

Rpt. 5a.

REPORT ON BOILERS.

No. 1309

WED. FEB. 2 1921

Received at London Office

Date of writing Report *Jan 8th 1921* When handed in at Local Office *Jan 11th 1921* Port of *Halifax, N.S.*
 No. in Survey held at *New Glasgow N.S. & Montreal P.Q.* Date, First Survey *Aug 17th 1920* Last Survey *Dec 14th 1920*
 Reg. Book. on the *Steel Single Screw Steamer "Canadian Sapper"* (Number of Visits) Gross *1762.68* Tons Net *1044.24*
 Master *M^r Igor Fraser* Built at *New Glasgow, N.S.* By whom built *Nova Scotia Steel & Coal Co. Ltd.* When built *1920*
 Engines made at *Sherbrooke P.Q.* By whom made *Canadian Ingersoll Rand Ltd* When made *1920*
Partly at Montreal Que *Dominion Bridge Co Ltd*
 Boilers made at *New Glasgow N.S.* By whom made *Nova Scotia Steel and Coal Co Ltd.* When made *1920*
 Registered Horse Power Owners *Canadian Government Merchant Marine Ltd* Port belonging to *Montreal.*

Converted to F.D. 1929

MULTITUBULAR BOILERS—MAIN, ~~AUXILIARY OR DONKEY~~.—Manufacturers of Steel *Lukens Steel Co. Coatsville Pa.*

Letter for record) Total Heating Surface of Boilers *2900* ^{sq ft} / forced draft fitted *No.* No. and Description of Boilers *2 Scotch Multitubular, Marine* Working Pressure *185 lbs* Tested by hydraulic pressure to *330 lbs* Date of test *Nov. 9-26, 1920*
 Nos of Certificates *13 & 14* Can each boiler be worked separately *Yes* Area of fire grate in each boiler *42* ^{sq ft} No. and Description of safety valves to each boiler *2 Spring loaded* Area of each valve *7.06* Pressure to which they are adjusted *185 lbs*
 Are they fitted with easing gear *Yes* In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler *✓*
 Smallest distance between boilers or uptakes and bunkers or woodwork *12"* Mean dia. of boilers *12'-9"* Length *10'-9"*
 Material of shell plates *Steel* Thickness *1 3/16"* Range of tensile strength *28-32* Are the shell plates welded or flanged *Flanged*
 Descrip. of riveting: cir. seams *D.R. Lap joint* long. seams *T.R.D. Butt* Diameter of rivet holes in long. seams *1 5/16"* Pitch of rivets *8 3/4"*
 Top of plates or width of butt straps *19 1/4"* Per centages of strength of longitudinal joint rivets *87.5* plate *85* Working pressure of shell by rules *208* Size of manhole in shell *12" x 16"* Size of compensating ring *32" x 36"* No. and Description of Furnaces in each boiler *2 Corrugated* Material *Steel* Outside diameter *48 7/8"* Length of plain part ^{top} *7 1/2"* Thickness of plates ^{crown} *5/8"* ^{bottom} *5/8"*
 Description of longitudinal joint *✓* No. of strengthening rings *✓* Working pressure of furnace by the rules *205 lbs* Combustion chamber plates: Material *Steel* Thickness: Sides *9/16"* Back *9/16"* Top *9/16"* Bottom *1"* Pitch of stays to ditto: Sides *6" x 9"* Back *7 1/16" x 8"*
 Top *7 1/2" x 7 1/2"* If stays are fitted with nuts or riveted heads *Nuts inside* Working pressure by rules *193* Material of stays *Steel* Area at smallest part *1.299* Area supported by each stay *56.48* Working pressure by rules *240* End plates in steam space: Material *Steel* Thickness *1"*
 Pitch of stays *14" x 15"* How are stays secured *Screwed & nutted* Working pressure by rules *208* Material of stays *Steel* Area at smallest part *3.98*
 Area supported by each stay *210* Working pressure by rules *197* Material of Front plates at bottom *Steel* Thickness *7/8"* Material of Lower back plate *Steel* Thickness *13/16"* Greatest pitch of stays *13 1/4"* Working pressure of plate by rules *260* Diameter of tubes *3"*
 Pitch of tubes *4" x 4 5/8"* Material of tube plates *Steel* Thickness: Front *7/8"* Back *7/8"* Mean pitch of stays *8.6"* Pitch across wide water spaces *14 1/2"* Working pressures by rules *240* Girders to Chamber tops: Material *Steel* Depth and thickness of girder at centre *9" x 1 1/2"* Length as per rule *33"* Distance apart *7 1/2"* Number and pitch of Stays in each *3-7 1/2"*
 Working pressure by rules *250* Steam dome: description of joint to shell *✓* % of strength of joint *✓*
 Diameter *✓* Thickness of shell plates *✓* Material *✓* Description of longitudinal joint *✓* Diam. of rivet holes *✓*
 Pitch of rivets *✓* Working pressure of shell by rules *✓* Crown plates *✓* Thickness *✓* How stayed *✓*
 SUPERHEATER. Type *✓* Date of Approval of Plan *✓* Tested by Hydraulic Pressure to *✓*
 Date of Test *✓* Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler *✓*
 Diameter of Safety Valve *✓* Pressure to which each is adjusted *✓* Is Easing Gear fitted *✓*

The foregoing is a correct description,

Manufacturer.

Dates During progress of *Aug. 17-20-24-30, Sept. 6-13-14-22, Oct. 2-15-29.* Is the approved plan of boiler forwarded herewith *✓*
 Survey work in shops - - *Nov. 6-8-9.*
 while During erection on *Nov. 11-15-24-26-30 Dec. 4-14.* Total No. of visits *21*
 building board vessel - -

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

These boilers have been constructed under special survey, the materials and workmanship are good, and in my opinion eligible for record + LMC. 12-20.

Survey Fee ... : When applied for, *Jan 13 1921*
 Travelling Expenses (if any) *\$ 45.00* : When received, *24/1/21*

FRI. 11 FEB. 1921

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned