

REPORT ON BOILERS.

No. 53836

20 SEP 1933

Received at London Office

22

6.8.9.15.23

Date of writing Report 6.8.9.15.23 When handed in at Local Office 10 Port of Glasgow Last Survey 15-9-1933

No. in Survey held at Glasgow Date, First Survey 15-9-1933 (Number of Visits) 1 Tons {Gross Net Reg. Book.

on the new steel s/s "FRANCIS FLAGGATE" Yard No. 145 When built 1933

Master Buntland By whom built Buntland SBC Co Engine No. 956 When made 1933

Engines made at Glasgow By whom made David Rowan & Co Ltd Boiler No. 956 When made 1933

Boilers made at Glasgow By whom made David Rowan & Co Ltd Port belonging to

Nominal Horse Power 218 Owners

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Bohler & Co Ltd Is forced draught fitted no Coal or Oil fired coal (Letter for Record (S))
Total Heating Surface of Boilers 3600 Working Pressure 200

No. and Description of Boilers Two single ended Can each boiler be worked separately yes

Tested by hydraulic pressure to 350 Date of test 26-4-33 No. of Certificate 19226 Area of Firegrate in each Boiler 53 5/8" No. and Description of safety valves to each boiler Two Improved high lift

Area of each set of valves per boiler {per Rule 5.23 sq" as fitted 6.28 sq" Pressure to which they are adjusted 200 lbs Are they fitted with easing gear yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler Is oil fuel carried in the double bottom under boilers no

Smallest distance between boilers or uptakes and bunkers 11" Is the bottom of the boiler insulated yes

Smallest distance between shell of boiler and tank top plating 2'-6" Largest internal dia. of boilers 14'-0" Length 10'-6" Shell plates: Material Steel Tensile strength 29-33 tons

Thickness 1 1/2" Are the shell plates welded or flanged no Description of riveting: circ. seams {end DR inter. Pitch of rivets {circ. seams F 3.19 B 3.49 long. seams 1 5/16" rivets 8 3/4"

long. seams DRS, TR Diameter of rivet holes in {plate F 6.27 B 6.24 rivets F 4.51 B 50.5 Percentage of strength of circ. intermediate seam {plate 85 rivets 94.5 combined 88.9

Percentage of strength of circ. end seams {plate 85 rivets 94.5 combined 88.9 Working pressure of shell by Rules 200

Percentage of strength of longitudinal joint {plate 85 rivets 94.5 combined 88.9 No. and Description of Furnaces in each Boiler Three Deighton Smallest outside diameter 40.125"

Thickness of butt straps {outer 1 5/16" inner 1 1/8" Tensile strength 26 20 lines Description of longitudinal joint welded

Material Steel Length of plain part {top bottom Thickness of plates {crown 3/16" bottom 3/16" Working pressure of furnace by Rules 203

Dimensions of stiffening rings on furnace or c.c. bottom End plates in steam space: Material Steel Tensile strength 26-30 tons Thickness 1 3/16" Pitch of stays 17 1/2" x 18 1/2"

How are stays secured WN Tube plates: Material {front steel back Tensile strength 26-30 tons Thickness {front 29/32" back 29/32"

Mean pitch of stay tubes in nests 10 1/8" Pitch across wide water spaces 12" Working pressure {front 203 back 214

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

at centre 20 7/8" x 1 1/8" Length as per Rule 30.503" Distance apart 9 3/8" No. and pitch of stays

in each 20 9/8" Working pressure by Rules 204 Combustion chamber plates: Material steel Tensile strength 26-30 tons Thickness: Sides 23/32" Back 11/16" Top 23/32" Bottom 23/32"

Pitch of stays to ditto: Sides 9 3/8" x 9 7/8" Back 9 1/4" x 8 1/4" Top 9 3/8" x 9 7/8" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 200 Front plate at bottom: Material steel Tensile strength 26-30 tons Thickness 25/32"

Thickness 29/32" Lower back plate: Material steel Tensile strength 26-30 tons Thickness 25/32"

Pitch of stays at wide water space 13 1/4" Are stays fitted with nuts or riveted over nuts

Working Pressure 204 Main stays: Material steel Tensile strength 28-32 tons

Diameter {At body of stay, 3 1/8" & 2 3/4" No. of threads per inch 6 Area supported by each stay 342 & 320 sq"

Working pressure by Rules 230 & 202 lb Screw stays: Material steel Tensile strength 26-30 tons

Diameter {At turned off part, 1 7/8" & 1 3/4" No. of threads per inch 9 Area supported by each stay 76 & 90 sq"

Working pressure by Rules 230 & 202 lb No. of threads per inch 9

Diameter {Over threads 1 7/8" & 1 3/4" No. of threads per inch 9

[2m.1.31.—Copyable link.]

Working pressure by Rules 200 Are the stays drilled at the outer ends no Margin stays: Diameter ^{At turned off part,} 1 7/8
 No. of threads per inch 9 Area supported by each stay 92.8 Working pressure by Rules 229
 Tubes: Material Iron External diameter ^{Plain} 3 1/4 ^{Stay} 3 1/4 Thickness 8 WS No. of threads per inch 9
 Pitch of tubes 4 3/8 x 4 1/2 Working pressure by Rules 230 Manhole compensation: Size of opening in
 shell plate 19 1/2 x 15 1/2 Section of compensating ring 9 1/2 x 1 1/2 No. of rivets and diameter of rivet holes 34 @ 1 5/16
 Outer row rivet pitch at ends 8 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} _____
 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 none Manufacturers of ^{Tubes} _____
 Number of elements _____ Material of tubes _____ ^{Steel castings} _____ 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 _____

The foregoing is a correct description,
 For David Rowan & Co Ltd Manufacturer.
Arch. H. Ericsson

Dates of Survey ^{During progress of} See ^{work in shops - -} _____ Are the approved plans of boiler and superheater forwarded herewith _____
 while ^{During erection on} See ^{board vessel - - -} _____ (If not state date of approval.)
 building ^{See} accompanying ^{Survey Report.} _____ Total No. of visits _____

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 workmanship and materials are good.
The boilers have been constructed under special survey and have been sent
to Bannisdale to be fitted in the vessel.

15/9/33
The boilers have been efficiently fitted on board examined under steam
& safety valves adjusted 200 lbs.

CHH

Survey Fee £ See survey Rpt. When applied for, _____ 19 _____
 Travelling Expenses (if any) £ _____ When received, _____ 19 _____

S. D. Davis
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 19 SEP 1933 TUE. 26 JUN 1934 TUE. 31 OCT 1933
 Assigned SEE ACCOMPANYING MACHINERY REPORT See 2th J.C.
18506

