

REPORT ON MACHINERY

No. 4345

Received at London Office

Date of writing Report 24th Dec. 1909 When handed in at Local Office 24th Dec. 1909 Port of Southampton
 No. in Survey held at Southampton Date, First Survey Feb 3rd 1908 Last Survey 22nd Dec. 1909
 Reg. Book. on the Steel Screw Lug Jean (Day Summers & Co. No 143) (Number of Visits 26)
 Master J. A. Glover Built at Southampton By whom built Day Summers & Co. Ltd Tons { Gross 86 Net 78
 Engines made at Southampton By whom made Day Summers & Co. Ltd when made 1908
 Boilers made at do By whom made do when made 1908
 Registered Horse Power 50 Owners Ceylon Wharfrage Co. Port belonging to London
 Nom. Horse Power as per Section 28 50 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

ENGINES, &c.—Description of Engines Inverted Compound Surface Condensing No. of Cylinders Two No. of Cranks Two
 Dia. of Cylinders 15" x 30" Length of Stroke 24" Revs. per minute 130 Dia. of Screw shaft as per rule 6.98 Material of screw shaft steel
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube no 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 no 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 2' 5"
 Dia. of Tunnel shaft as per rule 6.21 Dia. of Crank shaft journals as per rule 6.52 Dia. of Crank pin 6 5/8" Size of Crank webs 4 1/2" x 9 1/4" Dia. of thrust shaft under
 collars 6 5/8" Dia. of screw 7 1/2" Pitch of Screw 9.6" No. of Blades 4 State whether moveable no Total surface 23 sq ft.
 No. of Feed pumps no Diameter of ditto 2 1/4" Stroke 12" Can one be overhauled while the other is at work yes
 No. of Bilge pumps no Diameter of ditto 2 1/2" Stroke 12" Can one be overhauled while the other is at work yes
 No. of Donkey Engines no Sizes of Pumps 2 3/4" x 4 1/2" x 4" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Two 2" Suctions In Holds, &c. no 2" Suction in each
 No. of Bilge Injections no sizes 3" Connected to condenser, 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 yes
 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 27 June 1906 Stern Tube 27 June Screw shaft and Propeller 27 June
 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 Plate & Bar Castles & Co. Newcastle, Rint-Miller
 Total Heating Surface of Boilers 951 sq ft Is Forced Draft fitted no No. and Description of Boilers no 2 Multi-tubular
 Working Pressure 120 lbs Tested by hydraulic pressure to 240 lbs Date of test May 28th 1908 No. of Certificate 272
 Can each boiler be worked separately yes Area of fire grate in each boiler 38 sq ft No. and Description of Safety Valves to
 each boiler Two Spring loaded Area of each valve 5.939 Pressure to which they are adjusted 125 lbs Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 8" Mean dia. of boilers 10.6" Length 9.0" Material of shell plates Steel
 Thickness 11/16" Range of tensile strength 29/32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams D.R. top
 long. seams D.R. tank shape Diameter of rivet holes in long. seams 1" Pitch of rivets 4" Lap of plates or width of butt straps 10"
 Per centages of strength of longitudinal joint 84.9% Working pressure of shell by rules 120.5 lbs Size of manhole in shell 12" x 16"
 Size of compensating ring 16" No. and Description of Furnaces in each boiler Two plain Material Steel Outside diameter 3' 2 1/4"
 Length of plain part top 6.3 Thickness of plates bottom 3 1/2 Description of longitudinal joint double butt shape No. of strengthening rings 17
 Working pressure of furnace by the rules 120 lbs Combustion chamber plates: Material Steel Thickness: Sides 3/32" Back 9/16" Top 19/32" Bottom 3/32"
 Pitch of stays to ditto: Sides 8 3/4" x 8" Back 9 1/2" x 9 1/2" Top 8 1/2" x 11 1/4" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 121 lbs
 Material of stays Steel Diameter at smallest part 1.448 Area supported by each stay 90.25 Working pressure by rules 128 lbs End plates in steam space:
 Material Steel Thickness 13/16" Pitch of stays 15 1/2" x 16 1/4" How are stays secured Sub & Main Working pressure by rules 124 lbs Material of stays Steel
 Diameter at smallest part 3.03 Area supported by each stay 251.875 Working pressure by rules 120 lbs Material of Front plates at bottom Steel
 Thickness 13/16" Material of Lower back plate Steel Thickness 3/32" Greatest pitch of stays double Working pressure of plate by rules 120 lbs
 Diameter of tubes 3 1/2" Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates Steel Thickness: Front 13/16" Back 3/4" Mean pitch of stays 13 1/2"
 Pitch across wide water spaces 13" Working pressures by rules 120 lbs Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 5 3/4" x 1 1/8" Length as per rule 1.11 1/2" Distance apart 11 1/4" Number and pitch of stays in each Two 8" x 11 1/4"
 Working pressure by rules 129 lbs Superheater or Steam chest; how connected to boiler yes Can the superheater be shut off and the boiler worked
 separately no Diameter no Length no Thickness of shell plates no Material no Description of longitudinal joint no Diam. of rivet
 holes no Pitch of rivets no Working pressure of shell by rules no Diameter of flue no Material of flue plates no Thickness no
 If stiffened with rings yes Distance between rings no Working pressure by rules no End plates: Thickness no How stayed no
 Working pressure of end plates no Area of safety valves to superheater no Are they fitted with easing gear no

