

## REPORT ON BOILERS.

No. 49064

Received at London Office 24 APR 1929

Date of writing Report 20 April 1929 When handed in at Local Office 22 April 1929 Port of Glasgow

No. in Reg. Book. Survey held at Glasgow Date, First Survey 11.4.28 Last Survey 19.4.1929

on the Screw Steamer 'JUNYA' (Number of Visits 88) Gross 6078 Tons Net 3746

Master Built at Glasgow By whom built A. Stephen &amp; Son Ltd. Yard No. 522. When built 1929.

Engines made at Glasgow By whom made A. Stephen &amp; Son Ltd. Engine No. 522 When made 1929.

Boilers made at Glasgow By whom made A. Stephen &amp; Son Ltd. Boiler No. 522. When made 1929.

Nominal Horse Power 677. 612. Owners James Hunter Ltd. Port belonging to London.

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel The Steel Co. of Scotland Ltd. (Letter for Record S.)

Total Heating Surface of Boilers 8040 sq. ft. Is forced draught fitted Gas ✓ Coal or Oil fired Oil ✓

No. and Description of Boilers Three Cyl. Single End. Working Pressure 180 lb. per sq. in.

Tested by hydraulic pressure to 320 lb. Date of test 2.7.29. No. of Certificate 17993. Can each boiler be worked separately Gas.

Area of Firegrate in each Boiler 63 sq. ft. No. and Description of safety valves to each boiler Two Cornish Imp. High Lift

Area of each set of valves per boiler (per Rule 10.32.07) Pressure to which they are adjusted 180 lb. Are they fitted with easing gear Gas

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler ✓

Smallest distance between boilers or uptakes 7'-0" Is oil fuel carried in the double bottom under boilers Gas

Smallest distance between shell of boiler and tank top plating 22" Is the bottom of the boiler insulated Gas

Largest internal dia. of boilers 15'-9" ✓ Length 12'-0" ✓ Shell plates: Material S. Tensile strength 28/32 T.

Thickness 1 19/64" Are the shell plates welded or flanged No. Description of riveting: circ. seams and L.D.R.

long. seams DBS/TR. ✓ Diameter of rivet holes in (circ. seams 13/8" ✓ Pitch of rivets 9/8" ✓

Percentage of strength of circ. end seams (plate 69.2, rivets 42.4) Percentage of strength of circ. intermediate seam (plate 85.4, rivets 94.0)

Percentage of strength of longitudinal joints (plate 85.4, rivets 94.0) Working pressure of shell by Rules 182 lb. per sq. in.

Thickness of butt straps (outer 1 1/8" ✓ inner 1 1/8" ✓) No. and Description of Furnaces in each Boiler 3 Brighton 3 Cyl.

Material S. Tensile strength 26/30 T. Smallest outside diameter 47 3/16"

Length of plain part (top 19/32" ✓ bottom 19/32" ✓) Description of longitudinal joint Weld ✓

Dimensions of stiffening rings on furnace or c.c. bottom None Working pressure of furnace by Rules 188 lb. per sq. in.

End plates in steam space: Material S. Tensile strength 26/30 T. Thickness 1 1/16" ✓ Pitch of stays 18" x 16"

How are stays secured D.N.W. Working pressure by Rules 203 lb. per sq. in.

Tube plates: Material (front S, back S) Tensile strength 26/30 T. Thickness 15/16" ✓

Mean pitch of stay tubes in nests 11 1/4" x 9 3/8" Pitch across wide water spaces 13 1/2" ✓ Working pressure (front 181 lb, back 181 lb)

Girders to combustion chamber tops: Material S. Tensile strength 28/32 T. Depth and thickness of girder

at centre 9 3/4" x 1 1/4" ✓ Length as per Rule 34.36" Distance apart 8 3/4" ✓ No. and pitch of stays

in each 3 @ 8 1/2" ✓ Working pressure by Rules 182 lb. per sq. in. Combustion chamber plates: Material S.

