

REPORT ON MACHINERY.

Received at London Office

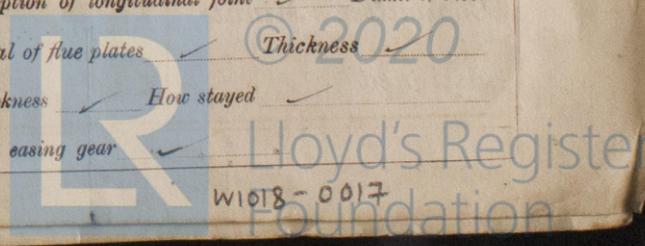
FRI. FEB. 7. 1913

Date of writing Report 28th Jan. 1913 When handed in at Local Office 3rd Feb. 1913 Port of Antwerp
 No. in Survey held at Seraing & Hoboken Date, First Survey 19th October 1911 Last Survey 17th Jan. 1913
 Reg. Book. 477 on the Steel twin s.s. "Albertville" (Cokerill's no 534) (Number of Visits 60)
 Master J. Bernaerts Built at Hoboken By whom built S. A. John Cokerill Tons { Gross 7500 Net 4980
 Engines made at Seraing By whom made S. A. John Cokerill when made 1912
 Boilers made at Seraing By whom made S. A. John Cokerill when made 1912
 Registered Horse Power Owners Cie Belge Maritime du Congo Port belonging to Antwerp
 Nom. Horse Power as per Section 28 964 Is Refrigerating Machinery fitted for cargo purpose no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Quadruple, twin screw No. of Cylinders 4 (each set) No. of Cranks 4 (each set)
 Dia. of Cylinders 23" x 33" x 47" x 67" Length of Stroke 48" Revs. per minute 93 Dia. of Screw shaft 13.91" Material of steel
 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 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 no If two
 liners are fitted, is the shaft lapped or protected between the liners no Length of stern bush 5'-10"
 Dia. of Tunnel shaft 12.53" Dia. of Crank shaft journals 13.16" Dia. of Crank pin 14" Size of Crank webs 19 1/2" x 8 1/2" Dia. of thrust shaft under
 collars 13.75" Dia. of screw 16'-6" Pitch of Screw 17'-11" No. of Blades 3 State whether moceable yes Total surface 837.44
 No. of Feed pumps One Diameter of ditto 4 1/2" Stroke 2'-3" Can one be overhauled while the other is at work yes
 No. of Bilge pumps One Diameter of ditto 5" Stroke 2'-3" Can one be overhauled while the other is at work yes
 No. of Donkey Engines Four Sizes of Pumps 13 1/2 x 10 Ballcock 10 x 12 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Four of 3 1/2" (2 in E.R. & 2 in S.H.) In Holds, &c. No. 1 hold - 2 of 3 1/2"; - No. 2 hold - 2 of 3 1/2"; -
No. 3 hold - 2 of 3 1/2"; - No. 4 hold - 1 of 3 1/2"; - Tunnel well, 1 of 3 1/2"; - Tunnel wings, 2 of 3 1/2";
 No. of Bilge Injections 2 sizes 8 1/2" Connected to condenser, or to circulating pump circ. p. Is a separate Donkey Suction fitted in Engine room & size yes, 2 of 3 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 valves & cocks
 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 no
 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 26-6-12 of Stern Tube 31-5-12 Screw shaft and Propeller 26-6-12
 Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from platform on main deck level