005779-005790-0110

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	
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 crosshead & two connecting rod bolts & nuts. Two main bearing bolts. Pipe coupling bolts. One set of feed & Belge Pump valves. A quantity of assorted bolts & nuts and iron of various sizes*

The foregoing is a correct description,

Manufacturer.

Samuel R. Day

Dates of Survey while building: During progress of work in shops—*Feb 3, 4, 11, 15, 17, 20, 21, 25, March 2, 9, 13, 20, April 7, 10, 27, May 7, 11, 16, 28, 29.*
During erection on board vessel—*June 1, 11, 23, 26, 1908*
Total No. of visits—*26*

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

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Dates of Examination of principal parts—Cylinders *Feb 15, 25* Slides *Feb 15, 20, 25* Covers *Feb 20-25* Pistons *Feb 26 March* Rods *Feb 15-20-25*
Connecting rods *Feb 15-17-20-25* Thrust shaft *March 2-9-13-20* Tunnel shafts *March 2-9-13-20* Screw shaft *March 2-9-13-20* Propeller *March 2-9-13-20*
Stern tube *April 2-7 May 7* Steam pipes tested *July 14, 1909* Engine and boiler seatings *Jan 1-11-12-23* Engines holding down bolts *July 3-14-20*
Completion of pumping arrangements *20th July 1909* Boilers fixed *July 20th 1909* Engines tried under steam *10/12/09*
Main boiler safety valves adjusted *10/12/09* Thickness of adjusting washers *5/16" 1/8"*
Material of Crank shaft *Steel* Identification Mark on Do. *2050 S.A.H.* Material of Thrust shaft *Steel* Identification Mark on Do. *506 H.K.*
Material of Tunnel shafts *Steel* Identification Marks on Do. *507 H.K.* Material of Screw shafts *Steel* Identification Marks on Do. *500 H.K.*
Material of Steam Pipes *Copper* Test pressure *240 lbs.*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The Machinery of this vessel has now been built under special survey and in accordance with the approved plan and Lecty's letter dated 17th & 27th Aug 1908. The materials and workmanship are of good quality and when tried under steam was found satisfactory in every respect. In our opinion, the machinery is eligible for the notation +L.M.C. with date.*

Date of build of Engines & Boilers 1909

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 12.09.

John D. Kees & R. Elliott
28/10/09

The amount of Entry Fee £ 1 : 0 : 0 When applied for, Special .. £ 8 : 0 : 0 25 Dec 1909
Donkey Boiler Fee .. £ : : : When received, Travelling Expenses (if any) £ : : : 27-12-09

Committee's Minute

Assigned

WED 29 DEC 1909

+ L.M.C. 12.09

TUE 18 DEC 1917



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MACHINERY CERTIFICATE WRITTEN