

# REPORT ON BOILERS.

No. 92836

Received at London Office 15 AUG 1935

Date of writing Report

19

When handed in at Local Office

12<sup>th</sup> Aug 1935 Port of

NEWCASTLE-ON-TYNE

ing in

No. in Survey held at  
g. Book.

Newcastle

Date, First Survey 7<sup>th</sup> May 1935 Last Survey 14<sup>th</sup> Aug 1935

(Number of Visits 9)

Tons  
Gross  
Net

on the

Multitubular Boiler

laster

Built at Monfalcone

By whom built Cantieri Riuniti Dell'Adriatico

When built

ter of engines made at

By whom made

Engine No.

When made

boilers made at

Newcastle

By whom made

R & D Hawthorn Leslie & Co<sup>l</sup>

Boiler No.

When made 1935

pitch

Nominal Horse Power

Owners

Port belonging to

## MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

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

Total Heating Surface of Boilers 2317 sq ft Is forced draught fitted Yes Coal or Oil fired Oil

No. and Description of Boilers One single ended multitubular Working Pressure 180 lb

Tested by hydraulic pressure to 320 lb Date of test 2.8.35 No. of Certificate 645 Can each boiler be worked separately -

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler Two 3 1/4" John Grant & Co

Area of each set of valves per boiler {per Rule 16.02, as fitted 16.58 Pressure to which they are adjusted 185 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 ft Is oil fuel carried in the double bottom under boilers No

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

Largest internal dia. of boilers 14 - 3 5/8 Length 11 - 6 Shell plates: Material Steel Tensile strength 28/32

Thickness 1 3/16 Are the shell plates welded or flanged No Description of riveting: circ. seams end DTC Lap inter.

Long. seams OBS TIC Diameter of rivet holes in {circ. seams 1 1/4, long. seams Pitch of rivets 3 1/2

Percentage of strength of circ. end seams {plate 64.28, rivets 48.5 Percentage of strength of circ. intermediate seam {plate 85.7, rivets 91 Working pressure of shell by Rules 183 lb

Percentage of strength of longitudinal joint {plate 85.7, rivets 91, combined 89.7

Thickness of butt straps {outer 29/32, inner 1 1/32 No. and Description of Furnaces in each Boiler 3 horizon

Material Steel Tensile strength 26/30 Smallest outside diameter 3 - 7/8

Length of plain part {top, bottom Thickness of plates {crown 9/16, bottom Description of longitudinal joint Weld

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 189 lb

End plates in steam space: Material Steel Tensile strength 26/30 Thickness 1 1/2 Pitch of stays 1 3/4 x 2 1/2

How are stays secured D nuts Working pressure by Rules 183 lb

Tube plates: Material {front Steel, back Tensile strength 26/30 Thickness 1 3/16 Working pressure {front 242 lb, back 293 lb

Mean pitch of stay tubes in nests 9 Pitch across wide water spaces 13 3/4 Working pressure {front 242 lb, back 293 lb

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

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

in each 3 x 8 Working pressure by Rules 194 lb Combustion chamber plates: Material Steel

Tensile strength 26/30 Thickness: Sides 4 5/64 Back 4 5/64 Top 4 5/64 Bottom 7/8

Pitch of stays to ditto: Sides 8 x 8 Back 8 x 8 Top 8 x 10 Are stays fitted with nuts or riveted over Riveted

Working pressure by Rules 180 lb Front plate at bottom: Material Steel Tensile strength 26/30 Thickness 27/32

Thickness 1 5/16 Lower back plate: Material Steel Tensile strength 26/30 Thickness 27/32

Pitch of stays at wide water space 15 x 8 Are stays fitted with nuts or riveted over nuts

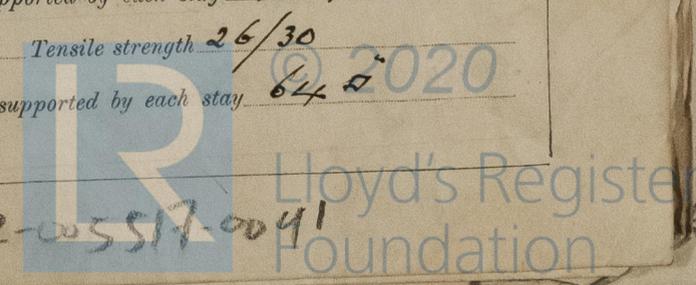
Working Pressure 200 lb Main stays: Material Steel Tensile strength 28/32

Diameter {At body of stay, or Over threads 3 No. of threads per inch 6 Area supported by each stay 3 1/2 x 7 5/8

Working pressure by Rules 181 lb Screw stays: Material Steel Tensile strength 26/30

Diameter {At turned off part, or Over threads 1 1/2, 1 5/8 No. of threads per inch 9 Area supported by each stay 6 1/4

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Working pressure by Rules 196 Are the stays drilled at the outer ends 110 Margin stays: Diameter  $\left\{ \begin{array}{l} \text{At turned off part, } 13 \\ \text{Over threads, } 14 \end{array} \right. \checkmark$

No. of threads per inch 9 Area supported by each stay 920 Working pressure by Rules 197

Tubes: Material Iron External diameter  $\left\{ \begin{array}{l} \text{Plain } 23 \\ \text{Stay } 24 \end{array} \right. \checkmark$  Thickness  $\left\{ \begin{array}{l} 9 \text{ w.g.} \\ 5/16 \text{ } 3/8 \end{array} \right. \checkmark$  No. of threads per inch 9

Pitch of tubes 4 x 3 3/8 Working pressure by Rules 215 k Manhole compensation: Size of opening in 8 1/4

shell plate 21 x 17 Section of compensating ring 21 x 1 3/8 No. of rivets and diameter of rivet holes 40 @ 1 1/4

Outer row rivet pitch at ends 8 3/4 Depth of flange if manhole flanged 3 1/2 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  $\left\{ \begin{array}{l} \text{Plate} \\ \text{Rivets} \end{array} \right.$

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  $\left\{ \begin{array}{l} \text{Tubes} \\ \text{Steel castings} \end{array} \right.$

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 22 inclusive for boilers been complied with

The foregoing is a correct description,  
*R. & W. HAYDON & CO. LIMITED*  
*R. B. Johnson* Manufacturer

Dates of Survey  $\left\{ \begin{array}{l} \text{During progress of work in shops} \\ \text{while building} \end{array} \right.$  1935  
May 7. 16. Jun 3. 20. Jul 3. 12. 17.  
25 Aug. 2

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

Total No. of visits 9+

Is this Boiler a duplicate of a previous case Yes 8736 on "Anaplus" excepting that tubes are iron  
 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 Rules Requirements + The approved plan. The materials and workmanship are good + the boiler was found satisfactory under Hydraulic test. Mountings tested to twice the working pressure. The boiler is being forwarded to Italy where it will be installed on a new oil tanker being built for The Anglo-Saxon Petroleum Co. Ltd.*

Survey Fee ... .. £ 15 : 8 :- When applied for, 14 AUG 1935

Travelling Expenses (if any) £ : : : When received, 16.8.35  
20/8  
*E. J. Stoddart*

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 18 SEP 1936

Assigned See Tri. 11375

