

# REPORT ON BOILERS.

No. 31287.

Date of writing Report **24.9.33** When handed in at Local Office **2 OCT. 1933** Port of **Sunderland.**  
 No. in Book. **88** held at **Sunderland.** Date, First Survey **27 Sep. 1933**  
 on the **S.S. COLONEL CROMPTON** (Number of Visits **1495** Gross **844** Tons) Net **844**  
 Built at **Sunderland** By whom built **S.P. Austin & Sons** Yard No. **324** When built **1933**  
 Engines made at **Sunderland** By whom made **J. Dickinson & Sons Ltd** Engine No. **913** When made **1933**  
 Boilers made at **Sunderland** By whom made **J. Dickinson & Sons Ltd** Boiler No. **913** When made **1933**  
 Indicated Horse Power **158** Owners **London Power Co Ltd** Port belonging to **London.**

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

Manufacturers of Steel **The Steel Company of Scotland.** (Letter for Record **S**)  
 Heating Surface of Boilers **2668 sq ft** Is forced draught fitted **no.** Coal or Oil fired **coal.**  
 and Description of Boilers **One Single ended.** Working Pressure **200 lbs/sq in.**  
 Tested by hydraulic pressure to **360** Date of test **17.4.33** No. of Certificate **4140** Can each boiler be worked separately **✓**  
 Area of Firegrate in each Boiler **62 sq ft** No. and Description of safety valves to each boiler **2 High Lift.**  
 No. of each set of valves per boiler **per Rule 7.456** Pressure to which they are adjusted **200** 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 **plates** and bunkers **woodwork** **2'-2"** Is oil fuel carried in the double bottom under boilers **open floors**  
 Smallest distance between shell of boiler and tank top plating **open floors** Is the bottom of the boiler insulated **yes.**  
 Greatest internal dia. of boilers **16'-0 3/16"** Length **11'-6"** Shell plates: Material **Steel** Tensile strength **29-33.**  
 Thickness **1 13/32"** Are the shell plates welded or flanged **flanged** Description of riveting: circ. seams **double**  
 T.R.D.B. **✓** Diameter of rivet holes in circ. seams **1 1/2"** Pitch of rivets **4"**  
 Percentage of strength of circ. end seams **plate 62.5** rivets **49.83** Percentage of strength of circ. intermediate seam **plate 85.09** rivets **92.85**  
 Percentage of strength of longitudinal joint **combined 88.45** Working pressure of shell by Rules **200.4**  
 Thickness of butt straps **outer 1 1/8"** inner **1 1/4"** No. and Description of Furnaces in each Boiler **3 Cornugator (Leighton).**  
 Material **Steel** Tensile strength **26-30** Smallest outside diameter **4'-0 5/8"** 3-10 1/2  
 Length of plain part **top 11'-4"** bottom **11'-4"** Thickness of plates **crown 1 1/16"** bottom **1 1/16"** Description of longitudinal joint **weld.**  
 Dimensions of stiffening rings on furnace or p.c. bottom **✓** Working pressure of furnace by Rules **204.3**  
 Plates in steam space: Material **Steel** Tensile strength **26-30** Thickness **1 1/4"** Pitch of stays **21" x 19 3/8"**  
 Are stays secured **Nuts inside, nuts & rule size washers outside** Working pressure by Rules **200.4**  
 Front plates: Material **Steel** Tensile strength **26-30** Thickness **7/8"**  
 Pitch of stay tubes in nests **11 1/4"** Pitch across wide water spaces **13 1/2"** Working pressure **front 218.8** back **200.4**  
 Boilers to combustion chamber tops: Material **Steel** Tensile strength **28-32** Depth and thickness of girder **9 1/4"**  
 Centre **8" x 2 1/2"** Length as per Rule **3'-1 1/16"** Distance apart **9 1/4"** No. and pitch of stays **3 @ 10"**  
 Working pressure by Rules **200** Combustion chamber plates: Material **Steel**  
 Tensile strength **26-30** Thickness: Sides **25/32** Back **23/32** Top **25/32** Bottom **25/32**  
 No. of stays to ditto: Sides **11 1/8" x 8 1/2"** Back **10" x 9"** Top **9 1/4" x 10"** Are stays fitted with nuts or riveted over **nuts.**  
 Working pressure by Rules **200.5** Front plate at bottom: Material **Steel** Tensile strength **26-30**  
 Thickness **7/8"** Lower back plate: Material **Steel** Tensile strength **26-30** Thickness **24/32**  
 No. of stays at wide water space **13 1/4"** Are stays fitted with nuts or riveted over **Proper 3/8" & caulked.**  
 Working Pressure **206.2** Main stays: Material **Steel** Tensile strength **28-32.**  
 At body of stay, **3 3/8"** No. of threads per inch **6** Area supported by each stay **21" x 19 3/8"**  
 Over threads. **215.04** Screw stays: Material **Steel** Tensile strength **26-30.**  
 Working pressure by Rules **13/4, 1 1/8, 2" x 12 1/8"** No. of threads per inch **9** Area supported by each stay **9" x 10", 8 3/4" x 11 1/8"**  
 At turned off part, **12 1/4" x 9" x 12 1/4" x 11 1/8"**



20.6, 21.8  
Working pressure by Rules 221 & 204 Are the stays drilled at the outer ends *no.* Margin stays: Diameter { At turned off part or Over threads *2 1/8 x 2"*  
No. of threads per inch *9.* Area supported by each stay *12 1/4 x 11 1/8, 12 1/4 x 9.* Working pressure by Rules *204. 221.4.*  
Tubes: Material *Wrought Iron* External diameter { Plain *3 1/4"* Thickness *8 WG. 5/16"* No. of threads per inch *9.*  
Pitch of tubes *13 1/2" x 9"* Working pressure by Rules *213.5.* Manhole compensation: Size of opening  
Shell plate *✓ 16 x 12* Section of compensating ring *✓* No. of rivets and diameter of rivet holes *✓*  
Outer row rivet pitch at ends *✓* 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 *none.* Manufacturers of { Tubes  
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 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,  
*J. P. DeLusi* Manufacturer

Dates of Survey { During progress of work in shops - - -  
while building { During erection on board vessel - - -  
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.)  
*This boiler has been constructed under special survey in accordance with the approved plan & the Rules of the Society. The materials & workmanship are good. On completion the boiler has been satisfactorily tested by hydraulic pressure in accordance with the rules, found tight & sound, securely fixed on board the vessel, rammed under steam, safety valves adjusted to working pressure & accumulated test carried out satisfactorily. For recommendation please see Machinery Report.*

Survey Fee ... *charged* When applied for, 192  
Travelling Expenses (if any) *✓ Machinery Rpt.* When received, 192  
Committee's Minute *TUE. 10 OCT 1933*  
Assigned *See F.C. Rpt.*  
*J. P. DeLusi*  
Engineer Surveyor to Lloyd's Register of Shipping.