

# REPORT ON BOILERS

REC'D. FEB. 4 - 1920

Received at London Office

Date of writing Report 191 When handed in at Local Office - 3 FEB 1920 Port of Sunderland

No. in Survey held at Sunderland Date, First Survey 24 Nov '19 Last Survey 12 Jan'y 1920  
 Reg. Book. on the boilers for the (Number of Visits) Tons } Gross }  
 Net }

Master                      Built at Newcastle By whom built Wood & Cairns & Co. 218 When built 1920

Engines made at                      By whom made                      When made                     

Boilers made at Sunderland By whom made North Eastern Marine Engineering Co. (N° 2993) When made 1920

Registered Horse Power                      Owners                      Port belonging to                     

## MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel John Spence & Sons Ltd.

(Letter for record S) Total Heating Surface of Boilers 2900 sq ft Is forced draft fitted no No. and Description of Boilers Two single ended marine Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 12-1-20

No. of Certificate 3648 Can each boiler be worked separately                      Area of fire grate in each boiler 36.60 sq ft No. and Description of safety valves to each boiler                      Area of each valve                      Pressure to which they are adjusted                     

Are they fitted with easing gear                      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 12-9" Length 10-6"

Material of shell plates steel Thickness 1 1/2" Range of tensile strength 28-32 tons Are the shell plates welded or flanged no

Descrip. of riveting: cir. seams DR long. seams BBS-TR Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 1 3/8"

Lap of plates or width of butt straps 1 3/8" Per centages of strength of longitudinal joint rivets 86.6 Working pressure of shell by plate 85.59

rules 181 Size of manhole in shell 16" x 12" Size of compensating ring flanged No. and Description of Furnaces in each boiler two Deighton Material S Outside diameter 3-11 1/2" Length of plain part top                      Thickness of plates crown } 9" bottom } 16"

Description of longitudinal joint welded No. of strengthening rings                      Working pressure of furnace by the rules 185 Combustion chamber plates: Material steel Thickness: Sides 23/32" Back 23/32" Top 23/32" Bottom 1" Pitch of stays to ditto: Sides 10 1/2" x 9 3/8" Back 10 5/8" x 9 1/4"

Top 10 1/2" x 9 3/8" stays are fitted with nuts or riveted heads nuts in use Working pressure by rules 180 Material of stays steel Area at smallest part 2.030 Area supported by each stay 980 Working pressure by rules 186 End plates in steam space: Material S Thickness 1 3/8"

Pitch of stays 18 1/4" x 25 1/2" How are stays secured DN & W Working pressure by rules 182 Material of stays steel Area at smallest part 8.294

Area supported by each stay 4650 Working pressure by rules 185 Material of Front plates at bottom steel Thickness 1" Material of Lower back plate steel Thickness 29/32" Greatest pitch of stays 14 1/2" x 9 1/4" Working pressure of plate by rules 192 Diameter of tubes 3 1/4"

Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates steel Thickness: Front 1" Back 3/4" Mean pitch of stays 11 1/4" Pitch across wide water spaces 14 1/2" Working pressures by rules 183 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 2 @ 9" x 1 1/8" Length as per rule 2-9" Distance apart 10 1/2" Number and pitch of Stays in each 2 @ 9 3/8"

Working pressure by rules 184 Steam dome: description of joint to shell none % 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,  
 FOR THE NORTH EASTERN MARINE ENGINEERING CO. LD  
W. D. New Manufacturer.

Dates of Survey } During progress of } 1919 Nov 24, 26. Dec 29, 12, 15, 18. Jan 8, 12 Is the approved plan of boiler forwarded herewith yes  
 while } work in shops - - }  
 building } During erection on } see Newcastle Report 73500 Total No. of visits                       
 board vessel - - - }

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

The materials and workmanship are good.  
The boilers have been constructed under special survey and are being despatched to the R. Type  
to be fitted in the vessel. Surveyors advised at that port.

Survey Fee ... .. £ 9 : 13 : } When applied for, 3 FEB 1920  
 Travelling Expenses (if any) £ : : } When received, 191  
Jan / Mar 14. 2. 20.

TUE. SEP. 14 1920

Committee's Minute

Assigned

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