

REPORT ON BOILERS.

No. 63260

JAN -2 1941

Received at London Office

Date of writing Report 19 ³⁰: 12: 19 ⁴⁰ When handed in at Local Office Port of **GLASGOW**

No. in Survey held at **Glasgow** Date, First Survey **15: 2: 40** Last Survey **21st Dec. 1940**

Reg. Book. **90211** on the **S/S "TRADER"** (Number of Visits **74**) Gross **6000** Tons Net

Built at **Glasgow** By whom built **Chas. Connell & Co. Ltd.** Yard No. **430** When built **1940**

Engines made at **-do-** By whom made **David Power & Co. Ltd.** Engine No. **1052** When made **1940**

Boilers made at **-do-** By whom made **-do-** Boiler No. **1052** When made **1940**

Nominal Horse Power **524** Owners **Clarente S.S. Co. Ltd.** Port belonging to **Liverpool**

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel **The Steel Company of Scotland, Ltd.** (Letter for Record **A**)

Total Heating Surface of Boilers **8208 sq ft** Is forced draught fitted **No** Coal or Oil fired **Coal**

No. and Description of Boilers **2 Drifted-ended** Working Pressure **210 lb.**

Tested by hydraulic pressure to **365 lb.** Date of test **13-9-40** No. of Certificate **20639** Can each boiler be worked separately **Yes**

Area of Firegrate in each Boiler **107.5 sq ft** No. and Description of safety valves to each boiler **1-4" drift spring**

Area of each set of valves per boiler {per Rule **22.80** as fitted **25.120**} Pressure to which they are adjusted **210 lb.** Are they fitted with easing gear **Yes**

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler **No**

Smallest distance between boilers or uptakes and bunkers or woodwork **16"** Is oil fuel carried in the double bottom under boilers **No**

Smallest distance between shell of boiler and tank top plating **2'-6"** Is the bottom of the boiler insulated **Yes**

Largest internal dia. of boilers **15'-8 7/8"** Length **17'-6"** Shell plates: Material **Steel** Tensile strength **29/35 tons**

Thickness **F 1 1/16" C 1 1/32"** Are the shell plates welded or flanged **No** Description of riveting: circ. seams {end **double** inter. **triple** long. seams **DBS TR** Diameter of rivet holes in circ. seams **F 1 5/16" B+C 1 1/2"** Pitch of rivets {outer **10 7/16" INNER 10 1/4"** plate **6 1/4"** rivets **68.2**

Percentage of strength of circ. end seams {plate **B 64.3 F 60.7** rivets **45.5 44.8** Percentage of strength of circ. intermediate seam {plate **OUTER 85.6 INNER 85.36** rivets **85.7 88.7 89.2** combined **88.3 88.6**

Percentage of strength of longitudinal joint {plate **C 1 7/64" F 1 3/32"** rivets **85.7 88.7 89.2** combined **88.3 88.6**

Thickness of butt straps {outer **B 1 3/32" F 1 3/32"** inner **B 1 7/32" F 1 7/32"** No. and Description of Furnaces in each Boiler **6 Deighton**

Material **Steel** Tensile strength **26/30 tons** Smallest outside diameter **3'-8 9/32"**

Length of plain part {top **4 1/64"** bottom **4 1/64"** Thickness of plates {crown **4 1/64"** bottom **4 1/64"** Description of longitudinal joint **welded**

Dimensions of stiffening rings on furnace or c.c. bottom **-**

End plates in steam space: Material **Steel** Tensile strength **26/30 tons** Thickness **1 15/32"** Pitch of stays **21 3/4" x 22"**

How are stays secured **D.N.**

Tube plates: Material {front **Steel** back **Steel** Tensile strength {**26/30 tons** Thickness {**1 1/32"**

Mean pitch of stay tubes in nests **W 12 3/16" C 12"** Pitch across wide water spaces **14 1/2"**

Girders to combustion chamber tops: Material **Steel** Tensile strength **28/32 tons** Depth and thickness of girder at centre **2 @ 12 1/8" x 7/8"** Length as per Rule **3'-9 15/16"** Distance apart **W 9 1/4" C 7 1/4"** No. and pitch of stays in each **4 @ 9"**

Combustion chamber plates: Material **Steel** Tensile strength **26/30 tons** Thickness: Sides **2 3/32"** Back **1 1/32"** Top **2 3/32"** Bottom **2 3/32"**

Pitch of stays to ditto: Sides **9" x 9 1/4"** Back **9" x 9 1/4"** Top **W 9 1/4" C 9" x 7 1/4"** Are stays fitted with nuts or riveted over **Nuts**

Front plate at bottom: Material **Steel** Tensile strength **26/30 tons**

Thickness **1"** Lower back plate: Material **Steel** Tensile strength **26/30 tons** Thickness **1"**

Pitch of stays at wide water space **-** Are stays fitted with nuts or riveted over **-**

Main stays: Material **Steel** Tensile strength **28/32 tons**

Diameter {At body of stay, **3 1/4" + 3 1/2"** No. of threads per inch **6**

Screw stays: Material **Iron** Tensile strength **21 1/2 tons**

Diameter {At turned off part, **1 3/4"** No. of threads per inch **9**



Are the stays drilled at the outer ends No Margin stays: Diameter At turned off part, or Over threads

No. of threads per inch 9

Tubes: Material Iron External diameter Plain 3 1/2" Stay 3 1/2" Thickness 7 W G 3/8" No. of threads per inch 9

Pitch of tubes W 4 7/8" x 4 7/8" C 4 7/8" x 4 3/4" Manhole compensation: Size of opening in shell plate 15 1/2" x 19 1/2" Section of compensating ring 10 1/4" x 1 5/8" No. of rivets and diameter of rivet holes 34 @ 1 1/2"

Outer row rivet pitch at ends 10 7/16" 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 _____ Thickness of crown _____ No. and diameter of stays _____ Inner radius of crown _____

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 Superheater Co. Ltd. Smokestack Manufacturers of Tubes See Mech. Certs. H: 6094 610 Steel forgings Arkus Leneith 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 Yes Is a safety valve fitted to every part of the superheater which can be shut off from the boiler Yes

Area of each safety valve 1.76 sq" Are the safety valves fitted with easing gear Yes

Pressure to which the safety valves are adjusted 210 lb. Hydraulic test pressure: tubes _____ forgings and castings _____ and after assembly in place 420 lb. Are drain cocks or valves fitted to free the superheater from water where necessary Yes

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Yes

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

Dates of Survey During progress of work in shops - - Are the approved plans of boiler and superheater forwarded herewith Yes while building During erection on board vessel - - - (If not, state date of approval.)

SEE ACCOMPANYING MACHINERY 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.) These boilers have been built under special survey in accordance with the Rules and approved plans, and the materials and workmanship are good. They have been satisfactorily installed in the vessel and the safety valves have been adjusted to the working pressure.

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30/12/40

Survey Fee £ _____ : _____ When applied for, _____ 19 _____

Travelling Expenses (if any) £ See memo : _____ When received, _____ 19 _____

M. J. Brown
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 31 DEC 1940

SEE ACCOMPANYING MACHINERY REPORT.

Assigned _____

