180 End plates in steam space:
 Material S Thickness 1 1/32" Pitch of stays 19 x 18" How are stays secured A. H. Working pressure by rules 194 Material of stays S

Diameter at smallest part 7.39^{sq} Area supported by each stay 342^{sq} Working pressure by rules 224 Material of Front plates at bottom S
 Thickness 15/16" Material of Lower back plate S Thickness 7/8" Greatest pitch of stays 13 1/2 x 8 7/8" Working pressure of plate by rules 195

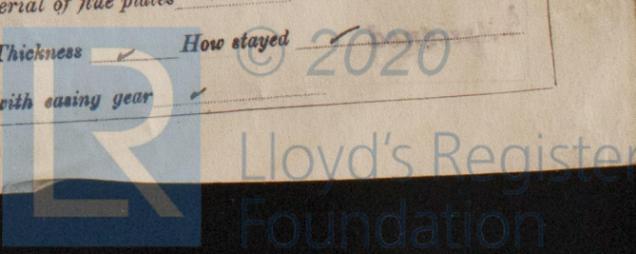
Diameter of tubes 3 1/2" Pitch of tubes 4 7/8 x 4 3/4" Material of tube plates S Thickness: Front 15/16" Back 13/16" Mean pitch of stays 9 5/8"
 Pitch across wide water spaces 13 1/2" Working pressures by rules 185 Girders to Chamber tops: Material S Depth and

thickness of girder at centre 9 1/4 x 1 1/2" Length as per rule 33 1/16" Distance apart 8 1/2" Number and pitch of stays in each three 8"
 Working pressure by rules 186 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 ✓

W928-0084



VERTICAL DONKEY BOILER— Manufacturers of Steel

No. _____ Description _____

Made at _____ By whom made *The Shipbuilders & Engineers Co. Ltd.* 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 top end bolts & nuts, Two bottom end bolts & nuts, Two main bearing bolts & nuts, One set of coupling bolts & nuts, one set of feed pipe pump valves, Bolts & nuts & iron of various sizes*

FOR EARLE'S SHIPBUILDING & ENGINEERING CO. LIMITED.

The foregoing is a correct description, *and*

Manufacturer.

Flournois
MANAGER

Dates of Survey while building	During progress of work in shops	1912.-Dec 3. 10. 17. 19. 24. 31	1913.-Jan 7. 10. 16. 23. 30. Feb 8. 15. 17. 19. 24. Mar 1. 6. 11.
	During erection on board vessel	Mar 12. 14. 18. 27	April 2. 4. 11. 15. 17. Jun 5. 13. 14. 16. 17. 19. 20. 23. Jul 14. 16.
	Total No. of visits	39	

Is the approved plan of main boiler forwarded herewith *Yes*
" " " donkey " " " *Yes*

Dates of Examination of principal parts	Cylinders	15-2-13	Slides	17-2-13	Covers	8-2-13	Pistons	15-2-13	Rods	23-1-13	
Connecting rods	16-1-13	Crank shaft	30-1-13	Thrust shaft	11-3-13	Tunnel shafts	11-3-13	Screw shaft	11-4-13	Propeller	15-4-13
Stern tube	13-6-13	Steam pipes tested	18-6-13	Engine and boiler seatings	27-3-13	Engines holding down bolts	20-6-13				
Completion of pumping arrangements	23-6-13	Boilers fixed	20-6-13	Engines tried under steam	23-6-13						
Main boiler safety valves adjusted	23-6-13	Thickness of adjusting washers	Port 1 3/8 2 1/8								
Material of Crank shaft	S	Identification Mark on Do.	3188WDH	Material of Thrust shaft	S	Identification Mark on Do.	1015FLS				
Material of Tunnel shafts	S	Identification Marks on Do.	1014FLS	Material of Screw shafts	S	Identification Marks on Do.	1016FLS				
Material of Steam Pipes	Solid drawn copper			Test pressure	400 lbs.						

General Remarks (State quality of workmanship, opinions as to class, &c.) *The Machinery for this vessel has been constructed under special survey in accordance with the approved plans & the rules of this society, the materials & workmanship are good, the machinery has been properly fitted & secured on board & on completion was tested under steam & found to work satisfactorily. The Boiler was tested by hydraulic pressure to 240 lbs & found sound & tight. The safety valves have been adjusted & tested for accumulation which did not exceed 192 lbs.*

In my opinion the vessel is eligible for the record + L.R.C. 7.13.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C 7.13.

The amount of Entry Fee	£ 2 : 0 :	When applied for,	24-7-13
Special	£ 16 . 7 :		
Donkey Boiler Fee	£ :	When received,	25/7/13
Travelling Expenses (if any)	£ 6/4 :		

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

Assigned
TUE. JUL 29 1913

MACHINERY CERTIFICATE WRITTEN.



Date of writing Rep
No. in Reg. Book.
pt-2 on the
Master
Boilers made at
Owners

VERTICAL
Made at
tested by hydraul
No. of safety cal
enter the donkey
strength 27/32
Lap of plating
Radius of do. 5
Thickness of fur
plates 5 8
Thickness of wa

Du
Dates of Survey while building
Du
bo
Tot

GENERAL
L
an

This D
board
adjust

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

Certificate (if required) to be sent to

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