

REPORT ON BOILERS.

No. 86155

24 DEC 1930

-5 SEP 1930

Received at London Office

Date of writing Report 1-9-1930 When handed in at Local Office 3-9-1930 Port of

NEWCASTLE-ON-TYNE

No. in Survey held at Hebburn

Date, First Survey 11 June

Last Survey 28 Aug 1930

485 on the T. S. S. SLIGO

(Number of Visits 9) Gross 891 Tons Net 542

Built at Dublin

By whom built Dublin Dockyard Co

Yard No. 146 When built 1930

Engines made at Glasgow

By whom made McKie & Baxter

Engine No. 1255 When made 1930

Boilers made at Hebburn

By whom made Palmers Co. Ltd.

Boiler No. 1144-5 When made 1930

Indicated Horse Power 249

Owners Sligo Steam Navigation Co Port belonging to Sligo

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel The Steel Company of Scotland Ltd.

(Letter for Record S)

Heating Surface of Boilers 4600

Is forced draught fitted No

Coal or Oil fired COAL

Description of Boilers TWO SINGLE ENDED

Working Pressure 200 LBS

Tested by hydraulic pressure to 350 LBS Date of test 20.8.30 No. of Certificate 491-2 Can each boiler be worked separately

Area of Firegrate in each Boiler 66 No. and Description of safety valves to each boiler

No. 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

Least distance between boilers or uptakes and bunkers or woodwork

Is oil fuel carried in the double bottom under boilers

Least distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated

Least internal dia. of boilers 15' 0" Length 12' 0" Shell plates: Material STEEL Tensile strength 29-33 TONS

Thickness 1 5/16 Are the shell plates welded or flanged No Description of riveting: circ. seams D.L.

Seams TR, DBS. Diameter of rivet holes in circ. seams 1 3/8 Pitch of rivets 4 1/8

Percentage of strength of circ. end seams plate 66.6% rivets 43.3% Percentage of strength of circ. intermediate seam plate 85.5% rivets 88.5%

Percentage of strength of longitudinal joint plate 85.5% rivets 88.5% combined 88.7% Working pressure of shell by Rules 200 LBS

Thickness of butt straps outer 1 1/8 inner 1 1/8 No. and Description of Furnaces in each Boiler 3 DEIGHTON SECTION

Material STEEL Tensile strength 26-30 TONS Smallest outside diameter 3' 10 1/16"

Thickness of plates crown 2 1/32 bottom 2 1/32 Description of longitudinal joint WELD

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 208 LBS

Plates in steam space: Material STEEL Tensile strength 26-30 TONS Thickness 1 1/4 Pitch of stays 19 1/2 x 20"

Are stays secured DOUBLE NUTS & WASHERS Working pressure by Rules 207 LBS

Plates: Material front STEEL Tensile strength 26-30 TONS Thickness 1 5/16

pitch of stay tubes in nests 8.875 Pitch across wide water spaces 14.5 Working pressure front 438 LBS back 258 LBS

Boilers to combustion chamber tops: Material STEEL Tensile strength 28-32 TONS Depth and thickness of girder

Size 1 5/8 x 10 1/2 Length as per Rule 3' 0" Distance apart 9 3/4 No. and pitch of stays

Working pressure by Rules 212 LBS Combustion chamber plates: Material STEEL

Tensile strength 26-30 TONS Thickness: Sides 23/32 Back 23/32 Top 23/32 Bottom 1"

No. of stays to ditto: Sides 8 x 10 1/2 Back 9 1/4 x 9 3/4 Top 7 5/8 x 9 3/4 Are stays fitted with nuts or riveted over NUTS

Working pressure by Rules 208 LBS Front plate at bottom: Material STEEL Tensile strength 26-30 TONS

Thickness 1 5/16 Lower back plate: Material STEEL Tensile strength 26-30 TONS Thickness 29/32

No. of stays at wide water space d = 21 Are stays fitted with nuts or riveted over NUTS

Working Pressure 206 LBS Main stays: Material STEEL Tensile strength 28-32 TONS

At body of stay, 3 1/4 No. of threads per inch 6 Area supported by each stay 399

Over threads Working pressure by Rules 206 LBS Screw stays: Material STEEL Tensile strength 26-30 TONS

At turned off part, 1 3/4 No. of threads per inch 9 Area supported by each stay 90.187

Working pressure by Rules **202 LBS** Are the stays drilled at the outer ends **No** Margin stays: Diameter $\left\{ \begin{array}{l} \text{At turned off part,} \\ \text{or} \\ \text{Over threads} \end{array} \right. \frac{1}{8}''$

No. of threads per inch **9** Area supported by each stay **115.7** Working pressure by Rules **200 LBS**

Tubes: Material **STEEL** External diameter $\left\{ \begin{array}{l} \text{Plain} \\ \text{Stay} \end{array} \right. \frac{3}{4}''$ Thickness $\frac{8}{16}$ No. of threads per inch **9**

Pitch of tubes **$4\frac{3}{8}'' \times 4\frac{1}{2}''$** Working pressure by Rules **230 LBS** Manhole compensation: Size of opening in shell plate **$16'' \times 20''$** Section of compensating ring **$3.0'' \times 2.8'' \times \frac{5}{16}''$** No. of rivets and diameter of rivet holes **32 @ $1\frac{3}{8}''$**

Outer row rivet pitch at ends **$9\frac{1}{2}''$** Depth of flange if manhole flanged **$3\frac{1}{2}''$** Steam Dome: Material **-**

Tensile strength **-** Thickness of shell **-** Description of longitudinal joint **-**

Diameter of rivet holes **-** Pitch of rivets **-** Percentage of strength of joint $\left\{ \begin{array}{l} \text{Plate} \\ \text{Rivets} \end{array} \right. \frac{1}{2}$

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 **-** Manufacturers of $\left\{ \begin{array}{l} \text{Tubes} \\ \text{Steel castings} \end{array} \right. \frac{1}{2}$

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 22 inclusive for boilers been complied with **YES**

Palmer's Shipbuilding & Iron Co., Ltd.

The foregoing is a correct description,

H. Cameron per **H. H.**

Manager, Hebburn Boiler Shop & Foundry.

Manufacturer.

Dates of Survey $\left\{ \begin{array}{l} \text{During progress of work in shops - -} \\ \text{while building} \end{array} \right. \left\{ \begin{array}{l} \text{During erection on board vessel - -} \end{array} \right. \frac{1930}{\text{June 11. 18. 30. July 15. 21. 30. Aug. 12. 20. 28.}}$ Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) **Yes.**

Total No. of visits **9.**

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) **These boilers have been built under Special Survey, the materials and workmanship are good.**

Survey Fee ... **£ 27 : 17 : 0**

Travelling Expenses (if any) **£ :**

When applied for,

When received,

- 4 SEP 1930

Low for

29/10/30

Thomas Napier

Engineer Surveyor to Lloyd's Register of Shipping.

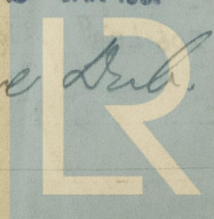
Committee's Minute **GLASGOW 25 DEC 1930**

Assigned **SEE ACCOMPANYING MACHINERY REPORT.**

Gls. N° 51118.

FRI. 2 JAN 1931

See Sub. J.C. 4826



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