

# REPORT ON BOILERS.

Received at London Office MAY 31 1939

Date of writing Report 26<sup>th</sup> May 1939 When handed in at Greenock Office 27<sup>th</sup> May 1939 Port of GREENOCK.

No. in Reg. Book Greenock Date, First Survey 22<sup>nd</sup> July 1938. Last Survey 24<sup>th</sup> May 1939.  
on the M. V. "CEDARDALE" (Number of Visits 1) Gross Tons 8000 (approx.) Net Tons 7000 (approx.)

Master Greenock Built at Glasgow By whom built Polystonwood Sh. Co. Ltd. Yard No. 54 When built 1939.  
Engines made at Greenock By whom made J. G. Thineaid & Co. Ltd. Engine No. 4-121 When made 1939.  
Boilers made at Do. By whom made Do. Boiler No. 4-121 When made 1939.  
Nominal Horse Power 20. Owners Anglo Saxon Petroleum Co. Ltd. Port belonging to London.

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Colvilles Ltd.: Scottish Iron & Steel Coy. (Letter for Record 5)  
 Total Heating Surface of Boilers 2502 ft.<sup>2</sup> Is forced draught fitted Yes Coal or Oil fired Oil  
 No. and Description of Boilers One - single-ended return tube Working Pressure 180 lbs.  
 Tested by hydraulic pressure to 320 lbs. Date of test 30-12-38 No. of Certificate 2177 Can each boiler be worked separately Yes  
 Area of Firegrate in each Boiler Oil fired No. and Description of safety valves to each boiler Two: spring loaded  
 Area of each set of valves per boiler per Rule 16 ins.<sup>2</sup> as fitted 16.58 ins.<sup>2</sup> Pressure to which they are adjusted 180 lbs. Are they fitted with easing gear Yes  
 In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No main boilers.  
 Smallest distance between boilers or uptakes and bunkers or woodwork 21 6" Is oil fuel carried in the double bottom under boilers No  
 Smallest distance between shell of boiler and tank top plating Boiler fitted at top platform Is the bottom of the boiler insulated Yes  
 Largest internal dia. of boilers 14 6" Length 11 6" Shell plates: Material Steel Tensile strength 29-33 tons  
 Thickness 15/32" Are the shell plates welded or flanged Yes Description of riveting: circ. seams end D.R. Lap  
 long. seams T.R.D.B.S. Diameter of rivet holes in 1 7/32" Pitch of rivets 3" 5/27  
 Percentage of strength of circ. end seams plate 65.4 rivets 45.3 Percentage of strength of circ. intermediate seam plate 85.32 rivets 85.75  
 Percentage of strength of longitudinal joint combined 87.79 Working pressure of shell by Rules 180 lbs.  
 Thickness of butt straps outer 7/8" inner 1" No. and Description of Furnaces in each Boiler 3 - Dighton Section.  
 Material Steel Tensile strength 26-30 tons Smallest outside diameter 3 7/16"  
 Length of plain part top 9 1/16" bottom 9 1/16" Description of longitudinal joint Weld  
 Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 189 lbs.  
 End plates in steam space: Material Steel Tensile strength 26-30 tons Thickness 1 9/32" Pitch of stays 21" x 19 1/2"  
 How are stays secured double nuts Working pressure by Rules 187 lbs.  
 Tube plates: Material Steel Tensile strength 26-30 tons Thickness 15/16" 11/16"  
 Mean pitch of stay tubes in nests 9" 3/75 Pitch across wide water spaces 13 1/2" Working pressure front 225 lbs. back 191 lbs.  
 Girders to combustion chamber tops: Material Steel Tensile strength 29-33 tons Depth and thickness of girder  
 at centre 2 @ 8 1/2" x 3/4" Length as per Rule 21 7 5/8" Distance apart 9" No. and pitch of stays  
 in each 3 @ 7 1/2" Working pressure by Rules 193 lbs. Combustion chamber plates: Material Steel  
 Tensile strength 26-30 tons Thickness: Sides 1/16" Back 1/16" Top 1/16" Bottom 7/8"  
 Pitch of stays to ditto: Sides 7 1/2" x 7 7/16" Back 7 1/2" x 7 7/16" Top 7 1/2" x 9" Are stays fitted with nuts or riveted over Riveted  
 Working pressure by Rules 184 lbs. Front plate at bottom: Material Steel Tensile strength 26-30 tons  
 Thickness 15/16" Lower back plate: Material Steel Tensile strength 26-30 tons Thickness 13/16"  
 Pitch of stays at wide water space 14" Are stays fitted with nuts or riveted over Original stays rapped. Others riveted.  
 Working Pressure 189 lbs. Main stays: Material Steel Tensile strength 28-32 tons  
 Diameter At body of stay, 3" or Over threads 3 1/4" No. of threads per inch 6 Area supported by each stay 409.5 ins.<sup>2</sup>  
 Working pressure by Rules 191 lbs. Screw stays: Material Steel Tensile strength 26-30 tons  
 Diameter At turned off part, 1 3/8" or Over threads 1 3/8" No. of threads per inch 9 Area supported by each stay 55.7 ins.<sup>2</sup>

