

REPORT ON BOILERS.

No. 4359

Received at London Office

3 SEP 1934

Date of writing Report 27/8 1934 When handed in at Local Office 27/8 1934 Port of Oslo

Opening No. in Survey held at Oslo Date, First Survey 1910 Last Survey 30/6 1934

374 on the steamer "SOUTHERN PRINCESS" (Number of Visits 4) Tons { Gross 12092 Net 7578

Builder Built at Newcastle By whom built Armstrong Whitworth & Co. Ltd. Yard No. When built 1915

Engines made at Newcastle By whom made N.E. Marine Eng. Co. Ltd. Engine No. When made 1915

Boilers made at Newcastle By whom made N.E. Marine Eng. Co. Ltd. Boiler No. When made 1915

Owners Southern Whaling & Sealing Co. Ltd. Port belonging to Sweden

Rotating whale oil boilers made at Oslo by Kroner Bruk A/S made 1934

Rotating whale oil boilers

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Messrs. Vilkovice Iron Works Corp. (Letter for Record E 1/5.34)

Total Heating Surface of Boilers Is forced draught fitted Coal or Oil fired -

No. and Description of Boilers 2 rotating whale oil boilers Working Pressure 80 lbs.

Tested by hydraulic pressure to 160 Date of test 30/6.34 No. of Certificate - Can each boiler be worked separately -

Area of Firegrate in each Boiler - No. and Description of safety valves to each boiler 1 off, single spring loaded, 2" dia

Area of each set of valves per boiler 2.24 sq. in. free opening Pressure to which they are adjusted - Are they fitted with easing gear -

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler -

Smallest distance between boilers or uptakes and bunkers or woodwork - Is oil fuel carried in the double bottom under boilers -

Smallest distance between shell of boiler and tank top plating - Is the bottom of the boiler insulated -

Largest internal dia. of boilers 2600 mm Length 6893 mm Shell plates: Material S.4. steel Tensile strength 28-35

Thickness 13 mm Are the shell plates welded or flanged welded Description of riveting: circ. seams { end single riv. overlap inter single riv. single butt strap } 68 mm

Long. seams double riv. single butt strap Diameter of rivet holes in { circ. seams 23.5 mm long. seams 23.5 mm } Pitch of rivets { 75.2 mm }

Percentage of strength of circ. end seams { plate 60.9 rivets 40.6 } Percentage of strength of circ. intermediate seam { plate 60.9 rivets 40.6 }

Percentage of strength of longitudinal joint { plate 68.6 rivets 121 } Working pressure of shell by Rules 90

Thickness of butt straps { outer 15 mm inner - } No. and Description of Furnaces in each Boiler -

Material - Tensile strength - Smallest outside diameter -

Length of plain part { top - bottom - } Thickness of plates { crown - bottom - } Description of longitudinal joint -

Dimensions of stiffening rings on furnace or c.c. bottom - Working pressure of furnace by Rules -

End plates in steam space: Material S.4. steel Tensile strength 26-30 Thickness 25 x 35 mm Pitch of stays -

How are stays secured dished ends, radius 3300 mm Working pressure by Rules -

Tube plates: Material { front - back - } Tensile strength { - } Thickness { - }

Mean pitch of stay tubes in nests - Pitch across wide water spaces - Working pressure { front - back - }

Girders to combustion chamber tops: Material - Tensile strength - Depth and thickness of girder -

at centre - Length as per Rule - Distance apart - No. and pitch of stays -

in each - Working pressure by Rules - Combustion chamber plates: Material -

Tensile strength - Thickness: Sides - Back - Top - Bottom -

Pitch of stays to ditto: Sides - Back - Top - Are stays fitted with nuts or riveted over -

Working pressure by Rules - Front plate at bottom: Material - Tensile strength -

Thickness - Lower back plate: Material - Tensile strength - Thickness -

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

Working Pressure - Main stays: Material - Tensile strength -

Diameter { At body of stay, - or Over threads - } No. of threads per inch - Area supported by each stay -

Working pressure by Rules - Screw stays: Material - Tensile strength -

Diameter { At turned off part, - or Over threads - } No. of threads per inch - Area supported by each stay -

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Working pressure by Rules _____ Are the stays drilled at the outer ends _____ Margin stays: Diameter { At turned off part, or Over threads _____

No. of threads per inch _____ Area supported by each stay _____ Working pressure by Rules _____

Tubes: Material _____ External diameter { Plain _____ Stay _____ Thickness { _____ No. of threads per inch _____

Pitch of tubes _____ Working pressure by Rules _____ Manhole compensation: Size of opening _____

shell plate _____ 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 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 _____ 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 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 _____

Pr. **WERNER BRUG**
The foregoing is a correct description,
W. Werner Manufacturer

Dates of Survey { During progress of work in shops - - } 19/6, 25/6, 28/6 & 30/6.34 _____ Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) 11/5.34 _____

{ During erection on board vessel - - - } _____ Total No. of visits 4 _____

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 rotating wheel oil boilers were constructed in accordance with approved plans and were examined during construction and tested by hydraulic pressure to 160 lbs per square inch and found sound and tight at that pressure. The cast steel material and shell plates employed were made at approved works and tested by the Society's Surveyors.

The boilers were marked:

LLOYD'S TEST
160 LBS.
W. P. 80 LBS.
30.6.34
P.B.R.

Survey Fee K. 8.0 : When applied for, 9/7. 1934.

Travelling Expenses (if any) 6. : When received, 20/8. 1934.

Perkins-Roli
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute _____

Assigned _____

