

# REPORT ON BOILERS.

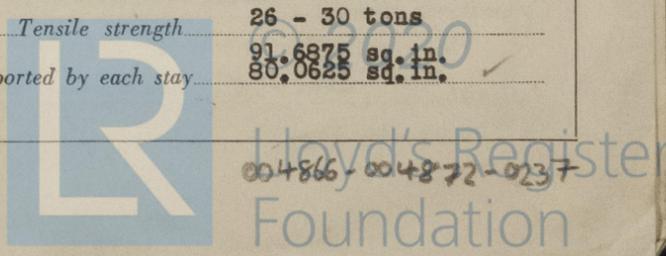
incl. Rpt. No. 6652

13 OCT 1945

Rpt. 5a. Rpt. 5a  
 Date of writing Report 27th July 19 45 When handed in at Local Office 27th July 19 45 Port of MONTREAL, QUE.  
 No. in Reg. Book Survey held at MONTREAL, QUE. Date, First Survey 18th December, 1944 Last Survey 21st July 19 45  
 on the SINGLE SCREW STEAMER "CABEDELLO" (Number of Visits Constant Attendance) Gross 3142.34 Tons Net 1818.16  
 Built at MONTREAL, QUE. By whom built CANADIAN VICKERS LTD. Yard No. 211 When built 1945  
 Engines made at Montreal, Que. By whom made CANADIAN VICKERS LIMITED Engine No. 35028-1 When made 1945  
 Boilers made at Montreal, Que. By whom made CANADIAN VICKERS LIMITED Boiler No. 1267 1268 When made 1945  
 Nominal Horse Power 367 Owners LLOYD BRASILEIRO (Patrimonio Nacional) Port belonging to Rio de Janeiro

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY  
 The Steel Company of Canada Limited, Lukens Steel Company  
 The Taylor Forge & Pipe Works  
 Page-Hersey Tubes Limited

Manufacturers of Steel (Letter for Record S)  
 Total Heating Surface of Boilers 5160 square feet Is forced draught fitted Yes Coal or Oil fired Oil  
 No. and Description of Boilers TWO, Single Ended Multitubular Working Pressure 220 lbs.  
 Tested by hydraulic pressure to 380 lbs. Date of test 23.3.45 13.4.45 No. of Certificate 1267 1268 Can each boiler be worked separately Yes  
 Area of Firegrate in each Boiler 66 sq.ft. No. and Description of safety valves to each boiler 2-2 1/2" High Lift  
 Area of each set of valves per boiler { per Rule 7.45 sq.in. as fitted 9.8 sq.in. Pressure to which they are adjusted 220 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 uptakes and bunkers 4 feet Is oil fuel carried in the double bottom under boilers No  
 Smallest distance between shell of boiler and tank top plating 24" Is the bottom of the boiler insulated Yes  
 Largest internal dia. of boilers 15' - 6" Length 11' - 6" Shell plates: Material O H Steel Tensile strength 29-35 tons  
 Thickness 1 1/2" Are the shell plates welded or flanged No Description of riveting: circ. seams { end D.R. Lap inter -  
 long. seams TR. DBS. Diameter of rivet holes in { circ. seams 1 1/2" long. seams 1 1/2" Pitch of rivets { 4.207" 10 5/16"  
 Percentage of strength of circ. end seams { plate 64.3 rivets 70.8 Percentage of strength of circ. intermediate seam { plate - rivets -  
 Percentage of strength of longitudinal joint { plate 85.45 rivets 84.934 combined 88.0 Working pressure of shell by Rules 221.5 lbs.  
 Thickness of butt straps { outer 1 5/32" inner 1 9/32" No. and Description of Furnaces in each Boiler 3 Morrison  
 Material O H Steel Tensile strength 26-30 Tons Smallest outside diameter 47 1/2"  
 Length of plain part { top - bottom - Thickness of plates { crown 3/4" bottom - Description of longitudinal joint Welded  
 Dimensions of stiffening rings on furnace or c.c. bottom - - Working pressure of furnace by Rules 232.84 lbs.  
 End plates in steam space: Material O H Steel Tensile strength 26.32 tons Thickness 1 1/32" Doublers 1 1/32" Pitch of stays 23" x 18"  
 How are stays secured Nuts outside and inside Working pressure by Rules 222.0 lbs.  
 Tube plates: Material { front O H Steel back O H Steel Tensile strength 26-32 tons Thickness { 1 1/32" 13/16"  
 Mean pitch of stay tubes in nests 9.875" Pitch across wide water spaces 14" Working Pressure { front 227.2 back 243.5  
 Girders to combustion chamber tops: Material O H Steel Tensile strength 29-33 tons Depth and thickness of girder  
 at centre 10"x 13/16"x2 (1 5/8)" Length as per Rule 2' - 8 15/32" Distance apart Wings 9 1/2" Centre 10 1/2" No. and pitch of stays  
 in each 3 @ 7 5/8" centre Working pressure by Rules Centre 236 lbs. Wings 291" Combustion chamber plates: Material O H Steel  
 Tensile strength 26-30 tons Thickness: Sides 25/32" Back 23/32" Top 25/32" Bottom 7/8"  
 Pitch of stays to ditto: Sides 10 3/16" x 9" Back 8" x 10" Top 7 5/8" x 9 1/2" x 10 1/2" Are stays fitted with nuts or riveted over Nuts  
 Working pressure by Rules 221.3 lbs. (Min.) Front plate at bottom: Material O H Steel Tensile strength 26-32 tons  
 Thickness 1 1/32" Lower back plate: Material O H Steel Tensile strength 26-32 tons Thickness 1 1/32"  
 Pitch of stays at wide water space 14" x 10" Are stays fitted with nuts or riveted over Nuts  
 Working pressure 297 lbs. Main stays: Material O H Steel Tensile strength 28-32 tons  
 Diameter { At body of stay 3 1/2" No. of threads per inch 6 Area supported by each stay 414 sq.in.  
 Working pressure by Rules 261 lbs. Screw stays: Material O H Steel Tensile strength 26 - 30 tons  
 Diameter { At turned off part - No. of threads per inch 9 Area supported by each stay 91.6875 sq.in. 80.0625 sq.in.