Working pressure by Rules *184 lbs.* Are the stays drilled at the outer ends *No* Margin stays: Diameter *1 5/8"* At turned off part, *1 5/8"* or *1 1/2"* No. of threads *189 lbs.*

No. of threads per inch *9* Area supported by each stay *80.3 ins.<sup>2</sup>* Working pressure by Rules *189 lbs.*

Tubes: Material *Iron* External diameter *2 1/2"* Thickness *9/32" + 1/32"* No. of threads per inch *9*

Pitch of tubes *3 1/2" x 3 3/4"* Working pressure by Rules *210 lbs.* Manhole compensation: Size of opening in shell plate *16 1/2" x 20 1/2"* Section of compensating ring *11 7/8" x 1 9/32"* No. of rivets and diameter of rivet holes *380 1 5/16"*

Outer row rivet pitch at ends *9 1/4"* Depth of flange if manhole flanged *3 1/2"* Steam Dome: Material *Iron*

Tensile strength \_\_\_\_\_ Thickness of shell \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_ Plate \_\_\_\_\_ Rivets \_\_\_\_\_

Diameter of rivet holes \_\_\_\_\_ Pitch of rivets \_\_\_\_\_ Percentage of strength of joint \_\_\_\_\_ Rivets \_\_\_\_\_

Internal diameter \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_ Thickness of crown \_\_\_\_\_ Rivets \_\_\_\_\_ No. and diameter of \_\_\_\_\_

Internal diameter \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_ 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 casings \_\_\_\_\_

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 casing gear \_\_\_\_\_ Working pressure as per Rules \_\_\_\_\_ Pressure to which the safety valves are adjusted \_\_\_\_\_ Hydraulic test pressure: \_\_\_\_\_ tubes \_\_\_\_\_ forgings and 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 *Yes*

The foregoing is a correct description,  
 For JOHN G. KINCAID & CO. LIMITED,  
 Boiler Makers & Director, Manufacturer.

Dates \_\_\_\_\_ Are the approved plans of boiler and superheater forwarded herewith \_\_\_\_\_  
 of Survey \_\_\_\_\_ work in shops - - - - - (If not state date of approval)  
 building \_\_\_\_\_ During erection on \_\_\_\_\_ Total No. of visits \_\_\_\_\_  
 board vessel - - - - -

Is this Boiler a duplicate of a previous case *Yes* If so, state Vessel's name and Report No. *M.V. 'DOSMINA' No. 987.20643.*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *This boiler has been built under special survey in accordance with the Rules & the approved plans: Material & workmanship are good: this report accompanies that of the Machinery.*

Survey Fee ... £ *Dr Machinery Report* When applied for, \_\_\_\_\_ 10  
 Travelling Expenses (if any) £ \_\_\_\_\_ When received, \_\_\_\_\_ 10

*A. Boyle*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW** 30 MAY 1939  
 Assigned **ACCOMPANYING MACHINERY REPORT.**