

REPORT ON BOILERS.

No. 91672

Received at London Office 23 AUG 1934

Date of writing Report 21st Aug. 1934 When handed in at Local Office 21st Aug. 1934 Port of **NEWCASTLE-ON-TYNE**

No. in Survey held at **Newcastle-on-Tyne** Date, First Survey **7th Febr** Last Survey **16th Aug** 19**34**

on the **Donkey Boiler N° 9705** (Number of Visits **14**) Tons { Gross / Net

Master Built at **Monfalcone** By whom built **ant. Riuniti dell'Adriatico** No. When built

Engines made at By whom made Engine No. When made

Boilers made at **Newcastle-on-Tyne** By whom made **Row. Hawthorn, Leslie & Co. Ld.** Boiler No. **9705** When made **1934**

Nominal Horse Power **154** Owners **Anglo-Saxon Petroleum Co. Ld.** Port belonging to

MULTITUBULAR BOILERS ~~MAIN, AUXILIARY, OR~~ DONKEY.

Manufacturers of Steel **The Steel Company of Scotland Ld.** (Letter for Record **S.**)

Total Heating Surface of Boilers **2317** Is forced draught fitted - Coal or Oil fired **oil**

No. and Description of Boilers **One Single Ended** Working Pressure **180 lbs./sq**

Tested by hydraulic pressure to **320 lbs./sq** Date of test **30.5.34** No. of Certificate **618** Can each boiler be worked separately -

Area of Firegrate in each Boiler - No. and Description of safety valves to each boiler **2-3 1/4" dia. direct spring loaded**

Area of each set of valves per boiler { per Rule **14.82** as fitted **16.58** Pressure to which they are adjusted - 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 - 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 **14-3 5/8"** Length **11-6"** Shell plates: Material **Steel** Tensile strength **28/32 tons/sq**

Thickness **1 3/16"** Are the shell plates welded or flanged **no** Description of riveting: circ. seams { end **DR. lap** inter. -

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

Percentage of strength of circ. end seams { plate **64.25** rivets **48.5** Percentage of strength of circ. intermediate seam { plate - rivets -

Percentage of strength of longitudinal joint { plate **85.7** rivets **91** combined **89.7** Working pressure of shell by Rules **183 lbs./sq**

Thickness of butt straps { outer **3 3/8"** inner **1 3/8"** No. and Description of Furnaces in each Boiler **3 Morrison**

Material **Steel** Tensile strength **26/30 tons/sq** Smallest outside diameter **3-7 3/8"**

Length of plain part { top - bottom - Thickness of plates { crown **9/16"** bottom **9/16"** Description of longitudinal joint **weld**

Dimensions of stiffening rings on furnace or c.c. bottom **none** Working pressure of furnace by Rules **189 lbs./sq**

End plates in steam space: Material **Steel** Tensile strength **26/30 tons/sq** Thickness **1 7/32"** Pitch of stays **17 3/4" x 21" mean**

How are stays secured **Dr. nuts** Working pressure by Rules **183 lbs./sq**

Tube plates: Material { front **Steel** back - Tensile strength { **26/30 tons/sq** Thickness { **15/16"** **13/16"**

Lean pitch of stay tubes in nests **9"** Pitch across wide water spaces **13 3/4"** Working pressure { front **242 lbs./sq** back **293 lbs./sq**

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

at centre **10" x 2 @ 3/4"** Length as per Rule **2-10 31/64"** Distance apart **10"** No. and pitch of stays

each **3 @ 8"** Working pressure by Rules **194 lbs./sq** Combustion chamber plates: Material **Steel**

Tensile strength **26/30 tons/sq** Thickness: Sides **45/64"** Back **45/64"** Top **45/64"** 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 lbs./sq** Front plate at bottom: Material **Steel** Tensile strength **26/30 tons/sq**

Thickness **15/16"** Lower back plate: Material **Steel** Tensile strength **26/30 tons/sq** 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 lbs./sq** Main stays: Material **Steel** Tensile strength **28/32 tons/sq**

Diameter { At body of stay **3"** No. of threads per inch **6** Area supported by each stay **372.75 sq**

Working pressure by Rules **181 lbs./sq** Screw stays: Material **Steel** Tensile strength **26/30 tons/sq**

Diameter { At turned off part **1 1/2" x 1 5/8"** No. of threads per inch **9** Area supported by each stay **64 sq + 80 sq**

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Working pressure by Rules 196 & 190 ^{4 1/2"} Are the stays drilled at the outer ends no Margin stays: Diameter At turned off part, or Over threads 1 3/4"

No. of threads per inch 9 Area supported by each stay 92 5/8" Working pressure by Rules 197 ^{4 1/2"}

Tubes: Material Iron External diameter Plain 2 3/4" Thickness 9 W.G. No. of threads per inch 9 Stay 2 3/4" 3/8" x 5/16"

Pitch of tubes 4" x 3 7/8" Working pressure by Rules 215 lbs./sq. in. Manhole compensation: Size of opening 40-1 1/4"

shell plate 21" x 17" Section of compensating ring 21" x 1 3/16" 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 Comp. Ring flanged 3 1/2" Steam Dome: Material Rose

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

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 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 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,
 H. & W. HAWTHORN, LESLIE & CO. LIMITED
 R. B. Johnston, Director

Dates of Survey During progress of work in shops -- 1934 Feb. 7, 12, 20, 28, Mar. 13, 21, Apr. 3, 10, 16, 23, May 1, 30, Aug. 8, 16. 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 14

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 Rules and approved plan; the materials and workmanship are good. The boiler is to be forwarded to Monfalcone for instalment in the vessel.

Survey Fee £ 15 : 8 : 0 When applied for, 19

Travelling Expenses (if any) £ : : When received, 25.8.34

A. B. Forster
 Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute TUE. 4 JUN 1935

Assigned See Tri. J.E. 10038