Working pressure by Rules **226 lbs.** Are the stays drilled at the outer ends **No** ✓ Margin stays: Diameter { At turned off part, -  
 or Over threads **2" & 2 1/4"** ✓  
 No. of threads per inch **9** ✓ Area supported by each stay **110 sq. in.** Working pressure by Rules **225 lbs.**  
 Tubes: Material **Seamless Steel** ✓ External diameter { Plain **3"** ✓ Thickness { **No. 8 L S G** ✓  
 Stay **3"** ✓ **5/16" & 3/8"** ✓ No. of threads per inch **9**  
 Pitch of tubes **4 1/4" x 4 1/4"** ✓ Working pressure by Rules **250 lbs.** Manhole compensation: Size of opening in  
 back plate **16" x 12"** ✓ Section of compensating ring - No. of rivets and diameter of rivet holes -  
 Outer row rivet pitch at ends - Depth of flange if manhole flanged **3 3/4" back plate** ✓ Steam Dome: Material **None** ✓  
 Tensile strength - Thickness of shell - Description of longitudinal joint -  
 Diameter of rivet holes - Pitch of rivets - Percentage of strength of joint { Plate -  
 Rivets -  
 Internal diameter - Working pressure by Rules - Thickness of crown - No. and diameter of  
 stays - Inner radius of crown - Working pressure by Rules -  
 How connected to shell - Size of doubling plate under dome - Diameter of rivet holes and pitch  
 of rivets in outer row in dome connection to shell -  
 Type of Superheater **SMOKE TUBE** ✓ Manufacturers of { Tubes **National Tube Co. Penn.** ✓  
 Steel forgings **Superheater Co. Limited, Sherbrooke, P. Q.** ✓  
 Steel castings - - -  
 Number of elements **70** ✓ Material of tubes **S. D. Steel** ✓ Internal diameter and thickness of tubes **.685", .095" min.**  
 Material of headers **O H Steel** ✓ Tensile strength **26-30 tons** ✓ Thickness **1" Min.** ✓ Can the superheater be shut off and  
 the boiler be worked separately **No** Is a safety valve fitted to every part of the superheater which can be shut off from the boiler **Yes** ✓  
 Area of each safety valve **1.7671 sq. in.** ✓ Are the safety valves fitted with easing gear **Yes** ✓ Working pressure as per  
 Rules **220 lbs.** ✓ Pressure to which the safety valves are adjusted **220 lbs.** ✓ Hydraulic test pressure:  
 tubes **1500 lbs.** ✓ forgings and castings **450 lbs.** ✓ and after assembly in place **440 lbs.** ✓ Are drain cocks or  
 valves fitted to free the superheater from water where necessary **Yes** ✓  
 Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with **Yes** ✓

The foregoing is a correct description,

**CANADIAN VICKERS, LIMITED** *L. J. Jagan* Manufacturer.

Dates of Survey { During progress of work in shops - - } **18th Dec. 1944 to 17th April, 1945** Are the approved plans of boiler and superheater forwarded herewith **New York**  
 while building { During erection on board vessel - - } **9th May to 21st July, 1945** (If not state date of approval.) **23.9.44**  
**19.12.44**  
 Total No. of visits **Constant Attendance**

Is this Boiler a duplicate of a previous case **No** If so, state Vessel's name and Report No. - -

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.) **These BOILERS have been constructed and installed on board the Vessel in conformity with the Society's Rules and Regulations, and the Secretary's letters. The scantlings and arrangements are in accordance with those shown on the Approved Plans. The materials have been tested by the Surveyors to this Society, and the workmanship is good. Safety Valves have been adjusted and accumulation tests carried out satisfactorily.**  
**Superheater Headers stamped LLOYD'S No. 7385, 11.4.45 G.P. - LLOYD'S No. 8668, 17.5.45 G.P. - Copies of Certificates enclosed.**  
**In conjunction with the Machinery it is recommended that the Vessel be classed with LLOYD'S MACHINERY Certificate and the record of + LMC 7,45 be made in the Register Book in the case of this Vessel.**

Survey Fee **Included in Eng. Rpt.** When applied for **10th Sept. 1945**  
 Travelling Expenses (if any) **included:** When received **19**  
*included Rpt.*

*J. S. Morrison*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **TUES. 23 OCT 1945**  
 Assigned **Su F. E. machy. rpt.**

