

Rpt. 5.

REPORT ON BOILERS.

No. 153.

Rec'd Halifax June 12th 1920.

Received at London Office

MON 3 JAN 1921

Date of writing Report June 5th 1920 When handed in at Local Office June 7th 1920 Port of Toronto

No. in Survey held at Toronto Date, First Survey June 9th Last Survey Nov 20th 1920

Reg. Book. 53802 on the Halifax Shipyard's Ltd Hull No. 5 (Number of Visits) Gross 5384.30 Tons Net 331.36

Master J. D. McKenzie Built at Halifax By whom built Halifax Shipyard's Ltd When built 1920

Engines made at Amherst N.S. By whom made Robt Engine Works Ltd When made 1920

Boilers made at Toronto By whom made Canadian Allis Chalmers When made 1920

Registered Horse Power _____ Owners Canadian Government Merchant Marine Ltd Port belonging to Halifax N.S.

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel Midvale H + Ordnance Co. Philadelphia

(Letter for record 3. 5. B.) Total Heating Surface of Boilers 8565 Is forced draft fitted yes No. and Description of Boilers 3 S.E. Multitubular Working Pressure 180 Tested by hydraulic pressure to 360 Date of test May 13th

No. of Certificate 113-114-115 Can each boiler be worked separately yes Area of fire grate in each boiler 74.75 sq ft No. and Description of safety valves to each boiler 2 spring loaded Area of each valve 9.62 Pressure to which they are adjusted 180

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 - Mean dia. of boilers 15'-6" Length 11'-6"

Material of shell plates O.H. Steel Thickness 1 3/8 Range of tensile strength 28-32 ton Are the shell plates welded or flanged no

Descrip. of riveting: cir. seams Double long. seams Tumble Diameter of rivet holes in long. seams 1 7/16 Pitch of rivets 9 7/8

Lap of plates or width of butt straps 10 3/4 Per centages of strength of longitudinal joint rivets 88.9 Working pressure of shell by rules 202 Size of manhole in shell 12" x 16 Size of compensating ring 37 1/2 x 33 No. and Description of Furnaces in each boiler 3 Corrugated Material O.H. Steel Outside diameter 50 1/4 Length of plain part 5 5/8 Thickness of plates 5/8

Description of longitudinal joint Welded No. of strengthening rings - Working pressure of furnace by the rules 200 Combustion chamber plates: Material O.H. Steel Thickness: Sides 7/8 Back 7/8 Top 7/8 Bottom 15/16 Pitch of stays to ditto: Sides 8" x 8" Back 8" x 8"

Top 8" x 8 1/4" If stays are fitted with nuts or riveted heads nuts outside Working pressure by rules 181 Material of stays O.H. Steel Area at smallest part 1.496 Area supported by each stay 66 Working pressure by rules 198 End plates in steam space: Material O.H. Steel Thickness 1 1/16

Pitch of stays 16 1/2 x 16 1/4 How are stays secured Double nuts Working pressure by rules 186 Material of stays O.H. Steel Area at smallest part 4.43 Area supported by each stay 266 Working pressure by rules 186 Material of Front plates at bottom O.H. Steel Thickness 1 3/4 Material of Lower back plate O.H. Steel Thickness 1 3/8 Greatest pitch of stays 8" x 8 1/4" Working pressure of plate by rules 190 Diameter of tubes 3"

Pitch of tubes 4" x 4 3/4" Material of tube plates O.H.S. Thickness: Front 1 3/8 Back 3/4 Mean pitch of stays 8" x 8 1/4" Pitch across wide water spaces 14 Working pressures by rules 260 Girders to Chamber tops: Material O.H. Steel Depth and thickness of girder at centre 9" x 1 1/2" Length as per rule 2'-6 1/2" Distance apart 8 1/8" Number and pitch of Stays in each 3 @ 8"

Working pressure by rules 207 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 _____

UPERHEATER. 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 _____

VERTICAL DONKEY BOILER— No. _____ Description _____ Manufacturers of steel _____

Made at _____ By whom made _____ When made _____ Where fixed _____ Working pressure _____

tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____ Fire grate area _____ 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 _____ Dia. of donkey boiler _____ Length _____ Material of shell plates _____ Thickness _____ Range of tensile strength _____

Descrip. of riveting long. seams _____ Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____

Lap of plating _____ Per centage of strength of joint Rivets _____ Working pressure of shell by rules _____ Thickness of shell crown plates _____

Radius of do. _____ No. of Stays to do. _____ Dia. of stays _____ Diameter of furnace Top _____ Bottom _____ Length of furnace _____

Thickness of furnace plates _____ Description of joint _____ 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 _____

The foregoing is a correct description, Canadian Allis Chalmers Ltd Manufacturer.

Dates of Survey while building: During progress of work in shops -- Jan 5, 7, 10, 15, 16, 22, 24, 27, Feb 2, 6, 10, 13, 18, 19, 23, 26, Mar 1, 5, 8, 15, 17, 25, 26, 30, Apr 10, 17, 22, May 12, 17, 25, June 2. During erection on board vessel -- Sept 9-10-14-16-20-27, Oct 6-19-22, Nov 5-16-20 Total No. of visits 58

Is the approved plan of main boiler forwarded herewith _____ " " " donkey " " " _____

W1309-0029

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

These boilers have been constructed under Special Survey and of good material + workmanship. They have been dispatched to the Halifax Shipyards Ltd. Halifax, to be fitted on board their Hull No. 1. + will be eligible for record with date when completed with the machinery

These boilers have been satisfactorily fitted on board the S.S. "Canadian Mariner". Halifax Shipyards Hull No 1, together with mountings and connections and tried under steam with satisfactory results. A hydraulic test was also put on the boilers when completed to 270 lb. In my opinion, they are eligible for record of LMC VI-20 with machinery.

Certificate (if required) to be sent to
(The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee .. £	:	:	When applied for,
Special	£ 79	65	June 7 1920
Donkey Boiler Fee £	:	:	When received,
Travelling Expenses (if any) £	1	00	19 11 21

Robert C Blyth, J. Moon
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute FRI. 11 FEB. 1921

Assigned



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