

# REPORT ON BOILERS.

No. 29270

Received at London Office **WED. 7 SEP 1910 SAT. 12 NOV 1910**

Date of writing Report **19** When handed in at Local Office **3/9/10** Port of **Glasgow**

No. in Survey held at **Glasgow** Date, First Survey **11<sup>th</sup> April 1910** Last Survey **22<sup>nd</sup> Aug 1910**

Reg. Book. on the Boiler **7<sup>th</sup> B 146** of "**Gopher**" (Number of Visits **10**) } Gross Tons } Net

Boiler Built at \_\_\_\_\_ By whom built \_\_\_\_\_ When built \_\_\_\_\_

Engines made at \_\_\_\_\_ By whom made \_\_\_\_\_ when made \_\_\_\_\_

Boilers made at **Glasgow** By whom made **David Rowan & Co** when made **1910**

Registered Horse Power \_\_\_\_\_ Owners \_\_\_\_\_ Port belonging to \_\_\_\_\_

## MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel **Stewart & Lloyds Ltd**

Letter for record \_\_\_\_\_ Total Heating Surface of Boilers **2115** Is forced draft fitted \_\_\_\_\_ No. and Description of Boilers **One single Ended** Working Pressure **180 lb** Tested by hydraulic pressure to **360 lb** Date of test **22/8/10**

No. of Certificate **10553** Can each boiler be worked separately \_\_\_\_\_ Area of fire grate in each boiler **59** No. and Description of Safety valves to each boiler \_\_\_\_\_ Area of each valve \_\_\_\_\_ 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 \_\_\_\_\_

Smallest distance between boilers or uptakes and bunkers or woodwork \_\_\_\_\_ Mean dia. of boilers **14' 6"** Length **10' 6"**

Material of shell plates **slit** Thickness **1 3/16"** Range of tensile strength **28 to 32** Are the shell plates welded or flanged **no**

Description of riveting: cir. seams **S. R. L** long. seams **S. B. 6** Diameter of rivet holes in long. seams **1 5/16"** Pitch of rivets **8.75"**

Width of butt straps **19 1/4"** Percentages of strength of longitudinal joint rivets **96.8** Working pressure of shell by rules **183 lb** Size of manhole in shell **16" x 12"** Size of compensating ring **Flanged** No. and Description of Furnaces in each boiler **3 Morrison** Material **slit** Outside diameter **3-9 1/16"** Length of plain part \_\_\_\_\_ Thickness of plates crown **1 1/16"** bottom **3/16"**

Description of longitudinal joint **weld** No. of strengthening rings \_\_\_\_\_ Working pressure of furnace by the rules **181** Combustion chamber Material **slit** Thickness: Sides **1 1/16"** Back **1 1/8"** Top **1 1/16"** Bottom **1 1/16"** Pitch of stays to ditto: Sides **9 3/4" x 9"** Back **9 1/2" x 9 1/4"**

If stays are fitted with nuts or riveted heads **nuts** Working pressure by rules **186** Material of stays **Iron** Diameter at smallest part **2.07** Area supported by each stay **86** Working pressure by rules **180** End plates in steam space: Material **slit** Thickness **1 7/16"**

How are stays secured **S. nuts** Working pressure by rules **182** Material of stays **slit** Diameter at smallest part **8.3**

Area supported by each stay **470** Working pressure by rules **180** Material of Front plates at bottom **slit** Thickness **7/8"** Material of rear back plate **slit** Thickness **1 3/16"** Greatest pitch of stays **12 3/4"** Working pressure of plate by rules **185** Diameter of tubes **3 1/4"**

Material of tube plates **slit** Thickness: Front **7/8"** Back **1 3/16"** Mean pitch of stays **11 1/8"** Pitch across wide spaces **13 1/4"** Working pressures by rules **190** Girders to Chamber tops: Material **slit** Depth and thickness of girder at centre **8 3/8" x 3 3/4" x 2"** Length as per rule **31 1/2"** Distance apart **9"** Number and pitch of Stays in each **2-9 3/4"**

Working pressure by rules **180** Superheater or Steam chest; how connected to boiler **none** Can the superheater be shut off and the boiler worked separately \_\_\_\_\_

Diameter	Length	Thickness of shell plates	Material	Description of longitudinal joint	Diam. of rivet

Pitch of rivets \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_ Diameter of flue \_\_\_\_\_ Material of flue plates \_\_\_\_\_ Thickness \_\_\_\_\_

Reinforced with rings \_\_\_\_\_ Distance between rings \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ End plates: Thickness \_\_\_\_\_ How stayed \_\_\_\_\_

Working pressure of end plates \_\_\_\_\_ Area of safety valves to superheater \_\_\_\_\_ Are they fitted with easing gear \_\_\_\_\_

Survey request form **146** attached

The foregoing is a correct description, **pro David Rowan & Co** Manufacturer.

Is the approved plan of boiler forwarded herewith **Yes** as **B 145**

During progress of work in shops - - - **1910. April 11. 18. 20. 27. June 1. July 11.**

During erection on board vessel - - - **Aug 3. 5. 15. 22.**

Total No. of visits **10**

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) **This boiler has been constructed under Special Survey & is of good materials & workmanship. It is to the order of Messrs. Galloway & Co., Great Yarmouth.**

Survey Fee **£ 7-1-0** £ : : When applied for **3/9/10** 19 **10**.

Travelling Expenses (if any) £ : : When received **4/11/10** 19 **10**.

**Hardman-Smith**  
Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute **GLASGOW** **6 SEP 1910**

signed **Transmit to London**

