

REPORT ON MACHINERY.

No. 10091

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 moveable 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" 16" 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 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 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 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"
Size of compensating ring 2' 11 1/2" x 2' 7 1/2" x 1 5/8" No. and Description of Furnaces in each boiler 3e.f. (Union) Material Steel Outside diameter 3'-10"
Length of plain part top Thickness of plates bottom 7' 48" Description of longitudinal joint welded No. of strengthening rings yes
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 1/4" Top 8 1/8" 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 1/4" Area supported by each stay 277.65 sq. in. Working pressure by rules 310 lbs. Material of Front plates at bottom Steel
Thickness 29/64" Material of Lower back plate Steel Thickness 6/64" 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 31/32" Back 7/8" Mean pitch of stays 7 1/4"
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 yes Can the superheater be shut off and the boiler worked
separately yes Diameter yes Length yes Thickness of shell plates yes Material yes Description of longitudinal joint yes Diam. of rivet
holes yes Pitch of rivets yes Working pressure of shell by rules yes Diameter of flue yes Material of flue plates yes Thickness yes
If stiffened with rings yes Distance between rings yes Working pressure by rules yes End plates: Thickness yes How stayed yes
Working pressure of end plates yes Area of safety valves to superheater yes Are they fitted with easing gear yes

W1018-0017

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	Date of adjustment	Dia. of donkey boiler
Material of shell plates	Thickness	Range of tensile strength	Length
Dia. of rivet holes	Whether punched or drilled	Pitch of rivets	Descrip. of riveting long. seams
Working pressure of shell by rules	Thickness of shell crown plates	Lap of plating	Per centage of strength of joint
Diameter of furnace Top	Bottom	Radius of do.	No. of stays to do.
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:— One bottom half bottom and 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 junking 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 bolts & studs complete.

The foregoing is a correct description,
Robert Anonymous John Cockburn
Le Secretaries, Le Directoire Manufacturer.

Dates of Examination of principal parts—Cylinders 8/8 + 8/10/12 Slides 23-5-12 Covers 24-4-12 Pistons 23/5 + 15/7/12 Rods 3-4-12
 Connecting rods 28-5-12 Crank shaft 27/6 + 6/9/12 Thrust shaft 24/4 + 13/5/12 Tunnel shafts 30-8-12 Screw shafts 10/6 + 22/6/12 Propellers 6-6-12
 Stern tubes 19-1-31-5-12 Steam pipes tested 1/11-11-11-12 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", Head P. 5 3/8". 89 ESW 4, 12
 134 ESW 6, 12 Alt. Port P. 5 3/8", Centre P. 5 3/8", Head P. 5 3/8". 91 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
 102, 3, 6, 8, 15, 26, 37 ESW 6, 12 Material of Screw shafts Steel Identification Marks on Do. 107 ESW 6, 12
 107, 14, 17 ESW 7, 12
 107, 14, 17 ESW 7, 12 Material of Steam Pipes lapwelded iron & one length copper (rod drawn) Test pressure 645 lbs. (H.) = 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. + LMC 1. 13.

F.D.

J.W.D. 10/2/13

The amount of Entry Fee ... £ 76. — :
 Special ... £ 17. 5. — :
 Donkey Boiler Fee ... £ — :
 Travelling Expenses (if any) £ 744. — :
 When applied for, 20/1/1913
 When received, 8/3/1913

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

Committee's Minute

TUE. FEB. 11. 1913

Assigned

+ LMC 1. 13



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