

REPORT ON BOILERS

Std. No. 28788
Mole No. 11666
AUG. 17 1923

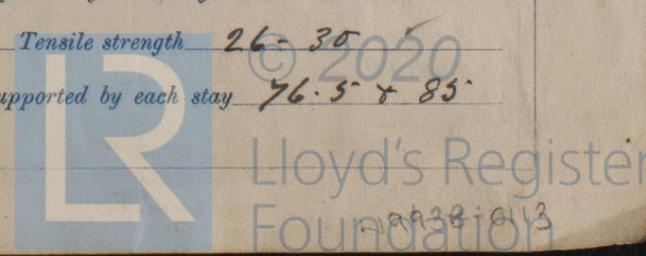
Received at London Office 10 1924

Date of writing Report 192 When handed in at Local Office 16.8.23 192 1923 Port of Middlesbrough
 No. in Survey held at Stockton-on-Tees Date, First Survey 6th April Last Survey 1st July 1923
 on the S/S "KILDALE" (Number of Visits 10) Tons {Gross 3877
 Net 2310
 Built at Sunderland By whom built M^{rs} Pickersgill's Yard No. 206 When built 1924
 Engines made at Hartlepool By whom made Richardsons, Westgarth Engine No. 2640 When made 1924
 Boilers made at Stockton-on-Tees By whom made Messrs Thos Sudron & Co Ltd Boiler No. 4751 When made 1923
 Owners Rowlan & Marwood S.S. & Co Ltd Port belonging to Whitby

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Messrs John Spencer & Sons Ltd. (Letter for Record (S))
 Total Heating Surface of Boilers 980 sq ft Is forced draught fitted No Coal or Oil fired Coal
 No. and Description of Boilers One single ended Working Pressure 180
 Tested by hydraulic pressure to 320 Date of test 19-7-23 No. of Certificate 6324 Can each boiler be worked separately ✓
 Area of Firegrate in each Boiler 33 1/2 sq ft No. and Description of safety valves to each boiler Two spring valves
 Area of each set of valves per boiler {per Rule 6.17 as fitted 11.85 Pressure to which they are adjusted 180 lbs Are they fitted with easing gear YES
 In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No
 Smallest distance between boilers or uptakes and bunkers or woodwork No bunkers in way Is oil fuel carried in the double bottom under boilers ✓
 Smallest distance between shell of boiler and tank top plating Boiler on upper deck Is the bottom of the boiler insulated No
 Largest internal dia. of boilers 10'-4 5/16" Length 10'-6" (ext) Shell plates: Material Steel Tensile strength 29-33
 Thickness 27/32" Are the shell plates welded or flanged No Description of riveting: circ. seams {end Abd Riv Lap inter. ✓
 Long. seams 2 B-3 Row 5 Rivets Diameter of rivet holes in {circ. seams 15/16" Pitch of rivets { 3 3/8" long. seams 15/16" 6 5/8"
 Percentage of strength of circ. end seams {plate 70.0 rivets 42.0 Percentage of strength of circ. intermediate seam {plate ✓ rivets ✓
 Percentage of strength of longitudinal joint {plate 85.85 rivets 91.6 combined 90.0 Working pressure of shell by Rules 182 lbs.
 Thickness of butt straps {outer 14 5/8 x 3/4 inner 14 5/8 x 7/8 No. and Description of Furnaces in each Boiler Two plain
 Material Steel Tensile strength 26-30 Smallest outside diameter 38"
 Length of plain part {top 83" bottom 110" Thickness of plates {crown 25/32 bottom 25/32 Description of longitudinal joint Weld
 Dimensions of stiffening rings on furnace or c.c. bottom none Working pressure of furnace by Rules 197
 End plates in steam space: Material Steel Tensile strength 26-30 Thickness 29/32 Pitch of stays 14 1/2 x 15"
 How are stays secured Nuts and 8 x 5/8 washers Working pressure by Rules 193
 Tube plates: Material {front Steel back Steel Tensile strength { 26-30 Thickness { 29/32 3/4"
 Mean pitch of stay tubes in nests 10 3/8" Pitch across wide water spaces 14" x 9" Working pressure {front 191 back 187
 Orders to combustion chamber tops: Material Steel Tensile strength 28-32 Depth and thickness of girder
 centre 7" x 1 1/2" Length as per Rule 27 25/32 Distance apart 7 1/2" No. and pitch of stays
 each 2 @ 8 1/2" Working pressure by Rules 187 lbs Combustion chamber plates: Material Steel
 Tensile strength 26-30 Thickness: Sides 2 1/32 Back 2 1/32 Top 2 1/32 Bottom 1"
 Pitch of stays to ditto: Sides 9 1/4 x 8 1/2 Back 8 1/2 x 9" Top 7 1/4 x 8 1/2 Are stays fitted with nuts or riveted over nuts
 Working pressure by Rules 190 Front plate at bottom: Material Steel Tensile strength 26-30
 Thickness 29/32" Lower back plate: Material Steel Tensile strength 26-30 Thickness 29/32
 Pitch of stays at wide water space 14" x 9" Are stays fitted with nuts or riveted over nuts
 Working Pressure 244 Main stays: Material Steel Tensile strength 28-32
 Diameter {At body of stay, 2 1/2 or 2 1/2 No. of threads per inch 6 Area supported by each stay 188 + 210
 Working pressure by Rules 184 + 197 Screw stays: Material Steel Tensile strength 26-30
 Diameter {At turned off part, 1 5/8 or 1 5/8 No. of threads per inch 9 Area supported by each stay 76.5 + 85

92K
17/8/23



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Working pressure by Rules 198 + 180 the stays drilled at the outer ends no Margin stays: Diameter At turned off part, Over threads 1 3/4"

No. of threads per inch 9 Area supported by each stay 101.25 Working pressure by Rules 180

Tubes: Material iron External diameter Plain 3 1/2 Thickness 3/8 : 5/16 + 1/4 No. of threads per inch 9
 Stay 3 1/2 Nº 9 - W. 9.

Pitch of tubes 4 1/2" x 4 1/2" Working pressure by Rules 204 + 180 Manhole compensation: Size of opening in shell plate 16" x 12" Section of compensating ring 5 1/2" x 1 1/2" No. of rivets and diameter of rivet holes 32 @ 1 1/2"

Outer row rivet pitch at ends 6 1/8" Depth of flange if manhole flanged Steam Dome: Material iron

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 easing 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 _____

The foregoing is a correct description,
THOMAS SUDRON & CO. LIMITED Manufacturer.

R. W. Houston

Dates of Survey During progress of work in shops - - 1923 April 6-13 May 14-25 June 1-10-20-27 July and Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)

while building During erection on board vessel - - - Total No. of visits 10

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been built under special survey; is of good material and workmanship and on completion was tested by hydraulic pressure with satisfactory results

This boiler has now been fitted, and fired on board in a satisfactory manner, examined under steam and safety valves adjusted

H. H. H. H.

Survey Fee ... £ 6 : 10 : 6 When applied for, monthly 192 afk

Travelling Expenses (if any) £ ✓ : : When received, 192 _____

Wm Morrison & C. E. Wilks
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 15 APR. 1924

Assigned _____

