

REPORT ON BOILERS.

Received at London Office

13 SEP 1924

Date of writing Report

192

When handed in at Local Office

13/8/1924

Port of

NEWCASTLE-ON-TYN

No. in Reg. Book.

Survey held at Newcastle-on-Tyne

Date, First Survey 30/4/24

Last Survey 13/8/1924

89606 on the

Steel Co.

LETCWORTH

(Number of Visits)

Gross 1325
Net 717

Master

Built at Newcastle

By whom built Wood Skinner & Co. Ltd.

Yard No. 235

When built 1924

Engines made at Newcastle

By whom made North Eastern Marine Eng. Co. Ltd.

Engine No. 2576

When made 1924

Boilers made at Newcastle

By whom made North Eastern Marine Eng. Co. Ltd.

Boiler No. 2576

When made 1924

Nominal Horse Power 179

Owners

Port belonging to

Newcastle

RETAIN

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel The Steel Company of Scotland Ltd. David Colville & Sons Ltd. (Letter for Record 5)

Total Heating Surface of Boilers 3150 sq ft Is forced draught fitted no. Coal or Oil fired Coal

No. and Description of Boilers Two Single-ended Cylindrical 2SB Working Pressure 180 lbs

Tested by hydraulic pressure to 320 lbs. Date of test 8-7-24 No. of Certificate 9836 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 40 sq ft No. and Description of safety valves to each boiler Two Spring-loaded

Area of each set of valves per boiler {per Rule 10.4 sq ft as fitted 11.88 sq ft Pressure to which they are adjusted 182 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 7'-9" Is oil fuel carried in the double bottom under boilers no

Smallest distance between shell of boiler and tank top plating 31" Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 153 7/8" Length 10'-6" Shell plates: Material Steel Tensile strength 28-32 tons

Thickness 1 7/16" Are the shell plates welded or flanged no Description of riveting: circ. seams {end Double inter. 3 3/8" Pitch of rivets { 8"

long. seams Triple Riv'd N.B.S. Diameter of rivet holes in {circ. seams 1 1/8" long. seams 1 1/8" Pitch of rivets { 8"

Percentage of strength of circ. end seams {plate 59.2 rivets 45.5 Percentage of strength of circ. intermediate seam {plate rivets

Percentage of strength of longitudinal joint {plate 85.9 rivets 90.5 combined 89.9 Working pressure of shell by Rules 182 lbs

Thickness of butt straps {outer 2 3/8" inner 1 5/16" No. and Description of Furnaces in each Boiler Two Mason 2 CF

Material Steel Tensile strength 26-30 tons Smallest outside diameter 44 3/8"

Length of plain part {top bottom Thickness of plates {crown 9 1/16" bottom 9 1/16" Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 184 lbs.

End plates in steam space: Material Steel Tensile strength 26-30 tons Thickness 1 1/8" Pitch of stays 21" x 17"

How are stays secured Double nuts & washers Working pressure by Rules 183 lbs.

Tube plates: Material {front Steel back Steel Tensile strength { 26-30 tons Thickness { 3/4" 1 5/16"

Mean pitch of stay tubes in nests 8 3/8" Pitch across wide water spaces 14 1/2" Working pressure {front 185 lbs back 210 lbs.

Girders to combustion chamber tops: Material Steel Tensile strength 28-32 tons Depth and thickness of girder

at centre 8 1/2" - 1 1/2" Length as per Rule 30" Distance apart 10 3/4" No. and pitch of stays

in each Two 9" Working pressure by Rules 190 lbs Combustion chamber plates: Material Steel

Tensile strength 26-30 tons Thickness: Sides 3/32" Back 3/32" Top 3/32" Bottom 7/8"

Pitch of stays to ditto: Sides 10 1/2" x 9" Back 9 3/8" x 9 3/8" Top 10 3/4" x 9" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 184 lbs Front plate at bottom: Material Steel Tensile strength 26-30 tons

Thickness 1 5/16" Lower back plate: Material Steel Tensile strength 26-30 tons Thickness 7/8"

Pitch of stays at wide water space 14 1/2" Are stays fitted with nuts or riveted over nuts

Working Pressure 187 lbs Main stays: Material Steel Tensile strength 28-32 tons

Diameter {At body of stay, or Over threads 2 3/4" No. of threads per inch six Area supported by each stay 3570"

Working pressure by Rules 183 lbs Screw stays: Material Steel Tensile strength 26-30 tons

Diameter {At turned off part, or Over threads 1 3/4" No. of threads per inch nine Area supported by each stay 96.750"

Lloyd's Register
W 410 0038

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Working pressure by Rules 188 lb Are the stays drilled at the outer ends No. Margin stays: Diameter { At turned off part, 1 7/8" or Over threads 1 7/8" ✓
 No. of threads per inch nine ✓ Area supported by each stay 114.750" Working pressure by Rules 186 lb
 Tubes: Material Iron ✓ External diameter { Plain 3 1/4" ✓ Stay 3 1/4" Thickness { No 8 S.W.G. ✓ No. of threads per inch nine ✓
 Pitch of tubes 4 1/2" x 4 3/8" ✓ Working pressure by Rules Plain 230 lb Stay 209 lb Manhole compensation: Size of opening in shell plate 20" x 16" ✓ Section of compensating ring 2 1/4" x 3 1/4" x 1 1/8" No. of rivets and diameter of rivet holes 36 - 1 5/8" ✓
 Outer row rivet pitch at ends 9 1/2" ✓ Depth of flange if manhole flanged 4" ✓ 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

Manufacturers of { Tubes _____ Steel castings _____
 Number of elements _____ Material of tubes _____ Internal diameter and thickness of tubes _____
 Material of headers _____ Tensile strength _____ Thickness _____ Can the superheater be shut off and the boiler be worked separately _____ Is a safety valve fitted to every part of the superheater which can be shut off from the boiler _____
 Area of each safety valve _____ Are the safety valves fitted with casing gear _____ Working pressure as per Rules _____ Pressure to which the safety valves are adjusted _____ Hydraulic test pressure: tubes _____, castings _____ and after assembly in place _____ Are drain cocks or valves fitted to free the superheater from water where necessary _____

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with Yes ✓

The foregoing is a correct description,
 THE NORTH EASTERN MARINE ENGINEERING Co., LTD. Manufacturer.

J. Harrison
 Secretary

Dates of Survey { During progress of work in shops - - } while building { During erection on board vessel - - }

See Machinery Report

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
 Total No. of visits _____

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

These boilers have been constructed under special survey. The workmanship and material are sound and good. They have been subjected to the hydraulic pressure test with satisfactory results, were efficiently installed and fastened on board the Steamer "LETCHEWORTH". In my opinion the vessel is eligible for notation +L.M.C. 8.24

Survey Fee £ *See Machinery Report* When applied for. 192
 Travelling Expenses (if any) £ *See Report* When received. 192

R. E. Amess
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **TUES. 16 SEP 1924**

Assigned _____

