

REPORT ON MACHINERY.

No. 26128

SAT. APR. 26. 1913

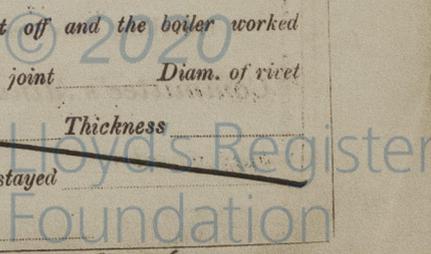
Received at London Office

Date of writing Report 1913 When handed in at Local Office 25/3/1913 Port of Hull
 No. in Survey held at Hull Date, First Survey July 24th Last Survey Mar. 15th 1913
 Reg. Book 47 on the SS. ELISABETH BROMLEY (Number of Visits 23)
 Master H. Latham & Sons Ltd. Built at Howden By whom built J. Swan & Son When built 1913
 Engines made at Hull By whom made Charles D. Holmes & Co. Ltd. when made 1913
 Boilers made at Hull By whom made Charles D. Holmes & Co. Ltd. when made 1913
 Registered Horse Power H. Owners H. Latham & Sons Ltd. Port belonging to Hull
 Nom. Horse Power as per Section 28 H. Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted No.

ENGINES, &c.—Description of Engines Compound No. of Cylinders 2 No. of Cranks 2
 Dia. of Cylinders 18"-27" Length of Stroke 18" Revs. per minute 135 Dia. of Screw shaft 6 1/2" Material of screw shaft Iron
 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 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 26"
 Dia. of Tunnel shaft 5.56 Dia. of Crank shaft journals 5.94 Dia. of Crank pin 6" Size of Crank webs 4x11" Dia. of thrust shaft under collars 6" Dia. of screw 6-8" Pitch of Screw 8-6" No. of Blades 4 State whether moveable No Total surface 20 sq ft
 No. of Feed pumps 1 Diameter of ditto 2 1/2" Stroke 10" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 1 Diameter of ditto 2 1/2" Stroke 10" Can one be overhauled while the other is at work Yes
 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 on 2" suction In Holds, &c. Two 2" 1/2 off hold, Two 2" 1/2 forward hold, on 2" 1/2 1/2
 No. of Bilge Injections 1 sizes 3" Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room of size 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 0
 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 23. 1. 13 of Stern Tube 23. 1. 13 Screw shaft and Propeller 23. 1. 13
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Yes

BOILERS, &c.—(Letter for record S.) Manufacturers of Steel Glyndale Iron & Steel Works
 Total Heating Surface of Boilers 450 sq ft Is Forced Draft fitted No No. and Description of Boilers One of multi-ported mild
 Working Pressure 150 lbs. Tested by hydraulic pressure to 300 lbs. Date of test 4. 10. 12 No. of Certificate 1932
 Can each boiler be worked separately Yes Area of fire grate in each boiler 28 sq ft No. and Description of Safety Valves to each boiler Two Spring
 Area of each valve 3.90" Pressure to which they are adjusted 152 lbs. Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 5" Mean dia. of boilers 9-6" Length 10-6" Material of shell plates S.
 Thickness 23" Range of tensile strength 28/1075 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D. P. S.
 long. seams D. B. S. Y. P. Diameter of rivet holes in long. seams 15" Pitch of rivets 5 3/32" Lap of plates or width of butt straps 10 1/2"
 Per centages of strength of longitudinal joint rivets 85% Working pressure of shell by rules 151 lbs. Size of manhole in shell 16" x 12"
 Size of compensating ring 4" x 23" No. and Description of Furnaces in each boiler 2 plain Material S. Outside diameter 2-11"
 Length of plain part top 7-3" bottom 7-3" Thickness of plates crown 21" Description of longitudinal joint Weld No. of strengthening rings 3 3/4" x 3 3/4" x 3/8" L on bottom
 Working pressure of furnace by the rules 152 lbs. Combustion chamber plates: Material S. Thickness: Sides 9" Back 19" Top 5" Bottom 9"
 Pitch of stays to ditto: Sides 9" x 4 3/4" Back 9 1/2" x 8 1/2" Top 10 1/2" x 7 1/2" If stays are fitted with nuts or riveted heads Yes Working pressure by rules 162 lbs.
 Material of stays S. Diameter at smallest part 1-7/16" Area supported by each stay 95.90 Working pressure by rules 165 lbs. End plates in steam space: Material S. Thickness 29" Pitch of stays 16" x 12 3/4" How are stays secured D. B. S. W. Working pressure by rules 186 lbs. Material of stays S.
 Diameter at smallest part 2-0/30" Area supported by each stay 204.0 Working pressure by rules 154 lbs. Material of Front plates at bottom S.
 Thickness 23" Material of Lower back plate S. Thickness 23" Greatest pitch of stays 14" x 8 1/4" Working pressure of plate by rules 214 lbs.
 Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates S. Thickness: Front 29" Back 23" Mean pitch of stays 9 1/8"
 Pitch across wide water spaces 13 1/2" Working pressures by rules 161 lbs. Girders to Chamber tops: Material S. Depth and thickness of girder at centre 7 1/4" x 1 1/2" Length as per rule 2-1/4" Distance apart 10 1/2" Number and pitch of stays in each 2 - 7 1/2"
 Working pressure by rules 159 lbs. Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked separately
 Diameter 18" Length 18" Thickness of shell plates 29" Material S. Description of longitudinal joint Weld Diam. of rivet holes 15" Pitch of rivets 5 3/32" Working pressure of shell by rules 151 lbs. Diameter of flue 18" Material of flue plates S. Thickness 29"
 If stiffened with rings Yes Distance between rings 18" Working pressure by rules 151 lbs. End plates: Thickness 29" How stayed Yes
 Working pressure of end plates 151 lbs. Area of safety valves to superheater 28 sq ft Are they fitted with easing gear Yes

