

REPORT ON BOILERS.

No. 681.

REC'D NEW YORK Dec. 11-1918
 Date of writing Report Nov 20th 1918 When handed in at Local Office No 30th 1918 Port of Vancouver B.C. Received at London Office TUE. 31 DEC. 1918
 No. in Survey held at Vancouver B.C. Date, First Survey July 11th 18 Last Survey Oct 23rd 1918
 Reg. Book, 1 on the Three Scotch Marine Boilers for "Wau Changer" (Number of Visits 18) Tons { Gross 5787.33
 Master A. S. Walker Built at Vancouver B.C. By whom built J. Coughlan & Sons When built 1918
 Engines made at Newville N.J. By whom made Keen Juniors Co. When made 1918
 Boilers made at Vancouver B.C. By whom made The Vulcan Iron Works When made 1918
 Registered Horse Power 442 Owners Messrs Ruban & Veiel Port belonging to Vancouver B.C.

MULTITUBULAR BOILERS—MAIN, ^{21, 22 & 23.} AUXILIARY OR DONKEY.—Manufacturers of Steel Waltham Boston Conn. U.S.A.

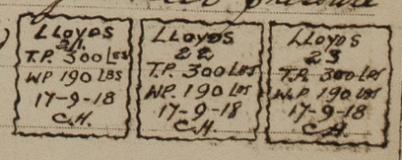
(Letter for record) Total Heating Surface of Boilers 8008.5 sq ft Is forced draft fitted Yes No. and Description of Boilers Three Scotch Marine Working Pressure 190 lbs Tested by hydraulic pressure to 300 lbs Date of test 17th Sept 18
 No. of Certificate 1 Can each boiler be worked separately Yes Area of fire grate in each boiler 60 sq ft No. and Description of safety valves to each boiler 2 Crosby Spring Loaded Area of each valve 9.6 sq in Pressure to which they are adjusted 190 lbs
 Are they fitted with easing gear Yes In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 18" Mean dia. of boilers 14'-9 3/8" Length 12'-1 3/8"
 Material of shell plates Steel Thickness 1 1/16" Range of tensile strength 60,000-65,000 Are the shell plates welded or flanged Flanged
 Descrip. of riveting: cir. seams D.R. Lap long. seams T.R. D.B. Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 8 3/8 x 4 3/8"
 Lap of plates or width of butt straps 22 1/2 x 14 1/2" Per centages of strength of longitudinal joint rivets 97.5 Working pressure of shell by rules 208.9 Size of manhole in shell 12 x 16" Size of compensating ring None No. and Description of Furnaces in each boiler 3 Morrison Comp Suspension Material Steel Outside diameter 48 3/16" Length of plain part top 8 1/2" Thickness of plates crown 1 1/32" bottom 1 1/32"
 Description of longitudinal joint Stitch seamless of strengthening rings None Working pressure of furnace by the rules 195.9 Combustion chamber plates: Material Steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 7/8" Pitch of stays to ditto: Sides 10 5/8 x 10 5/8" Back 7 1/2 x 7 1/2"
 Top 7 1/2 x 7 1/2" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 212.5 Material of stays Mild Steel Area at smallest part 1.47 Area supported by each stay 51.4 Working pressure by rules 212.5 End plates in steam space: Material Steel Thickness 1 1/16"
 Pitch of stays 16 1/4 x 16 1/4" How are stays secured D: Nuts Working pressure by rules 191.5 Material of stays Mild Steel Area at smallest part 4.908
 Area supported by each stay 264.06 Working pressure by rules 193.3 Material of Front plates at bottom Steel Thickness 3/4" Material of Lower back plate Steel Thickness 3/4" Greatest pitch of stays 13 x 7 1/8" Working pressure of plate by rules 314.5 Diameter of tubes 3" 00"
 Pitch of tubes 4 3/8 x 4" Material of tube plates Steel Thickness: Front 3/4" Back 3/4" Mean pitch of stays 12 1/2 x 8" Pitch across wide water spaces 13" Working pressures by rules 204 Girders to Chamber tops: Material Mild Steel Depth and thickness of girder at centre 10 x 3 1/4 double Length as per rule 36" Distance apart c/c 7 1/2" Number and pitch of Stays in each 3 @ 7 1/2"
 Working pressure by rules 236 Steam dome: description of joint to shell Yes % of strength of joint Yes
 Diameter Yes Thickness of shell plates Yes Material Yes Description of longitudinal joint Yes Diam. of rivet holes Yes
 Pitch of rivets Yes Working pressure of shell by rules Yes Crown plates Yes Thickness Yes How stayed Yes

UPERHEATER. Type Yes Date of Approval of Plan Yes Tested by Hydraulic Pressure to Yes
 Date of Test Yes Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler Yes
 Diameter of Safety Valve Yes Pressure to which each is adjusted Yes Is Easing Gear fitted Yes

The foregoing is a correct description,
J. Coughlan & Sons Manufacturer.

Dates of Survey July 11, 16 Aug 3, 7, 14, 19, 26 Sept 4, 9, 12, 17 while building Sept 25 Oct 2, 7, 15, 19, 22, 23
 Is the approved plan of boiler forwarded herewith Yes
 Total No. of visits 18

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These Boilers were Built under Special Survey and in accordance with the approved Plans. The material and workmanship are both Good. Upon Completion they were tested under hydraulic pressure to 300 lbs and found satisfactory. The following marks have been stamped upon the Boilers:



Survey Fee \$70.00 When applied for, 1918
 Travelling Expenses (if any) £ Yes When received, 22/4/1918
 Committee's Minute FRI. 10 JAN. 1919
 Assigned James Murdoch & Co. Chartered Engineer Surveyor to Lloyd's Register of Shipping.