

REPORT ON MACHINERY.

No. 26128

Received at London Office

SAT. APR. 26. 1913

Date of writing Report 1913 When handed in at Local Office 25/3/10 Port of Hull
 No. in Survey held at Hull. Date, First Survey July 24 Last Survey Mar. 15 1913.
 Reg. Book 47 on the Hull S.S. "ELISABETH BROMLEY". (Number of Visits 23)
 Master Built at Howden By whom built J. Swan & Son. Tons { Gross 147
 Net 67
 When built 1913.
 Engines made at By whom made } when made 1913.
 Boilers made at Hull. By whom made Charles D. Holmes & Co. Ltd. when made 1913.
 Registered Horse Power 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 Compounded. No. of Cylinders 2 No. of Cranks 2
 Dia. of Cylinders 18"-22" Length of Stroke 18" Revs. per minute 135 Dia. of Screw shaft as per rule 4.33 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 If two
 liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 26"
 Dia. of Tunnel shaft as per rule 5.56 Dia. of Crank shaft journals as per rule 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 ft.
 No. of Feed pumps 1 Diameter of ditto 2.5" Stroke 10" Can one be overhauled while the other is at work
 No. of Bilge pumps 1 Diameter of ditto 2.5" Stroke 10" Can one be overhauled while the other is at work
 No. of Donkey Engines 1 Sizes of Pumps 5"x2.5"x5" 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 aft.
 No. of Bilge Injections 1 sizes 3" Connected to condenser, or to circulating pump pump 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 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
 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 Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record S.) Manufacturers of Steel Glynwedale Iron & Steel Works.
 Total Heating Surface of Boilers 4500 Is Forced Draft fitted No. No. and Description of Boilers One up. mult. orifice m.d.
 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 Area of fire grate in each boiler 28 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 5.32" Lap of plates or width of butt straps 10.5"
 Per centages of strength of longitudinal joint rivets 8.5/1 plate 8.1/3 Working pressure of shell by rules 151 lbs. Size of manhole in shell 16"x12"
 Size of compensating ring 4"x23" No. and Description of Furnaces in each boiler 2 plain Material S. Outside diameter 2.11"
 Length of plain part top 7.3" bottom 7.2" Thickness of plates crown 2.1" bottom 2.2" Description of longitudinal joint Welded No. of strengthening rings
 Working pressure of furnace by the rules 152 lbs. Combustion chamber plates: Material S. Thickness: Sides 9" Back 12" Top 8" Bottom 16"
 Pitch of stays to ditto: Sides 9"x4.5" Back 9.5"x8.5" Top 10.5"x7.5" If stays are fitted with nuts or riveted heads Yes. Working pressure by rules 162 lbs.
 Material of stays S. Diameter at smallest part 1.760" Area supported by each stay 9.5. 9.0 Working pressure by rules 165 lbs. End plates in steam space:
 Material S. Thickness 2.9" Pitch of stays 16"x12.5" How are stays secured D.B.S.W. Working pressure by rules 186 lbs. Material of stays S.
 Diameter at smallest part 2.030" Area supported by each stay 20.40 Working pressure by rules 154 lbs. Material of Front plates at bottom S.
 Thickness 2.3" Material of Lower back plate S. Thickness 2.3" Greatest pitch of stays 14"x8.5" Working pressure of plate by rules 214 lbs.
 Diameter of tubes 3.5" Pitch of tubes 4.5"x4.5" Material of tube plates S. Thickness: Front 2.9" Back 2.3" Mean pitch of stays 9.5"
 Pitch across wide water spaces 12.5" Working pressures by rules 161 lbs. Girders to Chamber tops: Material S. Depth and
 thickness of girder at centre 7.5"x1.5" Length as per rule 2.4" Distance apart 10.5" Number and pitch of stays in each 2-7.5"
 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 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

005736-005778-0266

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	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 sets 1/2" & bottom and connecting rod bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one set each for 2 & 4 ft. 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.*

<div style="display: flex; justify-content: space-between;"> <div> <p><i>Arthur Holmes</i></p> <p>Dates of Survey while building</p> </div> <div> <p>DIRECTOR.</p> <p>1912: July 24 Aug 1. 9. 14. 22. 28. 29. Sep 11. 19. 23. 25. Oct 4. 8. 16. Nov 19.</p> </div> </div>	
<p>During progress of work in shops - -</p>	<p>1913: Jan 23. Feb 5. 6. 10. 14. 17. 18. Mar 15</p>
<p>During erection on board vessel - -</p>	
<p>Total No. of visits <u>23</u></p>	<p>Is the approved plan of main boiler forwarded herewith <u>yes</u></p>

Is the approved plan of main boiler forwarded herewith

“ “ “ *donkey* “ “

Dates of Examination of principal parts—Cylinders 14.8.12 Slides 8.10.12 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 Prod. $\frac{3}{16}$ " Standard $\frac{1}{16}$ "
Material of Crank shaft S Identification Mark on Do. N:9687.6 Material of Thrust shaft S Identification Mark on Do. N:9687
Material of Tunnel shafts Y Identification Marks on Do. Y Material of Screw shafts L Identification Marks on Do. N:9687
Material of Steam Pipes Solid drawn copper Test pressure 300 lbs. per sq. inch Hydro

General Remarks (State quality of workmanship, opinions as to class, &c. The engines & boilers of this vessel have been constructed under special survey in accordance with the Rules. The materials & workmanship are sound & good. The boilers 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 "A. 1. C. 3. 13" in the Register Book.

It is submitted that
this record is eligible for
244-250000 + LMC 3.13

The amount of Entry Fee .. £	1	:	0	:	When applied for,
Special £	8	:	0	:	25/4/13
Donkey Boiler Fee £		:		:	When received,
Travelling Expenses (if any) £		:	6/9	:	30/4/13

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

Committee's Minute

TUE. APR. 29 1913

Assigned

12m 3.13

**MACHINERY CERTIFICATE
WRITTEN.**



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