005736-005778-0266



VERTICAL DONKEY BOILER— *Manufacturers of Steel*

No. _____ Description _____

Made at _____ By whom made _____ When made _____ Where fired _____

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 end small iron rods bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one set each side & side 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.** *Manufacturer.*

Arthur Holmes DIRECTOR, 1912:— July 24 Aug 1. 9. 14. 22. 28. 29. Sep 11. 19. 23. 25. Oct 4. 8. 16. Nov 19.

Dates of Survey while building { During progress of work in shops - - }
 { During erection on board vessel - - - } 1913:— Jan 23. Feb 5. 6. 10. 14. 17. 18. Mar 15

Total No. of visits *23.* Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts—Cylinders *14. 8. 12* Slides *9. 10. 12* Covers *8. 10. 12* Pistons *8. 10. 12* Rods *19. 9. 12*

Connecting rods *19. 9. 12* Crank shaft *28. 8. 12* Thrust shaft *16. 10. 12* Tunnel shafts _____ Screw shaft *19. 11. 12* Propeller *19. 11. 12*

Stern tube *19. 11. 12* Steam pipes tested *14. 2. 13* Engine and boiler seatings *23. 1. 13* Engines holding down bolts *6. 2. 13*

Completion of pumping arrangements *14. 2. 13* Boilers fixed *14. 2. 13* Engines tried under steam *14. 2. 13*

Main boiler safety valves adjusted *14. 2. 13* Thickness of adjusting washers *9/16" Standard 1/16"*

Material of Crank shaft *S* Identification Mark on Do. *Nº 9687.6.D* Material of Thrust shaft *S* Identification Mark on Do. *Nº 9687.6.D*

Material of Tunnel shafts *V* Identification Marks on Do. _____ Material of Screw shafts *S* Identification Marks on Do. *Nº 9687.6.D*

Material of Steam Pipes *Solid drawn copper* Test pressure *300 lbs. per sq. inch hydraulic*

General Remarks (State quality of workmanship, opinions as to class, &c. *The engines & boilers of this vessel have been considered under special survey in accordance with the Rules. The materials & workmanship are correct & 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 R.L.M.C. 3.13 in the Register Books.*

It is submitted that this vessel is eligible for R.L.M.C. 3.13 + LMC 3.13.

J.W.D.
26/4/13.

Arthur Holmes
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

The amount of Entry Fee £ 1 : 0 :
 Special £ 8 : 0 :
 Donkey Boiler Fee £ : :
 Travelling Expenses (if any) £ : 6/2 :

When applied for, *25/4/13*
 When received, *30/4/13*

Committee's Minute
 Assigned

TUE. APR. 29. 1913

+ LMC 3.13

MACHINERY CERTIFICATE WRITTEN.



Certificate (if required) to be sent to _____