

# REPORT ON BOILERS.

No. 51840

Received at London Office 21 OCT 1931

Date of writing Report 17<sup>th</sup> Oct. 1931 When handed in at Local Office 17<sup>th</sup> Oct. 1931 Port of GLASGOW.

Survey held at Glasgow Date, First Survey 11<sup>th</sup> Aug 1930 Last Survey 14<sup>th</sup> Oct. 1931

on the T.S. M.V. "CLIONA" (Number of Visits 89) Tons {Gross 8375 Net 4948

Built at Glasgow By whom built Harland & Wolff Ltd Yard No. 908 G. When built 1931-10.

Engines made at Glasgow By whom made Do. Engine No. 908 When made 1931.

Boilers made at Belfast By whom made Do. Boiler No. 908 G. When made 1931.

Owners Anglo Saxon Petroleum Co Ltd Port belonging to London

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel \_\_\_\_\_ (Letter for Record )

Heating Surface of Boilers 2404 sq. ft. Is forced draught fitted Yes Coal or Oil fired Oil.

Description of Boilers 2 - S. E. cylindrical. Working Pressure 150 lbs./sq. in.

Tested by hydraulic pressure to  Date of test  No. of Certificate  Can each boiler be worked separately Yes

Area of Firegrate in each Boiler  No. and Description of safety valves to each boiler 2 - direct spring, Improved High Lift.

Area of each set of valves per boiler {per Rule 5.5 sq. ft. as fitted 6.2 sq. ft. Pressure to which they are adjusted 150 lbs./sq. in. Are they fitted with easing gear Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No main boilers.

Smallest distance between boilers or uptakes and bunkers or woodwork Well clear. Is oil fuel carried in the double bottom under boilers Boilers fitted at open deck level.

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

Largest internal dia. of boilers \_\_\_\_\_ Length \_\_\_\_\_ Shell plates: Material \_\_\_\_\_ Tensile strength \_\_\_\_\_

Thickness \_\_\_\_\_ Are the shell plates welded or flanged \_\_\_\_\_ Description of riveting: circ. seams {end \_\_\_\_\_ inter. \_\_\_\_\_

Percentage of strength of circ. end seams {plate \_\_\_\_\_ rivets \_\_\_\_\_ Percentage of strength of circ. intermediate seam {plate \_\_\_\_\_ rivets \_\_\_\_\_

Percentage of strength of longitudinal joints {plate \_\_\_\_\_ rivets \_\_\_\_\_ Working pressure of shell by Rules \_\_\_\_\_

Thickness of butt straps {outer \_\_\_\_\_ inner \_\_\_\_\_ No. and Description of Furnaces in each Boiler \_\_\_\_\_

Material \_\_\_\_\_ Tensile strength \_\_\_\_\_ Smallest outside diameter \_\_\_\_\_

Length of plain part {top \_\_\_\_\_ bottom \_\_\_\_\_ Thickness of plates {crown \_\_\_\_\_ bottom \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_

Dimensions of stiffening rings on furnace or c.c. bottom \_\_\_\_\_ Working pressure of furnace by Rules \_\_\_\_\_

Head plates in steam space: Material \_\_\_\_\_ Tensile strength \_\_\_\_\_ Thickness \_\_\_\_\_ Pitch of stays \_\_\_\_\_

How are stays secured \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_

Head plates: Material {front \_\_\_\_\_ back \_\_\_\_\_ Tensile strength \_\_\_\_\_ Thickness \_\_\_\_\_

Minimum pitch of stay tubes in nests \_\_\_\_\_ Pitch across wide water spaces \_\_\_\_\_ Working pressure {front \_\_\_\_\_ back \_\_\_\_\_

Head plates to combustion chamber tops: Material \_\_\_\_\_ Tensile strength \_\_\_\_\_ Depth and thickness of girder \_\_\_\_\_

Centre \_\_\_\_\_ Length as per Rule \_\_\_\_\_ Distance apart \_\_\_\_\_ No. and pitch of stays \_\_\_\_\_

Each \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_ Combustion chamber plates: Material \_\_\_\_\_

