

REPORT ON BOILERS.

No. 16598

Received at London Office MAY -2 1939

Date of writing Report 22/4/39 When handed in at Local Office 24/4/39 Port of MIDDLESBROUGH

No. in Survey held at Stockton on Tees Date, First Survey 14th December 1938 Last Survey 21/4/1939

on the (Number of Visits 5) Tons {Gross Net

Master Built at By whom built Yard No. 54 When built

Engines made at By whom made Engine No. When made

Boilers made at Stockton By whom made Stockton C. E. & Riley Bldg Co. Boiler No. 6338 When made 1939

Nominal Horse Power Owners Messrs. Oresundsvarvet Port belonging to

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Steel Company of Scotland Ltd (Letter for Record S)

Total Heating Surface of Boilers 1400 ft² Is forced draught fitted - Coal or Oil fired -

No. and Description of Boilers Single Ended Working Pressure 150 lbs.

Tested by hydraulic pressure to 275 lbs Date of test 21/4/39 No. of Certificate 6966 Can each boiler be worked separately -

Area of Firegrate in each Boiler - No. and Description of safety valves to each boiler -

Area of each set of valves per boiler {per Rule - as fitted - 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 - Is oil fuel carried in the double bottom under boilers -

Smallest distance between shell of boiler and tank top plating - Is the bottom of the boiler insulated -

Largest internal dia. of boilers 11'-8 3/8" Length 11'-4" Shell plates: Material Steel Tensile strength 29-33 tons

Thickness 13/16" Are the shell plates welded or flanged No. Description of riveting: circ. seams {end D.R. 3 3/4

Long. seams Q. R. D. B. S. Diameter of rivet holes in {circ. seams 1 1/16" long. seams 2 9/32" + 1 1/16" Pitch of rivets {11"

Percentage of strength of circ. end seams {plate 41.5 rivets 43.5 Percentage of strength of circ. intermediate seam {plate rivets

Percentage of strength of longitudinal joint {plate 90.3 rivets 97.9 combined 91.0 Working pressure of shell by Rules 153 lbs.

Thickness of butt straps {outer 13/16" inner 13/16" No. and Description of Furnaces in each Boiler 2 - Corrugated (Morrison)

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

Length of plain part {top bottom Thickness of plates {crown 15/32" bottom 15/32" Description of longitudinal joint Weld

Dimensions of stiffening rings on furnace or c.c. bottom - Working pressure of furnace by Rules 152 lbs.

End plates in steam space: Material Steel Tensile strength 26-30 tons Thickness 29/32" Pitch of stays 16 1/2" x 14"

How are stays secured D. N. r washers Working pressure by Rules 169 lbs.

Tube plates: Material {front back Steel Tensile strength {26-30 Thickness {29/32" 13/16"

Mean pitch of stay tubes in nests 8.125" Pitch across wide water spaces 14" Working pressure {front 210 lbs back 238 lbs

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

at centre 7 1/2" x 20 5/8" Length as per Rule 2'-6" Distance apart 8 1/2" No. and pitch of stays

in each 2 @ 9" Working pressure by Rules 153 lbs. Combustion chamber plates: Material Steel

Tensile strength 26-30 Thickness: Sides 21/32" Back 21/32" Top 21/32" Bottom 21/32"

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

Working pressure by Rules 165 lbs. 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 12" 14" x 9" in clear Are stays fitted with nuts or riveted over Nuts

Working Pressure 158 lbs Main stays: Material Steel Tensile strength 28-32

Diameter {At body of stay, 2 3/8" No. of threads per inch 6 Area supported by each stay 228 in²

Working pressure by Rules 165 lbs Screw stays: Material Steel Tensile strength 26-30

Diameter {At turned off part, 1 5/8" No. of threads per inch 9 Area supported by each stay 90 in²

Over threads

Working pressure by Rules 169 lbs are the stays drilled at the outer ends No. Margin stays: Diameter ^{As turned off part,} 1 3/4" ^{Over threads} 1 5/16"

No. of threads per inch 9 Area supported by each stay 10.8 sq" Working pressure by Rules 159 lbs

Tubes: Material Steel External diameter ^{Plain} 3" Thickness ^{Stay} 9/16" No. of threads per inch 9

Pitch of tubes 4" x 4 1/8" Working pressure by Rules P. 190 lbs S. 228 lbs Manhole compensation: Size of opening in shell plate 20" x 16" Section of compensating ring 6" x 1" No. of rivets and diameter of rivet holes 40 - 1 1/16"

Outer row rivet pitch at ends 7" Depth of flange if manhole flanged - Steam Dome: Material -

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 -

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 22 inclusive for boilers been complied with -

For and on behalf of
STOCKTON CHEMICAL ENGINEERS & RILEY BOILERS LTD.
The foregoing is a correct description,
G. H. Riley Manufacturer

Dates of Survey ^{During progress of work in shops - -} Dec. 14th Jan 18th 24. Mar. 10. Apr. 21 Are the approved plans of boiler and superheater forwarded herewith yes ^(If not state date of approval.)

^{while building} ^{During erection on board vessel - -} - - - Total No. of visits -

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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been constructed under Special Survey in accordance with the approved plan & the Requirements of the Rules. The material & workmanship are good, & the boiler was found sound & tight under hydraulic pressure 5/275 lbs/sq. in. This boiler is to be forwarded to Landskroona & is eligible in my opinion to be fitted in a classed vessel.

Survey Fee ... £ 9 : 6 : 0 When applied for, 11.5 1939

Travelling Expenses (if any) £ - : - : - When received, 27.6 1939

Fee paid as per Am. letter of the 27.6.39,
addr. to the Lloyd's office.

R. J. Easthope
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 3 NOV 1939

Assigned

See Memo. 56.1826



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Foundation