

REPORT ON BOILERS.

No. 76529

Received at London Office SAT. MAR. 10 1923
Date of writing Report March 8th 1923 When handed in at Local Office March 8th 1923 Port of NEWCASTLE-ON-TYNE
No. in Reg. Book. Survey held at Newcastle-on-Tyne Date, First Survey Jan 14th Last Survey March 6th 1923
on the 2 Single Ended Boilers for Messrs Smiths Dock Co Middlesbrough (Number of Visits 8)
Master Built at By whom built Yard No. When built
Engines made at By whom made Engine No. When made
Boilers made at Newcastle-on-Tyne By whom made R. & W. Hawthorn Leslie & Co Boilers No. 8681 When made 1923
Nominal Horse Power 190 Owners Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel John Spencer & Co (Letter for Record 5)
Less front tube plate
Total Heating Surface of Boilers 2850 sq ft Is forced draught fitted Coal or Oil fired
No. and Description of Boilers 2 Single ended multitubular Working Pressure 180 lbs
Tested by hydraulic pressure to 320 lbs Date of test 21-2-23 No. of Certificate 9732 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 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 12-6" Length 10-6" Shell plates: Material steel Tensile strength 28-32 tons
Thickness 1 1/2" Are the shell plates welded or flanged no Description of riveting: circ. seams end 5-2 1/2"
long. seams D. & S. Tube Rivetted Diameter of rivet holes in circ. seams 1 1/8" Pitch of rivets inter. 3 1/2"
Percentage of strength of circ. end seams plate 68 Percentage of strength of circ. intermediate seam plate
Percentage of strength of longitudinal joint rivets 46.5 Working pressure of shell by Rules 180 lbs
Thickness of butt straps outer 1 1/2" No. and Description of Furnaces in each Boiler 2 Keightons
Material steel Tensile strength 26-30 tons Smallest outside diameter 42 1/8"
Length of plain part top Thickness of plates crown 9 1/16" Description of longitudinal joint welded
Dimensions of stiffening rings on furnace or c.c. bottom none Working pressure of furnace by Rules 191 lbs
End plates in steam space: Material steel Tensile strength 26 to 30 tons Thickness 1 1/2" Pitch of stays 14" x 16 1/2"
How are stays secured double nuts Working pressure by Rules 194 lbs
Tube plates: Material front steel Tensile strength 26-30 Thickness 1 1/2"
back steel Tensile strength 26-30 Thickness 3/4"
Mean pitch of stay tubes in nests 9" Pitch across wide water spaces 14 1/2" Working pressure front 185 lbs
Girders to combustion chamber tops: Material steel Tensile strength 28-32 tons Depth and thickness of girder
at centre 8 1/2" x 1 1/2" Length as per Rule 31-5 1/2" Distance apart 8 1/2" No. and pitch of stays
in each 2-9 1/4" Working pressure by Rules 200 lbs Combustion chamber plates: Material steel
Tensile strength 26-30 tons Thickness: Sides 3 1/32" Back 3 1/32" Top 3 1/32" Bottom 1"
Pitch of stays to ditto: Sides 9 1/4" x 8 1/2" Back 9" x 9" Top 9 1/4" x 8 1/2" Are stays fitted with nuts or riveted over nuts
Working pressure by Rules 190 lbs Front plate at bottom: Material steel Tensile strength 26-30 tons
Thickness 1 1/2" Lower back plate: Material steel Tensile strength 26-30 tons Thickness 3/8"
Pitch of stays at wide water space 13 1/2" x 9" Are stays fitted with nuts or riveted over nuts
Working Pressure 238 lbs Main stays: Material steel Tensile strength 28-32 tons
Diameter At body of stay 2 3/4" No. of threads per inch 6 Area supported by each stay 280 sq in
Over threads 2 1/4" Screw stays: Material steel Tensile strength 26-30 tons
Working pressure by Rules 197 lbs Diameter At turned off part 1 3/4" No. of threads per inch 9 Area supported by each stay 81 sq in
Over threads 1 1/4"

Working pressure by Rules 212 lbs Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 1 1/8"
Over threads 1 1/8"

No. of threads per inch 9 Area supported by each stay 101.25 sq Working pressure by Rules 210 lbs

Tubes: Material steel External diameter { Plain 3 1/4" Thickness { 108 wg. No. of threads per inch 9
Stay 3 1/4" 1/8" + 5/16" + 1/4"

Pitch of tubes 4 1/2" x 4 1/2" Working pressure by Rules 210 lbs Manhole compensation: Size of opening in
shell plate 20" x 16" Section of compensating ring 2-11" x 2-6 1/2" x 1 1/8" No. of rivets and diameter of rivet holes 2 rows of 1 1/2" rivets

Outer row rivet pitch at ends 8 5/16" Depth of flange if manhole flanged 3" 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 none 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, yes

Manufacturer.

Dates of Survey { During progress of 1923 Jan 14-15 Feb 5-9 13-21-26 Are the approved plans of boiler and superheater forwarded herewith yes
work in shops - - - March 6th (If not state date of approval)
while building { During erection on -
board vessel - - - -

Total No. of visits 8

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been examined during construction, and the materials and workmanship are good, and in accordance with the requirements of the rules & the approved plan. On completion they were tested by hydraulic pressure to 320 lbs & found tight & sound. They are said to be to the order of Messrs Smiths Dock of Middlesbrough. The name or number of the vessel on which they are to be fitted is unknown to the makers.

Survey Fee ...

£ 19 : 0 : 0

When applied for.

1923

Travelling Expenses (if any) £

When received.

1923

Francis Nelson

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 12 JUN. 1923

Assigned



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