

REPORT ON BOILERS

No. 64417

Received at London Office 23 OCT 1941

Date of writing Report 4th Sept 1941 When handed in at Local Office 27th Sept 1941 Port of Glasgow

No. in g. Book 1000000 Survey held at Paisley Date, First Survey 11: 11: 40 Last Survey 22nd 1941

on the Jarica (Number of Visits 16) Tons } Gross Net

Master Built at Port Glasgow By whom built Ferguson Bros. Ltd. Yard No. 354 When built 1941

Engines made at By whom made Engine No. When made

Boilers made at Paisley By whom made R. V. Craig & Co. Ltd. Boiler No. 146 147 When made 1941

Nominal Horse Power 140 (136 net) Owners Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY

Manufacturers of Steel Colvilles Ltd. (Letter for Record S)

Total Heating Surface of Boilers 2554 sq ft Is forced draught fitted Coal or Oil fired Coal

No. and Description of Boilers Two Single Ended Working Pressure 180 lbs

Tested by hydraulic pressure to 320 lbs Date of test 746-28.7.41 No. of Certificate 20811 20815 Can each boiler be worked separately

Area of Firegrate in each Boiler 34.5 sq ft No. and Description of safety valves to each boiler

Area of each set of valves per boiler per Rule as fitted 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 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'-1 1/4" Length 11'-0" Shell plates: Material Steel Tensile strength 30/34 tons/s"

Thickness 7/8" Are the shell plates welded or flanged no Description of riveting: circ. seams end 3.24" inter. 6.78"

Long. seams T.R.D.B.S. Diameter of rivet holes in circ. seams 1 1/16" long. seams 1 1/8" Pitch of rivets 3.24"

Percentage of strength of circ. end seams plate 67.0 rivets 47.9 Percentage of strength of circ. intermediate seam plate 85.8 rivets 85.5

Percentage of strength of longitudinal joint rivets 85.5 Working pressure of shell by Rules 182 lbs

Thickness of butt straps outer 2 1/32" inner 2 5/32" No. and Description of Furnaces in each Boiler Two Deighton

Material Steel Tensile strength 26/30 tons Smallest outside diameter 36 1/16"

Length of plain part top bottom Thickness of plates crown 1 1/32" bottom 1 1/32" Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules app. 180 lbs

End plates in steam space: Material Steel Tensile strength 26/30 tons Thickness 29/32" Pitch of stays 14 1/2" x 14"

How are stays secured Double Nuts Working pressure by Rules app. 180 lbs

End plates: Material front back Steel Tensile strength 26/30 tons Thickness 29/32" Working pressure app. 180 lbs

Lean pitch of stay tubes in nests 93/8" Pitch across wide water spaces 13 1/2" Working pressure front back app. 180 lbs

Orders to combustion chamber tops: Material Steel Tensile strength 28/32 tons/s" Depth and thickness of girder

Centre 2 @ 8" x 3/4" Length as per Rule 2'-6 1/2" Distance apart 9" No. and pitch of stays

each 3 @ 7 7/8" Working pressure by Rules app. 180 lbs Combustion chamber plates: Material Steel

Tensile strength 26/30 tons/s" Thickness: Sides 5/8" Back 2 1/32" Top 5/8" Bottom 5/8"

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

Working pressure by Rules app. 180 lbs Front plate at bottom: Material Steel Tensile strength 26/30 tons/s"

Thickness 29/32" Lower back plate: Material Steel Tensile strength 26/30 tons Thickness 29/32"

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

Working Pressure app. 180 lbs Main stays: Material Steel Tensile strength 28/32 tons/s"

Diameter At body of stay, or Over threads 2 3/8" No. of threads per inch 6 Area supported by each stay 26/30 tons/s"

Working pressure by Rules app. 180 lbs Screw stays: Material Steel Tensile strength 26/30 tons/s"

Diameter At turned off part, or Over threads Back 1 7/8" Side 1 1/2" No. of threads per inch 9 Area supported by each stay



Working pressure by Rules *off. 180 lbs.* Are the stays drilled at the outer ends *no* Margin stays: Diameter *At turned off part, 1 7/8" & 1 3/4"*
 No. of threads per inch *9* Area supported by each stay *✓* Working pressure by Rules *off. 180 lbs.*
 Tubes: Material *Steel* External diameter *Plain 2 1/2" Stay 2 1/2"* Thickness *9w.c. 1/4" & 5/16"* No. of threads per inch *9*
 Pitch of tubes *3 3/4" x 3 3/4"* Working pressure by Rules *off. 180 lbs.* Manhole compensation: Size of opening
 shell plate *20" x 16"* Section of compensating ring *flanged plate 7/8" thick* No. of rivets and diameter of rivet holes *40 @ 1 1/2"*
 Outer row rivet pitch at ends *7"* Depth of flange if manhole flanged _____ Steam Dome: Material _____
 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
 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 a
 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 p
 Rules _____ Pressure to which the safety valves are adjusted _____ Hydraulic test pressur
 tubes _____ forgings and castings _____ and after assembly in place _____ Are drain cocks
 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,

T. C. R. Fair Manufactur
A. G. Smith

Dates of Survey *✓* During progress of work in shops - - - *1940 Nov. 25 (1941) Feb.* Are the approved plans of boiler and superheater forwarded herewith No - *4/3*
 while building *✓* During erection on board vessel - - - *12.17.27 Mar.: 21-31 May: 16 June 23* (If not state date of approval.)
 Total No. of visits *16*
July: 8 14 22 29 30 Aug 12 22

Is this Boiler a duplicate of a previous case *Yes* If so, state Vessel's name and Report No. *Herguson Bros. 352 Gt. Rpt*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *These boilers have been built under Special Survey in accordance with the Society's Rules on approved plans. The materials & workmanship are good. The boilers have been despatched to Port Glasgow for installation in the vessel.*

NOTE:- Certificates for material being common to these and boilers 748/749 to follow will be attached to report on these boilers intended for *Herguson Bros. Yard no 355.*

906
30/9/41

Survey Fee £ *17* : - : - } When applied for, **1 OCT 1941**
 Travelling Expenses (if any) £ : ✓ : } When received, *10*

G. Anderson & *M. P. Hibbeson*
 Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute **GLASGOW 1 OCT 1941**

Assigned *Severid*

