

AT. FEB. 14. 1914  
No. 10603.  
SAT. FEB. 14. 1914

# REPORT ON MACHINERY

4.

Received at London Office

of writing Report *9<sup>th</sup> Feb. 1914* When handed in at Local Office *13-2-1914* Port of *Antwerp*  
 in Survey held at *Seraing & Hoboken* Date, First Survey *20<sup>th</sup> February 1914* Last Survey *5<sup>th</sup> February 1914*  
 Book. *40* on the *Steel twin screw Steamer "Fzar Michael Theodorowitch"* (Number of Visits *41*)  
 Tons { Gross *2785*  
 Net *1971*  
 When built *1914*  
 Master *B. Schaga* Built at *Hoboken* By whom built *Sr. An. John Lockwill* when made *1914*  
 Engines made at *Seraing* By whom made *Sr. An. John Lockwill* when made *1914*  
 Boilers made at *Seraing* By whom made *Sr. An. John Lockwill* when made *1914*  
 Registered Horse Power \_\_\_\_\_ Owners *Russian Steam Navigation & Trading Co* Port belonging to \_\_\_\_\_  
 a. Horse Power as per Section 28 *417* Is Refrigerating Machinery fitted for cargo purposes *no* Is Electric Light fitted *yes*

**GINES, &c.**—Description of Engines *Two - triple expansion* No. of Cylinders *6* No. of Cranks *6*  
 No. of Cylinders *16 3/8", 16", 43 5/8"* Length of Stroke *31 1/2"* Revs. per minute *160* Dia. of Screw shaft *9.33* Material of screw shaft *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  
 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 *yes* If two  
 cylinders are fitted, is the shaft lapped or protected between the liners *yes* Length of stern bush *4'-1 1/4"*  
 a. of Tunnel shaft as per rule *8.263* Dia. of Crank shaft journals as per rule *8.677* Dia. of Crank pin *8.858* Size of Crank webs *11 1/2" x 5 1/2"* Dia. of thrust shaft under  
 bars *8.858* Dia. of screw *11'-6"* Pitch of Screw *9'-0"* No. of Blades *4* State whether moveable *yes* Total surface *40.66 sq. ft.*  
 No. of Feed pumps *2* Diameter of ditto *3 1/2"* Stroke *11 1/2"* Can one be overhauled while the other is at work *yes*  
 No. of Bilge pumps *2* Diameter of ditto *3 1/2"* Stroke *11 1/2"* Can one be overhauled while the other is at work *yes*  
 No. of Donkey Engines *four* Sizes of Pumps *Ballast 7" x 8" / Sewer service 8" x 6" / Wash 10 1/2" x 8"* No. and size of Suctions connected to both Bilge and Donkey pumps  
 Engine Room *4 of 3'* In Holds, &c. *No 1 hold, 2 of 3' - No 2 hold, 2 of 3' - No 3*  
*hold, 3 of 3' - No 4 hold, 1 of 3' - Tunnel 2 of 2 1/2', tunnel well, 1 of 2 1/2'*  
 No. of Bilge Injections *2* sizes *7 1/2"* Connected to condenser, or to circulating pump *ca. p.* Is a separate Donkey Suction fitted in Engine room & size *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 *no*  
 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*  
 Are that pipes 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 *30-10-13* of Stern Tube *6-10-13* Screw Shaft and Propeller *30-10-13*  
 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 *S*) Manufacturers of Steel *Thyssen & Co., Mülheim (Germany) & Sr. An. John Lockwill, Seraing.*  
 Total Heating Surface of Boilers *9046 sq. ft.* Is Forced Draft fitted *no* No. and Description of Boilers *4 single-ended*  
 Working Pressure *180 lb.* Tested by hydraulic pressure to *360 lb.* Date of test *15-7-13* No. of Certificate *33*  
 Can each boiler be worked separately *yes* Area of fire grate in each boiler *71 sq. ft.* No. and Description of Safety Valves to  
 each boiler *Two, spring loaded* Area of each valve *5.14 sq. in.* Pressure to which they are adjusted *180 lb.* Are they fitted with easing gear *yes*  
 Smallest distance between boilers or uptakes and bunkers or woodwork *9"* Mean dia. of boilers *15'-5 1/2"* Length *10'-7 1/2"* Material of shell plates *Steel*  
 Thickness *1 3/4"* Range of tensile strength *28-32 tons* Are the shell plates welded or flanged *no* Descrip. of riveting: cir. seams *d. riv.*  
 Long. seams *d. riv. d. b. s.* Diameter of rivet holes in long. seams *1 3/4"* Pitch of rivets *9 3/8"* Lap of plates or width of butt straps *1'-8 3/8"*  
 Percentages of strength of longitudinal joint rivets *88.7* Working pressure of shell by rules *208 lb.* Size of manhole in shell *16 3/4" x 12 3/4"*  
 Size of compensating ring *38" x 32 1/2"* No. and Description of Furnaces in each boiler *3 cor. (Mansard)* Material *Steel* Outside diameter *4'-1 1/2"*  
 Length of plain part top \_\_\_\_\_ bottom \_\_\_\_\_ Thickness of plates crown *5/8"* Description of longitudinal joint *Welded* No. of strengthening rings \_\_\_\_\_  
 Working pressure of furnace by the rules *186 lb.* Combustion chamber plates: Material *Steel* Thickness: Sides *1 1/2"* Back *9/16"* Top *1 1/2"* Bottom *5/8"*  
 Pitch of stays to ditto: Sides *7 7/8"* Back *7 1/8" x 7 1/8"* Top *8 3/8" x 7 1/8"* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *146 lb.*  
 Material of stays *Steel* Diameter at smallest part *1 1/2"* Area supported by each stay *62 sq. in.* Working pressure by rules *253 lb.* End plates in steam space:  
 Material *Steel* Thickness *1 1/2"* Pitch of stays *17 1/2" x 15 1/2"* How are stays secured *d. nuts & cones* Working pressure by rules *182 lb.* Material of stays *Steel*  
 Diameter at smallest part *2 1/2"* Area supported by each stay *275 sq. in.* Working pressure by rules *219 lb.* Material of Front plates at bottom *Steel*  
 Thickness *5/8"* Material of Lower back plate *Steel* Thickness *5/8"* Greatest pitch of stays *11 1/2"* Working pressure of plate by rules *200 lb.*  
 Diameter of tubes *3"* Pitch of tubes *4 3/8"* Material of tube plates *Steel* Thickness: Front *5/8"* Back *9/16"* Mean pitch of stays *8 1/2"*  
 Pitch across wide water spaces *14 3/8"* Working pressures by rules *194 lb.* Girders to Chamber tops: Material *Steel* Depth and  
 thickness of girder at centre *9 1/2" - 13"* Length as per rule *2'-7 1/2"* Distance apart *8 3/4"* Number and pitch of stays in each *3 - 7 1/2" - 64*  
 Working pressure by rules *186 lb.* Superheater or Steam chest; how connected to boiler *yes* Can the superheater be shut off and the boiler worked  
 separately *yes* Diameter \_\_\_\_\_ Length \_\_\_\_\_ Thickness of shell plates \_\_\_\_\_ Material \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_ Diam. of rivet  
 Pitch of rivets \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_ Diameter of flue \_\_\_\_\_ Material of flue plates \_\_\_\_\_ Thickness \_\_\_\_\_  
 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 \_\_\_\_\_

Lloyd's Register  
Foundation

W602-0267

