

# REPORT ON BOILERS.

No. 47922

Received at London Office

*This Rpt. now filled in on form 101 Waitato*

Date of writing Report April 21<sup>st</sup> 1928 When handed in at Local Office April 28<sup>th</sup> 1928 Port of GLASGOW.

No. in Survey held at Glasgow Date, First Survey 7-2-28 Last Survey April 21<sup>st</sup> 1928

Reg. Book. Glasgow (Number of Visits 8) Gross 114.31

on the S.E. Marine Boiler for Export. Tons Net

Master Cadiz By whom built S. E. de Construccin Yard No. 56 When built 1928

Engines made at non-propelling By whom made ✓ Engine No. When made

Boilers made at Glasgow By whom made A. W. Dalgligh Boiler No. 864 When made 1928

Nominal Horse Power ✓ Owners Obras del Puerto Sevilla Port belonging to Sevilla

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

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

Total Heating Surface of Boilers 304 sq Is forced draught fitted No. Coal or Oil fired Coal

No. and Description of Boilers One S.E. Marine Working Pressure 120 lbs

Tested by hydraulic pressure to 230 lbs Date of test 21-4-28 No. of Certificate 14845 Can each boiler be worked separately ✓

Area of Firegrate in each Boiler 11.68 sq No. and Description of safety valves to each boiler spring loaded. Two of 1 1/2"

Area of each set of valves per boiler per Rule 4.81" 2.85" Pressure at which they are adjusted 120 lb 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 2'-0" Is oil fuel carried in the double bottom under boilers No.

Smallest distance between shell of boiler and tank top plating Open floor Is the bottom of the boiler insulated No.

Largest internal dia. of boilers 6'-2 1/8" Length 6'-10 3/4" Shell plates: Material S. Tensile strength 28-32 tons

Thickness 3/16" Are the shell plates welded or flanged No Description of riveting: circ. seams end SR. Lap

long. seams DR. DBS. Diameter of rivet holes in circ. seams 15/16" long. seams 3/4" Pitch of rivets 2 1/2"

Percentage of strength of circ. end seams plate 58.33 rivets 54.58 Percentage of strength of circ. intermediate seam plate rivets

Percentage of strength of longitudinal joint plate 46.23 rivets 98.1 Working pressure of shell by Rules 125 lbs

Thickness of butt straps outer 1/2" inner 1/2" No. and Description of Furnaces in each Boiler One Plain

Material S Tensile strength 26-30 tons Smallest outside diameter 2'-10"

Length of plain part top 4'-9 3/8" bottom 4'-9 3/8" Thickness of plates crown 1/2" bottom 1/2" Description of longitudinal joint Weld.

Dimensions of stiffening rings on furnace or c.c. bottom None Working pressure of furnace by Rules 122 lbs.

End plates in steam space: Material S Tensile strength 26-30 tons Thickness 5/8" Pitch of stays 14 1/2"

How are stays secured Double Nut Working pressure by Rules 142 lbs

Tube plates: Material front S back S Tensile strength 26-30 tons Thickness 5/8"

Mean pitch of stay tubes in nests 8 13/16" Pitch across wide water spaces 10 1/2" Working pressure front 146 back 140

Girders to combustion chamber tops: Material S Tensile strength 28-32 tons Depth and thickness of girder

at centre 4" x 1/2" D. Length as per Rule 1-4 3/8" Distance apart 6 1/2" No. and pitch of stays

in each 1 Working pressure by Rules 145 lbs Combustion chamber plates: Material S

Tensile strength 26-30 tons Thickness: Sides 1/2" Back 1/2" Top 1/2" Bottom 1/2"

Pitch of stays to ditto: Sides 8" x 4" Back 4 1/2" x 4 3/4" Top 6 1/2" x 4" Are stays fitted with nuts or riveted over Nuts

Working pressure by Rules 133 Front plate at bottom: Material S Tensile strength 26-30 tons Thickness 5/8"

Thickness 5/8" Lower back plate: Material S Tensile strength 26-30 tons Thickness 5/8"

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

Working Pressure 245 lbs. Main stays: Material S Tensile strength 28-32 tons

Diameter At body of stay, 2" Over threads 2" No. of threads per inch 6 Area supported by each stay 156 sq

Working pressure by Rules 164 lbs Screw stays: Material S Tensile strength 26-30 tons

Diameter At turned off part, 1 1/4" Over threads 1 1/4" No. of threads per inch 9 Area supported by each stay 58.12 sq

013057-012062-0259



Working pressure by Rules 134 Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, or Over threads 1 1/4"

No. of threads per inch 9 Area supported by each stay 62 sq" Working pressure by Rules 128 lbs

Tubes: Material L.W. Iron External diameter { Plain 2 1/2" Thickness { 11 W.G. No. of threads per inch 9

Pitch of tubes 3 3/8" x 3 3/8" Working pressure by Rules 125 lbs Manhole compensation: Size of opening in shell plate 19" x 15" Section of compensating ring 31" x 24" x 3/4" No. of rivets and diameter of rivet holes 40 @ 15/16

Outer row rivet pitch at ends 5" Depth of flange if manhole flanged — Steam Dome: Material None

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 stays

How connected to shell Inner radius of crown Working pressure by Rules

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 None 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 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 23 inclusive for boilers been complied with

The foregoing is a correct description,

A. W. Dabiel Manufacturer

Dates of Survey { During progress of work in shops - - 1928 Feb. 7-11 Mar. 6-12-21-29 Are the approved plans of boiler and superheater forwarded herewith Yes (If not state date of approval.)

while building { During erection on board vessel - - - Apr. 10-21 July 24 Aug 4, 10, 22, 24 Total No. of visits 8 + 10

# GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

The boiler has been built under Special Survey in accordance with the approved plan and Rules of the Society. The workmanship and materials are of good quality. The boiler is intended for export to Seville.

This boiler has been securely fitted on board, the Safety valves adjusted under steam and the feed pump and steam ejector tried under full pressure and found satisfactory.

The boiler is used for driving the dredge crane and two auxiliary pumps and ejector.

The copper main steam pipes were tested by hydraulic pressure to 240 lb. and found satisfactory.

This boiler and machinery are in my opinion eligible to be classed with the vessel.

Installing Fee 200.00

Survey Fee ... .. £ 4 : 4 :

Travelling Expenses (if any) £ : :

When applied for, 8-9-28 1928 8-9-28

When received, 9-9-28 1928

Thomas Miller David C Barr

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 1- MAY 1928

Assigned

TRANSMIT TO LONDON

FRI. 21 SEP 1928 TUE. 10 DEC 1929

11 + 11.3 9.28 11.3 9.28 11.3 9.28  
Lloyd's Register Foundation