

# REPORT ON BOILERS.

No. 61247.

Received at London Office JUN 21 1939.

Date of writing Report 19 When handed in at Local Office 19 Port of Glasgow

No. in Reg. Book. Survey held at Glasgow Date, First Survey 14th April 1939 Last Survey 2-6 1939

on the Non-propelling dredger "FOREMOST CLAN" (Number of Visits 8) Tons { Gross 314.4 Net 190.0

Master Built at Aberdeen By whom built A. Hall & Co Yard No. 664 When built 1939

Engines made at Glasgow By whom made David Rowan & Co Ltd Engine No. When made

Boilers made at Glasgow By whom made David Rowan & Co Ltd Boiler No. A35 When made 1939

Nominal Horse Power Owners James Fanning & Dredging Co Ltd Port belonging to London

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

Manufacturers of Steel Bohills Ltd (Letter for Record S)

Total Heating Surface of Boilers coal 12230 oil 13150 Is forced draught fitted no Coal or Oil fired oil

No. and Description of Boilers one single ended Working Pressure 140

Tested by hydraulic pressure to 260 Date of test 31.5.39 No. of Certificate 20395 Can each boiler be worked separately -

Area of Firegrate in each Boiler oil only No. and Description of safety valves to each boiler 2 Improved high lift

Area of each set of valves per boiler { per Rule 5.34 as fitted 6.28 } Pressure to which they are adjusted 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 Is oil fuel carried in the double bottom under boilers

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

Largest internal dia. of boilers 11'-6" Length 10'-6" Shell plates: Material S Tensile strength 29-33 tons

Thickness 27/32 Are the shell plates welded or flanged no Description of riveting: circ. seams { end DR inter. } long. seams DRS. TR Diameter of rivet holes in { circ. seams } 29/32 Pitch of rivets { 2.506" 5 15/16" }

Percentage of strength of circ. end seams { plate 63.76 rivets 52.4 } Percentage of strength of circ. intermediate seam { plate 84.7 rivets 82.2 combined 89.7 } Working pressure of shell by Rules 144

Thickness of butt straps { outer 19/32 inner 23/32 } No. and Description of Furnaces in each Boiler Two Deighton

Material S Tensile strength 26-30 tons Smallest outside diameter 3'-3 7/8"

Length of plain part { top bottom } Thickness of plates { crown 7/16 bottom } Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 156

End plates in steam space: Material S Tensile strength 26-30 tons Thickness 13/16 Pitch of stays 16" x 13 3/8"

How are stays secured DR Working pressure by Rules 140

Tube plates: Material { front S back S } Tensile strength { 26-30 tons } Thickness { 13/16 45/64 }

Mean pitch of stay tubes in nests 11 1/8" Pitch across wide water spaces 14" Working pressure { front 140 back 142 }

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

at centre 2 @ 7 1/8" x 6" Length as per Rule 28 45/64 Distance apart 9 1/2" No. and pitch of stays

in each 2 @ 9 1/8" Working pressure by Rules 141 Combustion chamber plates: Material S

Tensile strength 26-30 tons Thickness: Sides 19/32 Back 19/32 Top 19/32 Bottom 19/32

Pitch of stays to ditto: Sides 9 1/2" x 9 1/8" Back 8 1/2" x 10" Top 9 1/8" x 9 1/2" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 140 Front plate at bottom: Material S Tensile strength 26-30 tons

Thickness 13/16 Lower back plate: Material S Tensile strength 26-30 tons Thickness 13/16

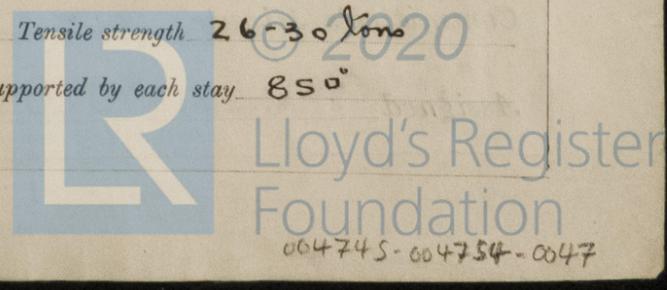
Pitch of stays at wide water space 13 1/2" Are stays fitted with nuts or riveted over nuts

Working Pressure 140 Main stays: Material S Tensile strength 28-32 tons

Diameter { At body of stay, or Over threads } 2" No. of threads per inch 6 Area supported by each stay 214 sq"

Working pressure by Rules 156 Screw stays: Material S Tensile strength 26-30 tons

Diameter { At turned off part, or Over threads } 1 1/2" No. of threads per inch 9 Area supported by each stay 850



Working pressure by Rules **145** Are the stays drilled at the outer ends **no** Margin stays: Diameter { At turned off part. or Over threads **1 5/8"**  
 No. of threads per inch **9** Area supported by each stay **99.8"** Working pressure by Rules **152**  
 Tubes: Material **Iron** External diameter { Plain **3 1/4"** Stay **3 1/4"** Thickness { **9 w.s.** **1/4" 9/16"** No. of threads per inch **9**  
 Pitch of tubes **4 1/2" x 4 3/8"** Working pressure by Rules **180** Manhole compensation: Size of opening in shell plate **15" x 19"** Section of compensating ring **7" x 29 3/32"** No. of rivets and diameter of rivet holes **40 @ 29" / 22"**  
 Outer row rivet pitch at ends **5 15/16"** Depth of flange if manhole flanged **3"** 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  
 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 forgings

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

Area of each safety valve

Is a safety valve fitted to every part of the superheater which can be shut off from the boiler

Rules

Pressure to which the safety valves are adjusted

Working pressure as per

tubes

forgings and 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

The foregoing is a correct description,  
 For **David Rowan & Co. Ltd** Manufacturer.  
**Archd. H. Grierson**

Dates of Survey { During progress of work in shops - - } **1939. April 14. May 2. 17. 22. 26. 29. 31. June 2 20** the approved plans of boiler and superheater forwarded herewith **yes**  
 while building { During erection on board vessel - - - } (If not state date of approval.)  
 Total No. of visits **8**

Is this Boiler a duplicate of a previous case **no** If so, state Vessel's name and Report No.

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

The materials and workmanship are good  
 The boiler has been constructed under special survey and will be sent to Aberdeen to be fitted in the vessel.

**Edw**  
**19/6/39**

Survey Fee ... £ **4 : 7** : } When applied for, **20 JUN 1939**  
 Travelling Expenses (if any) £ : : } When received, **19**

**Sh Davis**  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 20 JUN 1939**

Assigned **TRANSMIT TO LONDON**

**FRI 18 AUG 1939**

