

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 12/10/36 Port of Oslo

No. in Survey held at Reg. Book.

Date, First Survey

27/8

Last Survey

9/9

1936

(Number of Visits 3)

Tons

Gross 12156

Net 7603

4268 on the

S.S.

SOUTHERN PRINCESS

Master

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 Towing & Sealing Co. Ltd.

Port belonging to

Oslo (N.Z.)

Whale Oil

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Victorinox Mines & Co., Colville's, L. Dalzell, Strömberg Versted

(Letter for Record

E 1115/34
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 lb./sq. in.

Tested by hydraulic pressure to 160 lb./sq. in.

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

per Rule

as fitted

2.24 sq. in.

Pressure to which they are adjusted

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 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.

Thickness

13 mm.

Are the shell plates welded or flanged

Description of riveting: circ. seams

end S.R.

long. seams D.R. single strap

Diameter of rivet holes in

circ. seams

23.5 mm.

Pitch of rivets

60.3 mm.

Percentage of strength of circ. end seams

plate

rivets

40.5

Percentage of strength of circ. intermediate seam

plate

rivets

61.4

Percentage of strength of longitudinal joint

plate

rivets

68.7

Working pressure of shell by Rules

6.16 kg./cm².

Thickness of butt straps

outer 15 mm.

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.

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

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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Foundation

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.*

FOR KVERNER BRUG

Manufacturer.

Dates of Survey { During progress of work in shops - - }
while building { During erection on board vessel - - - }

27/8, 1/9 29/9-1936

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)

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, Ab 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./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: Lloyd's 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 whole 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, 19/9/36

Travelling Expenses (if any) £s. 20.00 :

When received, 19.10.36

Pride

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 3 NOV 1936

Assigned

See Nwc. Rpt. 94322



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