Tensile strength \_\_\_\_\_ Thickness: Sides \_\_\_\_\_ Back \_\_\_\_\_ Top \_\_\_\_\_ Bottom \_\_\_\_\_

Pitch of stays to ditto: Sides \_\_\_\_\_ Back \_\_\_\_\_ Top \_\_\_\_\_ Are stays fitted with nuts or riveted over \_\_\_\_\_

Working pressure by Rules \_\_\_\_\_ Front plate at bottom: Material \_\_\_\_\_ Tensile strength \_\_\_\_\_

Thickness \_\_\_\_\_ Lower back plate: Material \_\_\_\_\_ Tensile strength \_\_\_\_\_ Thickness \_\_\_\_\_

Pitch of stays at wide water space \_\_\_\_\_ Are stays fitted with nuts or riveted over \_\_\_\_\_

Working Pressure \_\_\_\_\_ Main stays: Material \_\_\_\_\_ Tensile strength \_\_\_\_\_

Diameter {At body of stay, \_\_\_\_\_ or \_\_\_\_\_ Over threads \_\_\_\_\_ No. of threads per inch \_\_\_\_\_ Area supported by each stay \_\_\_\_\_

Working pressure by Rules \_\_\_\_\_ Screw stays: Material \_\_\_\_\_ Tensile strength \_\_\_\_\_

Diameter {At turned off part, \_\_\_\_\_ or \_\_\_\_\_ Over threads \_\_\_\_\_ No. of threads per inch \_\_\_\_\_ Area supported by each stay \_\_\_\_\_



Working pressure by Rules \_\_\_\_\_ Are the stays drilled at the outer ends \_\_\_\_\_ Margin stays: Diameter { At turned off part, or Over threads. } \_\_\_\_\_

No. of threads per inch \_\_\_\_\_ Area supported by each stay \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_

**Tubes:** Material \_\_\_\_\_ External diameter { Plain \_\_\_\_\_ Stay \_\_\_\_\_ } Thickness { \_\_\_\_\_ } No. of threads per inch \_\_\_\_\_

Pitch of tubes \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_ **Manhole compensation:** Size of opening \_\_\_\_\_

shell plate \_\_\_\_\_ Section of compensating ring \_\_\_\_\_ No. of rivets and diameter of rivet holes \_\_\_\_\_

Outer row rivet pitch at ends \_\_\_\_\_ 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 rivets \_\_\_\_\_

stays \_\_\_\_\_ Inner radius of crown \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_

How connected to shell \_\_\_\_\_ Size of dome \_\_\_\_\_ Plate under dome \_\_\_\_\_ Diameter of rivet holes and \_\_\_\_\_

of rivets in outer row in dome connection to shell \_\_\_\_\_

**Type of Superheater** \_\_\_\_\_ Tubes \_\_\_\_\_ Manufacturers of \_\_\_\_\_ 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 from the boiler \_\_\_\_\_

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 \_\_\_\_\_

Rules \_\_\_\_\_ Pressure to which the safety valves are adjusted \_\_\_\_\_ Hydraulic test pressure \_\_\_\_\_

tubes \_\_\_\_\_ castings \_\_\_\_\_ and after assembly in place \_\_\_\_\_ Are drain cocks or valves \_\_\_\_\_

to free the superheater from water where necessary \_\_\_\_\_

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with \_\_\_\_\_

*Del. Apt.*

The foregoing is a correct description,

Dates of Survey { During progress of work in shops - - } \_\_\_\_\_ Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) \_\_\_\_\_

while building { During erection on board vessel - - - } \_\_\_\_\_

**SEE ACCOMPANYING MACHINERY REPORT.**

Total No. of visits 89

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

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.) *These Boilers have been seen in the vessel — at upper deck level forward of engine room — examined under steam and safety valves adjusted as above. They are fitted either for burning oil fuel or for utilising the exhaust gases from the main engines.*

*AB*  
*19/10/31*

Survey Fee ... .. £ :  When applied for, 19 \_\_\_\_\_

Travelling Expenses (if any) £ :  When received, 19 \_\_\_\_\_

*J. D. Boyle*  
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute **GLASGOW 20 OCT 1931**

Assigned **SEE ACCOMPANYING MACHINERY REPORT.**

