

REPORT ON BOILERS.

No. 13214

Received at London Office 21 FEB 1928

23-3 of writing Report 23. 2. 1928. When handed in at Local Office 23. 2. 1928. Port of **MIDDLESBROUGH.**

To. in Survey held at **STOCKTON.** Date, First Survey **see Mch. report.** Last Survey **21. 2. 1928.**

41 Sapon the **& "LLANOVER"** (Number of Visits **See Mch. Rpt.**) Tons { Gross Net

ster Built at **Sunderland** By whom built **Bartham & Co. Ltd** Yard No. **261** When built **1928.**

ines made at **STOCKTON.** By whom made **Blair & Co (1926) Ltd.** Engine No. **1967** When made **1928**

lers made at **. do.** By whom made **. do.** Boiler No. **1967** When made **1928.**

iminal Horse Power Owners **Anne Thomas S.S. Cola.** Port belonging to **London.**

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel **David Colville & Sons** (Letter for Record **S.**)

Heating Surface of Boilers **4914 ft²** Is forced draught fitted **no** Coal or Oil fired **coal.**

and Description of Boilers **3 S.B.** Working Pressure **180 lbs.**

sted by hydraulic pressure to **320 lbs** Date of test **3. 8. 27.** No. of Certificate **6564** Can each boiler be worked separately **Yes.**

ea of Firegrate in each Boiler **65.6 ft²** No. and Description of safety valves to each boiler **Pain Cockburns High Lift**

ea of each set of valves per boiler { per Rule **11.27.** as fitted **11.88.** Pressure to which they are adjusted **185 lbs.** Are they fitted with easing gear **Yes.**

case of donkey boilers, state whether steam from main boilers can enter the donkey boiler **✓**

allest distance between boilers or uptakes and bunkers or woodwork **4' 3"** Is oil fuel carried in the double bottom under boilers **no.**

allest distance between shell of boiler and tank top plating **3' 6"** Is the bottom of the boiler insulated **no.**

argest internal dia. of boilers **15' 9 7/16"** Length **11' 6"** Shell plates: Material **Steel** Tensile strength **28/32**

ickness **1 9/32"** Are the shell plates welded or flanged **no.** Description of riveting: circ. seams { end **D.R.** inter. **✓**

g. seams **T.R.D.B.S.** Diameter of rivet holes in { circ. seams **1 3/8"** Pitch of rivets { **4 1/4"** long. seams **1 5/16"** **9 5/16"**

centage of strength of circ. end seams { plate **67.6** rivets **44.7** Percentage of strength of circ. intermediate seam { plate **✓** rivets **✓**

centage of strength of longitudinal joint { plate **85.9** rivets **86.6** combined **89.1** Working pressure of shell by Rules **180 lbs.**

ickness of butt straps { outer **1"** inner **1 1/8"** No. and Description of Furnaces in each Boiler **3 Corrugated**

aterial **Steel** Tensile strength **26/30** Smallest outside diameter **44 5/32"**

ngth of plain part { top **✓** bottom **✓** Thickness of plates { crown **37/64"** bottom **✓** Description of longitudinal joint **weld.**

ensions of stiffening rings on furnace or c.c. bottom **✓** Working pressure of furnace by Rules **190 lbs.**

nd plates in steam space: Material **Steel** Tensile strength **26/30** Thickness **1 3/16"** Pitch of stays **19 1/4" x 20 1/2"**

ow are stays secured **D.N.C.W.** Working pressure by Rules **199 lbs.**

be plates: Material { front **Steel** back **✓** Tensile strength **26/30** Thickness { **1 1/16"** **1 3/16"**

ean pitch of stay tubes in nests **11 3/32"** Pitch across wide water spaces **14 1/2" x 9 3/4"** Working pressure { front **185 lbs.** back **193 lbs.**

orders to combustion chamber tops: Material **Steel** Tensile strength **28/32** Depth and thickness of girder

centre **8 x 15/16" (double)** Length as per Rule **33 3/4"** Distance apart **9"** No. and pitch of stays

each **3 x 8 1/2"** Working pressure by Rules **186 lbs.** Combustion chamber plates: Material **Steel**

ensile strength **26/30** Thickness: Sides **1 1/16"** Back **1 1/16"** Top **1 1/16"** Bottom **1 3/16"**

itch of stays to ditto: Sides **9 x 8 3/4"** Back **9 1/4" x 9"** Top **9 x 8 1/2"** Are stays fitted with nuts or riveted over **nuts**

orking pressure by Rules **187 lbs.** Front plate at bottom: Material **Steel** Tensile strength **26/30**

hickness **1 5/16"** Lower back plate: Material **Steel** Tensile strength **26/30** Thickness **29/32"**

itch of stays at wide water space **14" x 9"** Are stays fitted with nuts or riveted over **nuts**

orking Pressure **244 lbs.** Main stays: Material **Steel** Tensile strength **28/32**

iameter { At body of stay, **3 3/8"** No. of threads per inch **6** Area supported by each stay **379**

orking pressure by Rules **195 lbs.** Screw stays: Material **Steel** Tensile strength **26/30**

iameter { At turned off part, **1 3/4"** No. of threads per inch **8** Area supported by each stay **87**

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Working pressure by Rules 205 lb. Are the stays drilled at the outer ends no. Margin stays: Diameter { At turned off part, 1 7/8 or Over threads 1 7/8 ✓
No. of threads per inch 8. ✓ Area supported by each stay 106 ✓ Working pressure by Rules 195 lb.
Tubes: Material iron ✓ External diameter { Plain 3 1/2 ✓ Stay 3 1/2 ✓ Thickness { 8 W.G. ✓ No. of threads per inch 9. ✓
Pitch of tubes 4 3/4 x 4 7/8 ✓ Working pressure by Rules p. 215 S. 201. Manhole compensation: Size of opening
shell plate 16 x 12 ✓ Section of compensating ring 8 x 1 9/32 ✓ No. of rivets and diameter of rivet holes 28 - 1 5/16 ✓
Outer row rivet pitch at ends 9 5/16 ✓ 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
of rivets in outer row in dome connection to shell

Type of Superheater 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
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
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 Yes ✓

The foregoing is a correct description,
For BLAIR & CO. (1926) LIMITED.

Dates of Survey { During progress of work in shops - - -
while building { During erection on board vessel - - -

See H. G. H. reports

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) Yes

Total No. of visits ✓

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

These boilers are duplicate of those fitted in ss. "LIANBERIS" - Ind. Rpt. No. 13160.

The materials and workmanship are good. These boilers have been built under special survey in accordance with the Rules and Approved Plan and have been securely fitted aboard and their safety valves have been adjusted and tested under steam with satisfactory results.

Survey Fee ... £ See Machinery Rpt. } When applied for, ✓ 192
Travelling Expenses (if any) £ ... } When received, 192

P. J. Man.

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 16 MAR. 1928

Assigned

See Ind. Rpt. F.E. 13217



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Foundation