

# REPORT ON BOILERS.

No. 49047

10 APR 1929

Received at London Office

Date of writing Report April 4<sup>th</sup> 1929 When handed in at Local Office April 5<sup>th</sup> 1929 Port of GLASGOW

No. in Survey held at Yroon Date, First Survey 11.10.28 Last Survey Mar 29<sup>th</sup> 1929

on the SS LEEUWARDEN (Number of Visits 27) Gross Tons } Net

Master \_\_\_\_\_ Built at Yroon By whom built Ailsa S.B. Co Ltd Yard No. 409 When built 1929

Engines made at Yroon By whom made Ailsa S.B. Co Ltd Engine No. 144 When made 1929

Boilers made at Glasgow By whom made David Rowan & Co Ltd Boiler No. 364 When made 1929

Nominal Horse Power \_\_\_\_\_ Owners General Steam Nav. Co Ltd Port belonging to London

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

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

Total Heating Surface of Boilers 5834 sq. Is forced draught fitted No Coal or Oil fired Coal

No. and Description of Boilers Two S.E. Marine Working Pressure 200 lbs<sup>sq</sup>

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

Area of Firegrate in each Boiler \_\_\_\_\_ No. and Description of safety valves to each boiler One pair of Spring-loaded valves

Area of each set of valves per boiler { per Rule 20.34 as fitted 22.09 Pressure to which they are adjusted 200 lbs<sup>sq</sup> 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'-0" Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 14" 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. \_\_\_\_\_

long. seams \_\_\_\_\_ Diameter of rivet holes in { circ. seams \_\_\_\_\_ long. seams \_\_\_\_\_ Pitch of rivets { \_\_\_\_\_

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

Percentage of strength of longitudinal joint { 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 \_\_\_\_\_

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

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

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

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

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

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

in 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 \_\_\_\_\_



See Glasgow Report No 18824

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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 in 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 Boilers made at \_\_\_\_\_

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 \_\_\_\_\_

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 \_\_\_\_\_ Hydraulic test pressure: \_\_\_\_\_

Pressure to which the safety valves are adjusted \_\_\_\_\_ 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,

Manufacturer.

Dates of Survey { During progress of work in shops - - } See Accompanying Machinery Report

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

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

Total No. of visits 27

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.) The boilers have been securely fitted on board and tried under steam with satisfactory results.

A.G. 6/4/29.

See Accompanying Machinery Report

Survey Fee ... .. £ \_\_\_\_\_ : \_\_\_\_\_ When applied for. 192

Travelling Expenses (if any) £ \_\_\_\_\_ : \_\_\_\_\_ When received. 192

David C Barr.  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 9 - APR 1929

Assigned See Accompanying Machy. Report.



No. in Survey Book. \_\_\_\_\_ on the \_\_\_\_\_

Master \_\_\_\_\_

Engines made at \_\_\_\_\_

Boilers made at \_\_\_\_\_

Nominal Horse P \_\_\_\_\_

MULTITUB \_\_\_\_\_

Manufacturers of \_\_\_\_\_

Total Heating S \_\_\_\_\_

No. and Descrip \_\_\_\_\_

Tested by hydro \_\_\_\_\_

Area of Firegra \_\_\_\_\_

Area of each se \_\_\_\_\_

In case of donkey \_\_\_\_\_

Smallest distanc \_\_\_\_\_

Smallest distanc \_\_\_\_\_

Largest internat \_\_\_\_\_

Thickness \_\_\_\_\_

long. seams \_\_\_\_\_

Percentage of s \_\_\_\_\_

Percentage of s \_\_\_\_\_

Thickness of b \_\_\_\_\_

Material \_\_\_\_\_

Length of plai \_\_\_\_\_

Dimensions of \_\_\_\_\_

**End plates in** \_\_\_\_\_

How are stays \_\_\_\_\_

**Tube plates:** \_\_\_\_\_

Mean pitch of \_\_\_\_\_

**Girders to co** \_\_\_\_\_

at centre \_\_\_\_\_

in each \_\_\_\_\_

Tensile streng \_\_\_\_\_

Pitch of stays \_\_\_\_\_

Working pres \_\_\_\_\_

Thickness \_\_\_\_\_

Pitch of stay \_\_\_\_\_

Working Pre \_\_\_\_\_

Diameter { At \_\_\_\_\_

Working pres \_\_\_\_\_

Diameter { At \_\_\_\_\_