Tensile strength 26/30 T. Thickness: Sides 5/8" ✓ Back 1 1/16" x 1 1/4" ✓ Top 5/8" ✓ Bottom 28/32" ✓

Pitch of stays to ditto: Sides 8 3/4" x 8 1/2" ✓ Back 9 x 8 3/4" x 1 1/4" ✓ Top 8 3/4" x 8 1/2" ✓ Are stays fitted with nuts or riveted over Nuts

Working pressure by Rules 181 lb. per sq. in. Front plate at bottom: Material S. Tensile strength 26/30 T. Thickness 7/8" ✓

Thickness 15/16" ✓ Lower back plate: Material S. Tensile strength 26/30 T. Thickness 7/8" ✓

Pitch of stays at wide water space 13 1/2" x 8 3/4" ✓ Are stays fitted with nuts or riveted over Nuts

Working Pressure 198 lb. per sq. in. Main stays: Material S. Tensile strength 28/32 T.

Diameter (At body of stay, 2 3/4" ✓ or Over threads, 2 3/4" ✓) No. of threads per inch 6 ✓ Area supported by each stay 288 sq. in.

Working pressure by Rules 191 lb. per sq. in. Screw stays: Material S. Tensile strength 26/30 T.

Diameter (At turned off part, 1 3/4" ✓ or Over threads, 1 3/4" ✓) No. of threads per inch 9 ✓ Area supported by each stay 87.5 sq. in.



Working pressure by Rules **2084** Are the stays drilled at the outer ends **No** Margin stays: Diameter { At turned off part, or Over threads **1 7/8"**  
No. of threads per inch **9** Area supported by each stay **1030** Working pressure by Rules **2024**  
Tubes: Material **I.** External diameter { Plain **2 1/2"** Thickness **3/16, 1/8, 7/16** No. of threads per inch **9**  
Pitch of tubes **3 3/4" x 3 3/4"** Working pressure by Rules **1824** Manhole compensation: Size of opening in shell plate **20 1/2" x 16 1/2"** Section of compensating ring **10 1/2" x 1 1/8"** No. of rivets and diameter of rivet holes **36 - 1 3/8"**  
Outer row rivet pitch at ends **10"** Depth of flange if manhole flanged **3 1/16"** Steam Dome: Material **None**  
Tensile strength **552** Thickness of shell **152.0** Description of longitudinal joint  
Diameter of rivet holes **552** Pitch of rivets **552** Percentage of strength of joint { Plate Rivets  
Internal diameter **552** Working pressure by Rules **552** Thickness of crown **552** No. and diameter of stays  
How connected to shell **552** Inner radius of crown **552** Working pressure by Rules **552**  
Size of doubling plate under dome **552** Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell **552**  
Type of Superheater **None** Manufacturers of { Tubes Steel castings  
Number of elements **552** Material of tubes **552** Internal diameter and thickness of tubes **552**  
Material of headers **552** Tensile strength **552** Thickness **552** Can the superheater be shut off and the boiler be worked separately **552**  
Area of each safety valve **552** Are the safety valves fitted with easing gear **552** Working pressure as per Rules **552**  
Pressure to which the safety valves are adjusted **552** Hydraulic test pressure: tubes castings and after assembly in place **552** Are drain cocks or valves fitted to free the superheater from water where necessary **552**

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with **ALEXANDER STEPHEN & SONS LTD.,**  
The foregoing is a correct description,  
*[Signature]* Manufacturer.

Dates of Survey { During progress of work in shops - - - **See Accompanying**  
while building { During erection on board vessel - - - **machinery Report**  
Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) **Commercial Manager, Engine Dept.**  
Total No. of visits **88**

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) **These boilers have been constructed under special survey in accordance with the Rules. The materials and workmanship employed in their manufacture are sound and good. They have been satisfactorily fitted to the vessel and their safety valves registered under steam.**

Survey Fee ... £ **✓** : : When applied for, 192  
Travelling Expenses (if any) £ **✓** : : When received, 192

*[Signature]*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 23 APR 1929** **FRI. 7 JUN 1929**  
Assigned **See accompanying Machinery Report.**