

Rpt. 5a.

REPORT ON BOILERS.

No. 4813

Received at London Office 15 OCT 1936

Date of writing Report 21/9 - 1936 When handed in at Local Office 12/10 1936 Port of Oslo

No. in Reg. Book. 4268 Survey held at Oslo Date, First Survey 27/8 Last Survey 9/9 1936

on the S.S. "SOUTHERN PRINCESS" (Number of Visits 3) Tons {Gross 12156 Net 7603

Master [Signature] Built at Newcastle By whom built Armstrong Whitworth & Co. Ltd. Yard No. 857 When built 1915-5

Engines made at Newcastle By whom made K.E. Macfarlane & Co. Ltd. Engine No. _____ When made 1915

Boilers made at Oslo By whom made Kvarner Brug Boiler No. _____ When made 1936

Nominal Horse Power 947 Owners Southern Whaling & Sealing Co. Ltd. Port belonging to Duvedin (N.Z.)

Whale Oil
~~MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.~~

Manufacturers of Steel Victorinox Mines & Co., Colville's, L. Dalzell, Strömberg Verstedt (Letter for Record E 115/34 19/9/36)

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

No. and Description of Boilers one horizontal whale oil boiler with internal rotating drum Working Pressure 80 lbs/in²

Tested by hydraulic pressure to 160 lbs/in² Date of test 9/9/36 No. of Certificate _____ Can each boiler be worked separately

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler single, spring loaded

Area of each set of valves per boiler Pressure to which they are adjusted 2.24 in² 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 7015 mm Shell plates: Material S.M. steel Tensile strength 44-55 kg/cm²

Thickness 13 mm Are the shell plates welded or flanged Description of riveting: circ. seams {end S.R. inter. S.R. single strap

long. seams D.R. single strap Diameter of rivet holes in {circ. seams 23.5 mm long. seams 23.5 mm Pitch of rivets {60.3 mm 75.2 mm

Percentage of strength of circ. end seams {plate 61.0 rivets 40.5 Percentage of strength of circ. intermediate seam {plate 61.4 rivets 40.0

Percentage of strength of longitudinal joint {plate 68.7 rivets 64.8 combined _____ Working pressure of shell by Rules 6.16 kg/cm²

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.M. steel Tensile strength 41-47 kg/cm² Thickness 25 mm Pitch of stays dished ends

How are stays secured Radius of ends 3300 mm Working pressure by Rules 6.42 kg/cm²

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

limited to 50 lbs as it is compressed with other at 500 lbs

W1159-0169

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 in 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 _____

The foregoing is a correct description, *K.K. Kverner Brug* Manufacturer.

Dates of Survey { During progress of work in shops - - } *27/8, 1/9, 29/9-1936* Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) *E. 11/5/34*

{ During erection on board vessel - - - } Total No. of visits *3*

Is this Boiler a duplicate of a previous case *Yes*. If so, state Vessel's name and Report No. *Southern Empress; Abs Rpt. 4357*

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

This boiler was constructed in accordance with the approved plans and Secretary's letter in connection therewith. The boiler was examined during construction and was on completion tested by hydraulic pressure to 160 lbs. per sq. in. The workmanship was good. The steel materials used were made at approved works and tested by the Society's Surveyors.

The boiler was marked: *Lloyds Test 160 lbs
WP 80 lbs
9.9.36 - P.E.*

The boiler was not examined under steam, it was stated that this would be done at Newcastle.

It is recommended that this whale oil boiler be classed in the Society's Register Book, when the safety valve has been adjusted under steam.

Survey Fee ... *£s. 40.00* : When applied for, *19/9/1936*

Travelling Expenses (if any) *£s. 20.00* : When received, *19.10.19 24/10*

Pride
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **TUE. 3 NOV 1936**

Assigned *See Nwc. Rpt. 94322*

