

# REPORT ON MACHINERY.

No. 11848

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Survey held at *Seraing & Hoboken*. Date, First Survey *2/1/19* Last Survey *25-1-1922*.  
 on the *Steel Twin S.S. "ELISABETHVILLE"* (Lockhill's 31:562) Gross Tons *8178*  
 Built at *Hoboken* By whom built *J.A.M. John Lockhill* When built *1921*  
 made at *Seraing* By whom made *J.A.M. John Lockhill* when made *1921*  
 made at *Seraing* By whom made *J.A.M. John Lockhill* when made *1921*  
 red Horse Power Owners *E. Belge Maritime du Congo*. Port belonging to *Antwerp*.  
 Horse Power as per Section 28 *964* Is Refrigerating Machinery fitted for cargo purposes *no*. Is Electric Light fitted *yes*.

VES, &c.—Description of Engines *Quadruple Twin screw*. No. of Cylinders *4 each set*. No. of Cranks *4 each set*.  
 Cylinders *23"-33"-47"-67"* Length of Stroke *48"* Revs. per minute *88*. Dia. of Screw shaft *13.97"* Material of *1. m. Steel*.  
 screw shaft fitted with a continuous liner the whole length of the stern tube *yes* (both shafts) Is the after end of the liner made water tight  
 propeller boss *yes*. If the liner is in more than one length are the joints burned *✓* If the liner does not fit tightly at the part  
 the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive *✓* If two  
 re fitted, is the shaft lapped or protected between the liners *✓* Length of stern bush *5'10"*  
 Tunnel shaft *12.76"* Dia. of Crank shaft journals *13.4"* Dia. of Crank pin *14"* Size of Crank webs *19 1/2" x 8 1/4"* Dia. of thrust shaft under  
*13.75"* Dia. of screw *16'6"* Pitch of Screw *17'11"* No. of Blades *3*. State whether moveable *yes*. Total surface *82 sq'*  
 Feed pumps *one* Diameter of ditto *4 1/2"* Stroke *2'3"* Can one be overhauled while the other is at work *yes*  
 Bilge pumps *one* Diameter of ditto *6"* Stroke *2'3"* Can one be overhauled while the other is at work *yes*  
 Donkey Engines *Four*. Sizes of Pumps *11 1/2" x 26" - 7 1/2" x 21" - 5 1/2" x 10" - 12 1/2" x 10"* No. and size of Suctions connected to both Bilge and Donkey pumps  
 ine Room *4 of 3 1/2"*. In Holds, &c. *1st hold 2 of 3 1/2" - 2nd hold 2 of 3 1/2" - 3rd hold 2 of 3 1/2" - 4th hold 1 of 3 1/2" - Port Tunnel 1 of 3 1/2" - St. Tunnel 1 of 3 1/2"*  
*Boiler Room 2 of 3 1/2" - Side bunkers 2 of 3 1/2" - 1st hold 2 of 3 1/2" - 2nd hold 1 of 3 1/2" - Port Tunnel 1 of 3 1/2" - St. Tunnel 1 of 3 1/2"*  
 Bilge Injections *two* sizes *9"*. Connected to condenser, or to circulating pump *yes*. Is a separate Donkey Suction fitted in Engine room & size *yes two of 3 1/2"*  
 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*  
 connections with the sea direct on the skin of the ship *yes* Are they Valves or Cocks *Both valves & cocks*.  
 y 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 *below*.  
 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*.  
 pipes are carried through the bunkers *air & sounding pipes*. How are they protected *with iron casings*.  
 Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times *yes*.  
 Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges *yes*.  
 Screw Shaft Tunnel watertight *yes*. Is it fitted with a watertight door *yes*. worked from *Eng. room grating (Shelter deck)*.  
 ERS, &c.—(Letter for record *S*) Manufacturers of Steel *Selsenkirchener Bergwerke A.G. Aachen & St. Etienne - Marillat - Marillat - Marillat*.  