BOILERS, &c.—(Letter for record 5) Manufacturers of Steel Thyssen & Co. - Mülheim & S. A. John Cokerill - Seraing
 Total Heating Surface of Boilers 14100 sq. ft. Is Forced Draft fitted yes No. and Description of Boilers Six single ended
 Working Pressure 215 lbs. Tested by hydraulic pressure to 430 lbs. Date of test 27.10.12/13/12 No. of Certificate 22627 (behind)
 Can each boiler be worked separately yes Area of fire grate in each boiler 57.42 sq. ft. No. and Description of Safety Valves to
 each boiler Two direct spring loaded Area of each valve 9.62 sq. in. Pressure to which they are adjusted 220 lbs. Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 2'-6" Mean dia. of boilers 14'-10 1/2" Length 11'-6" Material of shell plates Steel
 Thickness 1 5/8" Range of tensile strength 28-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double
 long. seams T.R.D.B.S. Diameter of rivet holes in long. seams 1 5/8" Pitch of rivets 10.5" Lap of plates or width of butt straps 1'-11 1/4"
 Per centages of strength of longitudinal joint rivets 90.36 Working pressure of shell by rules 250.39 lbs. Size of manhole in shell 16" x 12"
 plate 84.52 No. and Description of Furnaces in each boiler 3e.f. (Mitsui) Material Steel Outside diameter 3'-10"
 Length of plain part top 7'48" Thickness of plates crown 7'48" Description of longitudinal joint welded No. of strengthening rings no
 bottom 7'48" Working pressure of furnace by the rules 227 lbs. Combustion chamber plates: Material Steel Thickness: Sides 43/64" Back 43/64" Top 43/64" Bottom 15/16"
 Pitch of stays to ditto: Sides 8" Back 7 1/2" x 8" Top 8 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 259 lbs.
 Material of stays Steel Diameter at smallest part 1 5/8" Area supported by each stay 64 sq. in. Working pressure by rules 291 lbs. End plates in steam space:
 Material Steel Thickness 1 1/4" Pitch of stays 17 1/2" x 15 1/2" How are stays secured d. nuts Working pressure by rules 252 lbs. Material of stays Steel
 Diameter at smallest part 3 1/2" Area supported by each stay 277.65 sq. in. Working pressure by rules 310 lbs. Material of Front plates at bottom Steel
 Thickness 29/32" Material of Lower back plate Steel Thickness 6/16" Greatest pitch of stays 1'-1" Working pressure of plate by rules 290 lbs.
 Diameter of tubes 2 1/2" Pitch of tubes 3 3/4" Material of tube plates Steel Thickness: Front 3/16" + 1/16" Back 7/8" Mean pitch of stays 7 3/4"
 Pitch across wide water spaces 1'-1 1/2" Working pressures by rules 422 lbs. Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 9 1/4" x 15" Length as per rule 2'-7 1/2" Distance apart 8 1/4" Number and pitch of stays in each Three - 8"
 Working pressure by rules 411 lbs. Superheater or Steam chest; how connected to boiler no 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 no 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

58 ft.
 given as it
 System.
 Water Capacity.
 Tons.
 88
 43.
 44.
 25.26.29
 7.25 Feb. 4.
 Visits 62



VERTICAL DONKEY BOILER— Manufacturers of Steel

No.	Description	When made	Where fixed
Made at	By whom made	No. of Certificate	Fire grate area
Working pressure	tested by hydraulic pressure to	Date of test	Description of Safety
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted
If fitted with easing gear	If steam from main boilers can enter the donkey boiler	Diap. of donkey boiler	Date of adjustment
Material of shell plates	Thickness	Range of tensile strength	Descrip. of riveting long. seams
Diap. of rivet holes	Whether punched or drilled	Pitch of rivets	Lap of plating
Working pressure of shell by rules	Thickness of shell crown plates	Radius of do.	No. of stays to do.
Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates
Working pressure of furnace by rules	Thickness of furnace crown plates	Radius of do.	Description of joint
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey

SPARE GEAR. State the articles supplied:— One bottom half bottom end bearing, 1 top end bracket, 2 connecting rod bottom end and 2 top end bolts & nuts, one air pump bracket & rod, 18 air pump valves, 12 cylinder cover studs, 6 junk ring bolts, 50 condenser tubes and 24 ferrules, 2 main bearing bolts, 2 eccentric shaft bolts, 12 slide valve cover studs, one set feed & bodge pump valves, a spare piston packing for each slide valve & piston rod, 6 packing gland studs, 2 slide valve spindles, 12 coupling bolts, 11 cylinder escape valve springs, 2 screw shafts, 2 propeller blades (one left & one right-handed) the complete set of piston & piston valve packing rings, a quantity of assorted bolts & nuts and iron of various sizes, 3 boiler safety valve springs, one air pump valve seat with both & studs complete.

