

# REPORT ON BOILERS.

No. 25803

Received at London Office. 5 MAY 1948

**BARRY.**

Date of writing Report 26 April 1948. When handed in at Local Office 19.....

Port of

No. in Reg. Book. Survey held at

*Penarth*

Date, First Survey 1st Jan 1948. Last Survey 21st April 1948.

33552 on the

steel screw "Southern Island"

(Number of Visits.....) Tons { Gross 1391 Net 808

Master Built at *Kinderdijk* By whom built *L. Smit & Goon* Yard No. - When built 1917

Engines made at *Kinderdijk* By whom made *L. Smit & Goon* Engine No. - When made 1917

Boilers made at *Kinderdijk* By whom made *L. Smit & Goon* Boiler No. - When made 1917

Nominal Horse Power 184. Owners *Southern Shipping & Finance Co. Ltd.* Port belonging to *London*

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

Manufacturers of Steel *no record: existing boilers.* (Letter for Record.....)

Total Heating Surface of Boilers 3488 sq. ft. Is forced draught fitted *no.* Coal or Oil fired *coal.*

No. and Description of Boilers *Two Multitubular* Working Pressure 180 lb

Tested by hydraulic pressure to 195 lb Date of test 15-4-48 No. of Certificate *none* Can each boiler be worked separately *yes.*

Area of Firegrate in each Boiler 42 sq. ft. No. and Description of safety valves to each boiler *Two direct spring loaded.*

Area of each set of valves per boiler *per Rule 11.20 sq. in. as fitted 17.44 sq. in.* Pressure to which they are adjusted 180 lb Are they fitted with easing gear *yes.*

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler *none.*

Smallest distance between boilers *on plates and bunkers 4"* Is oil fuel carried in the double bottom under boilers *no.*

Smallest distance between shell of boiler and tank top plating 18" Is the bottom of the boiler insulated *yes - partly.*

Largest internal dia. of boilers 12' 5 9/16" Length 10' 5 1/4" Shell plates: Material *Steel* Tensile strength 24 1/2 tons

Thickness 1 5/32" Are the shell plates welded or flanged *no.* Description of riveting: circ. seams { end *8.R.* inter *none* long. seams *Y.R.* Diameter of rivet holes in { circ. seams } 1 7/32" Pitch of rivets { 3 5/8" 8 3/8"

Percentage of strength of circ. end seams { plate..... rivets..... } Percentage of strength of circ. intermediate seam { plate..... rivets..... }

Percentage of strength of longitudinal joint { plate..... rivets..... combined..... } Working pressure of shell by Rules.....

Thickness of butt straps { outer } 1 5/16" No. and Description of Furnaces in each Boiler *Two corrugated (Morrison type)*

Material *Steel* Tensile strength 24.5/28 tons Smallest outside diameter 3' 8 7/16"

Length of plain part { top..... bottom..... } Thickness of plates { crown } 1 9/32" Description of longitudinal joint *welded.*

Dimensions of stiffening rings on furnace or c.c. bottom *none.* Working pressure of furnace by Rules.....

End plates in steam space: Material *Steel* Tensile strength 25.5/30.5 tons Thickness 7/8" Pitch of stays 16" x 16" x 16"

How are stays secured *By nuts.* Working pressure by Rules.....

Tube plates: Material { front } *Steel* Tensile strength 25.5/30.5 tons Thickness { 29/32" 27/32"

Mean pitch of stay tubes in nests 8 9/16" x 8 9/16" Pitch across wide water spaces 15" Working pressure { front..... back..... }

Girders to combustion chamber tops: Material *Steel* Tensile strength 24.5/29.5 tons Depth and thickness of girder

at centre 4 7/8" x 3/4" Length as per Rule 2' 4 1/2" Distance apart 8 1/4" No. and pitch of stays

in each 3 @ 4 1/4" Working pressure by Rules..... Combustion chamber plates: Material *Steel*

Tensile strength 24.5/29.5 tons Thickness: Sides 1 1/16" Back 1 1/16" Top 1 1/16" Bottom 7/8"

Pitch of stays to ditto: Sides 6 1/16" x 4 7/8" Back 4 7/8" x 4 7/8" Top 8 1/4" x 4 1/4" Are stays fitted with nuts or riveted over *Riveted, except margin stays.*

Working pressure by Rules..... Front plate at bottom: Material *Steel* Tensile strength 25.5/30.5 tons

Thickness 24/32" Lower back plate: Material *Steel* Tensile strength 25.5/30.5 tons Thickness 7/8"

Pitch of stays at wide water space 15" Are stays fitted with nuts or riveted over *margin stays fitted with nuts*

Working pressure..... Main stays: Material *Steel* Tensile strength 24.5/29 tons

Diameter { At body of stay } 2 5/8" No. of threads per inch..... Area supported by each stay.....

Working pressure by Rules..... Screw stays: Material *Steel* Tensile strength 25.5/29.5 tons

Diameter { At turned off part } 1 5/8" No. of threads per inch 8 Area supported by each stay.....



Working pressure by Rules..... Are the stays drilled at the outer ends..... no Margin stays: Diameter { At turned off part...  
 or Over threads... 1 3/4" x 1 7/8"  
 No. of threads per inch... 8 Area supported by each stay..... Working pressure by Rules.....  
 Tubes: Material Steel External diameter { Plain } 3 1/4" Thickness { 3/8" } No. of threads per inch.....  
 Pitch of tubes... 4 9/32" x 4 9/32" Working pressure by Rules..... Manhole compensation: Size of opening in  
 shell plate... 11 7/8" x 15 3/4" Section of compensating ring... 1 1/8" No. of rivets and diameter of rivet holes.....  
 Outer row rivet pitch at ends..... Depth of flange if manhole flanged..... 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..... Working pressure by Rules..... Thickness of crown..... No. and diameter of  
 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.....  
 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 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..... 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,  
 \_\_\_\_\_  
 Manufacturer

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

Is this Boiler a duplicate of a previous case..... If so, state Vessel's name and Report No.....

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers are not new; they have now been examined for classification in accordance with the approved plan and Secretary's letter "E" 13-2-48. The boilers have been placed in good condition and in my opinion, are eligible to be classed, subject to stay and plain tubes being renewed at the first opportunity.  
Please see Barry Rpt No 25803.

Charged on Rpt 9.  
 Survey Fee ... .. £ : : } When applied for..... 19.....  
 Travelling Expenses (if any) £ : : } When received..... 19.....

C. Moffatt.  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute..... MAY 28 1948  
 Assigned..... Su F.E. nash. rpt

