

REPORT ON BOILERS.

No. 88955

Received at London Office 1 AUG 1932

Date of writing Report 27/1/32 When handed in at Local Office 27/1/32 Port of Newcastle-on-Tyne.

No. in Survey held at Wallsend-on-Tyne Date, First Survey 30 Dec/31 Last Survey 26 July 1932

Book. on the New Steel S/S Harlesden (Number of Visits —) Gross 5483 Net 3220

ster Built at Lebburn By whom built Hawthorn Leslie & Co Ltd Yard No. 586 When built 1932

gines made at Wallsend By whom made North Eastern Marine & Co Ltd Engine No. 2988 When made 1932

lers made at Wallsend By whom made North Eastern Marine & Co Ltd Boiler No. 2988 When made 1932

iminal Horse Power 480 Owners National S/S Coy Ltd Port belonging to London

ULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel The Steel Company of Scotland Ltd. (Letter for Record P.)

Heating Surface of Boilers 4952 sq ft See App. Is forced draught fitted yes Coal or Oil fired coal

Description of Boilers Two single ended. Working Pressure 220 lbs

Tested by hydraulic pressure to 380 lbs Date of test 29-11-32 No. of Certificate 546 Can each boiler be worked separately yes

Area of Firegrate in each Boiler 46 sq ft No. and Description of safety valves to each boiler Two spring loaded

Area of each set of valves per boiler {per Rule 13.9 as fitted 14.14 Pressure to which they are adjusted 225 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 3'-5" Is oil fuel carried in the double bottom under boilers no

Smallest distance between shell of boiler and tank top plating 2'-8" Is the bottom of the boiler insulated yes

Largest internal dia. of boilers 15'-3 1/2" Length 11'-6" Shell plates: Material Steel Tensile strength 29 to 33 tons

Thickness 1 1/2" Are the shell plates welded or flanged no Description of riveting: circ. seams {end D.R. inter. ✓

g. seams T.R.D.B.S. Diameter of rivet holes in {circ. seams 1 1/2" long. seams 1 1/2" Pitch of rivets {4 1/2" 10 3/8" ✓

Percentage of strength of circ. end seams {plate 64.4 rivets 44.9 Percentage of strength of circ. intermediate seam {plate 85.54 rivets 86.95

Percentage of strength of longitudinal joint {plate 88.3 rivets 86.95 Working pressure of shell by Rules 222 lbs

Thickness of butt straps {outer 1 1/2" inner 1 1/4" No. and Description of Furnaces in each Boiler 3 corrugated. ✓

Material Steel Tensile strength 26 to 30 tons Smallest outside diameter 3'-8 3/4" ✓

Length of plain part {top ✓ bottom ✓ Thickness of plates {crown 3/4" bottom 3/4" Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom none Working pressure of furnace by Rules 25 1/2 lbs

Stays in steam space: Material Steel Tensile strength 26 to 30 tons Thickness 1 1/2" Pitch of stays 1'-10" x 1'-8 3/4" ✓

How are stays secured double nuts Working pressure by Rules 222 lbs

Stays in steam space: Material Steel Tensile strength 26 to 30 tons Thickness 3/4" Pitch of stays 1'-10" x 1'-8 3/4" ✓

Front pitch of stay tubes in nests 8 1/2" Pitch across wide water spaces 14 1/4" x 8 1/2" Working pressure {front 235 back 218.3

Stays to combustion chamber tops: Material Steel Tensile strength 29 to 33 tons Depth and thickness of girder

centre 2 @ 10 1/4" x 7 1/8" Length as per Rule 2'-10" Distance apart 11" No. and pitch of stays

each 3 @ 7 1/8" Working pressure by Rules 229 lbs Combustion chamber plates: Material Steel

Tensile strength 26 to 30 tons Thickness: Sides 25/32" Back 25/32" Top 25/32" Bottom 25/32" ✓

Pitch of stays to ditto: Sides 10 1/4" x 9 3/8" Back 9 1/4" x 9 3/8" Top 11" x 7 1/8" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 222 lbs Front plate at bottom: Material Steel Tensile strength 26 to 30 tons

Thickness 3 1/2" Lower back plate: Material Steel Tensile strength 26 to 30 tons Thickness 29/32" ✓

Pitch of stays at wide water space 14 1/4" x 9 3/4" Are stays fitted with nuts or riveted over nuts

Working Pressure 225 lbs Main stays: Material Steel Tensile strength 26 to 30 tons

Diameter {At body of stay, or 3 3/4" No. of threads per inch 6 Area supported by each stay 456.5" ✓

Working pressure by Rules 239 lbs Screw stays: Material Wrought iron Tensile strength 21 1/2 tons min.

Diameter {At turned off part, or 2" No. of threads per inch 9 Area supported by each stay 94 sq in ✓

Working pressure by Rules 255 lbs. Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 2 1/4" or Over threads 2 1/4"
No. of threads per inch 9 Area supported by each stay 118.75 Working pressure by Rules 244 lbs.
Tubes: Material S.D. Steel External diameter { Plain 3" Stay 3" Thickness { 5 L.S.G. 1/4" x 3/8" No. of threads per inch 9
Pitch of tubes 1 1/4" x 1 1/4" Working pressure by Rules W.W.S. 243 lbs. Manhole compensation: Size of opening in shell plate 3'-3" x 2'-11" Section of compensating ring 25 x 1 1/2" No. of rivets and diameter of rivet holes 34 @ 1 1/2"
Outer row rivet pitch at ends 10 3/4" Depth of flange if manhole flanged 3 1/2" 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 North Eastern Iron Works Manufacturers of { Tubes Stumps & Shells Ltd Steel castings The Birmingham Steel Co.
Number of elements 114 Material of tubes S.D. Steel Internal diameter and thickness of tubes 1 1/4" x 2 1/4"
Material of headers Wrought Steel Tensile strength 26 to 30 tons Thickness 1/8" 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 3.1416 Are the safety valves fitted with easing gear yes Working pressure as per Rules 220 lbs Pressure to which the safety valves are adjusted 225 lbs Hydraulic test pressure: tubes 1500 lbs forgings 660 lbs and after assembly in place 550 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,

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

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) yes

Total No. of visits _____

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

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

These boilers have been built under special survey, materials and workmanship good, hydraulic tests satisfactory.

Survey Fee £

When applied for, 19

Travelling Expenses (if any) £

When received, 19

Engineer Surveyor to Lloyd's Register of Shipping.

WED. AUG 3 1932

Committee's Minute

Assigned

Lee F. E. Rpt.



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