The foregoing is a correct description, of piston & piston valve packing rings, a quantity of assorted bolts & nuts and iron of various sizes, 3 boiler safety valve springs, one air pump valve seat with both & studs complete.

John Cocca
Le Directeur, Le Directeur
 Manufacturer.

Dates of Survey while building	During progress of work in shops	During erection on board vessel	Total No. of visits	Is the approved plan of main boiler forwarded herewith	Is the approved plan of donkey boiler forwarded herewith
1912 - May 31, June 28, Aug. 28, 29, 31	1912 - Oct. 19 - Nov. 15, 17, 22, 24, Dec. 17, 28 - 1912 - Jan. 15, 19, 26, Feb. 6, 18, March 2, 14, 21, 23, April 3, 24, May 9, 18, 28	1912 - June 6, 12, 20, 22, 27, July 6, 15, 19, 30, Aug. 5, 7, 8, 23, 24, Sept. 6, 13, 25, Oct. 5, 8, 10, 17, Nov. 13, 19, Dec. 16, 21, 24, 31 - 1913 - Jan. 8, 17	40 + 20	yes	yes

Dates of Examination of principal parts—Cylinders 8/8 + 8/10/12 Slides 23-5-12 Covers 24-4-12 Pistons 28/5 + 18/7/12 Rods 2-4-12
 Connecting rods 28-5-12 Crank shaft 27/6 + 6/9/12 Thrust shaft 24/4 + 18/5/12 Tunnel shafts 20-8-12 Screw shafts 20/6 + 22/6/12 Propellers 6-6-12
 Stern tubes 19-1-31-5-12 Steam pipes tested 1/11-11-21-12-12 Engine and boiler seatings 10/10-11/11/12 Engines holding down bolts 13-11-12
 Completion of pumping arrangements 8-1-13 Boilers fixed 13-11-12 Engines tried under steam 28-12-12
 Main boiler safety valves adjusted 24-12-12 Thickness of adjusting washers Ford. Port P + 5 3/8", Centre P + 5 3/8", Shaft P 5 1/8" 89 ESW 4, 12
 134 ESW 6, 12 Alt. Port P + 5 3/8", Centre P + 5 3/8", Shaft P 5 1/8" 97 ESW 5, 12
 Material of Crank shafts Steel Identification Mark on Do. 179 ESW 9, 12 Material of Thrust shafts Steel Identification Mark on Do. 107 ESW 6, 12
 Material of Tunnel shafts Steel Identification Marks on Do. 102, 3, 6, 8, 15, 26, 37 ESW 6, 12 Do. 174, 175, 176, 177 ESW 6, 12
 Material of Steam Pipes lapwelded iron & one length copper (rod drain) Test pressure 645 lbs. (H.A.) = 430 lbs.

General Remarks (State quality of workmanship, opinions as to class, &c.)
 The materials and workmanship are good.
 The machinery has been made under Special Survey.
 The engines & boilers have been satisfactorily fitted in the vessel and afterwards tried under steam with satisfactory results.
 The machinery of this vessel is now eligible, in our opinion, for record * L.M.C. 12, 12 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 1. 13.

F.D. *J.W.D.* *A.P.S.*
 10/2/13
W.H. ...
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

The amount of Entry Fee	76. -	When applied for,	20/1/13
Special	1725. -	When received,	8/3/13
Donkey Boiler Fee	#		
Travelling Expenses (if any)	744. -		

Committee's Minute TUE. FEB. 11. 1913
 Assigned *Thme 1.13*



Certificate (if required) to be sent to Donkey's Underway Office.

Form No. 1B. Write "Aiming or Shelter Deck" or "Shelter Deck" opposite its corresponding letter.

Rpt. 13.
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