 Heating Surface of Boilers *14100* Is Forced Draft fitted *yes*. No. and Description of Boilers *Six single ended*.  
 ng Pressure *215 lb.* Tested by hydraulic pressure to *373 lb.* Date of test *14/8/21 - 15/9/21*. No. of Certificate *57-58-59-60-61-62-63-64-65-66-67-68*.  
 ch boiler be worked separately *yes*. Area of fire grate in each boiler *57.42 sq. feet*. No. and Description of Safety Valves to  
 iter *two direct spring loaded* Area of each valve *9.6 sq."* Pressure to which they are adjusted *220 lb.* Are they fitted with easing gear *yes*.  
 t distance between boilers or uptakes and bunkers or woodwork *2'0"* Mean dia. of boilers *14'10 5/8"* Length *11'6"* Material of shell plates *Steel*.  
 ss *1 5/8"* Range of tensile strength *28/32 ton* Are the shell plates welded or flanged *flanged*. Descrip. of riveting: cir. seams *Double Rivet*.  
 amss *Tril. Riv. D. Riv.* Diameter of rivet holes in long. seams *1 5/8"* Pitch of rivets *10.5"* Lap of plates or width of butt straps *23 1/4"*  
 tages of strength of longitudinal joint *90.39* Working pressure of shell by rules *241 lb.* Size of manhole in shell *16" x 12"*  
 compensating ring *2 11/2" x 2 7/2" x 1 1/8"* No. and Description of Furnaces in each boiler *3. C. H. Morrison*. Material *Steel* Outside diameter *3'10"*  
 of plain part *8'4 1/2"* Thickness of plates *4 3/16"* Description of longitudinal joint *lap welded*. No. of strengthening rings *none*.  
 ng pressure of furnace by the rules *222 lb.* Combustion chamber plates: Material *Steel*. Thickness: Sides *4 3/16"* Back *4 3/16"* Top *4 3/16"* Bottom *15/16"*  
 f stays to ditto: Sides *8"* Back *7 3/4" x 8"* Top *8 1/2" x 8"*. If stays are fitted with nuts or riveted heads *nuts*. Working pressure by rules *246 lb.*  
 al of stays *Steel* Area at smallest part *1.79"* Area supported by each stay *64 sq"* Working pressure by rules *238 lb.* End plates in steam space:  
 al *Steel* Thickness *1 1/4"* Pitch of stays *17 3/4" x 15 1/2"* How are stays secured *nuts*. Working pressure by rules *262 lb.* Material of stays *Steel*.  
 at smallest part *7.22 sq"* Area supported by each stay *275.125 sq"* Working pressure by rules *292 lb.* Material of Front plates at bottom *Steel*.  
 ss *29/32"* Material of Lower back plate *Steel*. Thickness *6/16"* Greatest pitch of stays *1'1 1/2"* Working pressure of plate by rules *240 lb.*  
 er of tubes *2 1/2"* Pitch of tubes *8 3/4"* Material of tube plates *Steel* Thickness: Front *39/32" + 1/2"* Back *7/8"* Mean pitch of stays *7 1/2" 7 3/4"*  
 across wide water spaces *1'1 1/2"* Working pressures by rules *277 lb.* Girders to Chamber tops: Material *Steel* Depth and  
 ss of girder at centre *4 1/2" x 15 1/8"* Length as per rule *2'7 7/8"* Distance apart *8 1/4"* Number and pitch of stays in each *3 st. x 8" P.*  
 ng pressure by rules *410 lb.* Steam dome: description of joint to shell *✓* % of strength of joint *✓*  
 er *✓* Thickness of shell plates *✓* Material *✓* Description of longitudinal joint *✓* Diam. of rivet holes *✓*  
 f rivets *✓* Working pressure of shell by rules *✓* Crown plates *✓* Thickness *✓* How stayed *✓*  
 REHEATER. Type *✓* Date of Approval of Plan *✓* Tested by Hydraulic Pressure to *✓*  
 Test *✓* Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler *✓*  
 eter of Safety Valve *✓* Pressure to which each is adjusted *✓* Is Easing Gear fitted *✓*

005377-005386-0211



IS A DONKEY BOILER FITTED? *no*

If so, is a report now forwarded? *-*

SPARE GEAR. State the articles supplied:— *two propeller shafts - 4 propeller blades - two bottom end frames - 1 brass pump impeller & shaft for same - one impeller shaft for circ. pump for aux. condenser - 1 H.P. and 1 I.P. spindle - 2 check valves - two top end bolts & nuts - two bottom end bolts & nuts - 2 main bearings & nuts - 1 set of coupling bolts - 1 set of tilge pump valves - 1 set of piston springs - 6 cyl. cover shaft 6 punch ring bolts - 10 boiler tubes - 3 dozen condenser tubes - 50 ferrules - 3 boiler safety valve springs - 2 quantity of assorted bolts & nuts - 1 Iron of various sizes.*

The foregoing is a correct description,

*Société Anonyme John Cocherill*

*J. Le Sec* *J. Le Sec* *General*

Manufacturer.

Dates of Survey while building  
During progress of work in shops: *2/12/19 - 18/2/20 - 7/4/20 - 12/6/20 - 28/6/20 - 14/7/20 - 22/7/20 - 28/7/20 - 11/8/20 - 24/8/20 - 2/9/20 - 15/9/20 - 19/9/20 - 3/10/20*  
During erection on board vessel: *24/9/20 - 23/12/21 - 13/5/21 - 6/4/21 - 1/7/21 - 14/7/21 - 22/7/21 - 30/7/21 - 10/8/21 - 13/9/21*  
Total No. of visits: *18/9/21 - Oct 12, 18, 28 - Nov 3, 10 - 15, 25*  
*43 visits* *Dec. 6, 9, 13 - 11, 20 - 27, 28 - Jan 6, 25/21*

Dates of Examination of principal parts—Cylinders *12/20* Slides *28/4/20* Covers *12/8/20* Pistons *28/4/20* Rods *5/5/20*

Connecting rods *22/12/20* Crank shaft *7/7/20* Thrust shaft *7/7/20* Tunnel shafts *14/7/20* Screw shaft *11/8/20* Propeller *29-9-20*

Stern tube *29-9-20* Steam pipes tested at *Wendenburg* Engine and boiler seatings *30-7-21* Engines holding down bolts *13-9-21*

Completion of pumping arrangements *30-11-21* Boilers fixed *18-10-21* Engines tried under steam *27/11/21 - 28/11/21*

Completion of fitting sea connections *2-4-21* Stern tube *2-4-21* Screw shaft and propeller *13-5-21*

Main boiler safety valves adjusted *6/12/21 - 13/12/21* Thickness of adjusting washers *Forw. C. Boiler 7.8 V. 7.3 P.V. 7.5 C. Boiler 7.4 St. 7.4*

Material of Crank shaft *Steel* Identification Mark on Do. *FLR 7-7-1920* Material of Thrust shaft *Steel* Identification Mark on Do. *FLR 7-7-1920*

Material of Tunnel shafts *Steel* Identification Marks on Do. *FLR 7-7-1920* Material of Screw shafts *Steel* Identification Marks on Do. *FLR 7-7-1920*

Material of Steam Pipes *Lapwelded (steel tanked letter)* Test pressure *650 lb*

Is an installation fitted for burning oil fuel *no* Is the flash point of the oil to be used over 150°F. *✓*

Have the requirements of Section 49 of the Rules been complied with *✓*

Is this machinery duplicate of a previous case *yes* If so, state name of vessel *Twin J. S. Albertville of Am*

General Remarks (State quality of workmanship, opinions as to class, &c.)

*The materials and workmanship are good and have been tested by the Society's Surveyors. The machinery has been made under special survey. The Engine and boilers fitted satisfactorily in the vessel have afterwards been tried under steam with satisfactory results.*

*The machinery of this vessel is in good condition and eligible in my opinion to have record of - I.L.M.C. 1-22. in the Society's Register Book.*