

Rpt. 5a.

## REPORT ON BOILERS.

No. 33599

Date of writing Report

19

When handed in at Local Office

29 JAN 1943

Received at London Office

1 FEB 1943 1 OCT

No. in  
Reg. Book

Survey held at

SUNDERLAND.

Port of

SUNDERLAND.

Date, First Survey

Nov. 18 42

Last Survey

20 Jan 1943

1943

on the TWIN SCREW SALVAGE VESSEL

(J2516)

"PRINCE SALVOR"

(Number of Visits 15)

Gross  
Tons  
Net

Built at

Gosk

By whom built

Evelyn Shipbuilding &amp; Repairing Co. Ltd.

Engines made at

Helmington-on-Tyne

By whom made

Whitehead &amp; Carter, Eng. Co. Ltd.

Yard No.

390

When built

1943

Boilers made at

Sunderland.

By whom made

N.E. Mar. Eng. Co. (1938), Ltd

Engine No.

888

When made

"

Nominal Horse Power

254

Owners

Admiralty

Boiler No.

4043

When made

1943

Port belonging to

MULTITUBULAR BOILERS—MAIN, ~~AUXILIARY OR DONKEY~~

Manufacturers of Steel

Appleby Frodingham Steel Co. Ltd.

Total Heating Surface of Boilers

4046 sq ft

(Letter for Record)

S

No. and Description of Boilers

2 S.E. Cylindrical

Is forced draught fitted

yes

Coal or Oil fired

oil

Tested by hydraulic pressure to

350 lb.

Date of test

13.1.43

No. of Certificate

4472

Working Pressure

200 lb.

Area of Firegrate in each Boiler

5.89

No. and Description of safety valves to each boiler

Can each boiler be worked separately

yes

Area of each set of valves per boiler

per Rule 1178 sq in

as fitted 6.284 sq in

Pressure to which they are adjusted

20.4 lb

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

2'-9"

Smallest distance between shell of boiler and tank top plating

1'-0"

Is oil fuel carried in the double bottom under boilers

YES

Largest internal dia. of boilers

13'-3"

Length

11'-15/16"

Is the bottom of the boiler insulated

YES

Thickness

1 1/2"

Are the shell plates welded or flanged

no

Shell plates: Material

Steel

Tensile strength

28/32

long. seams

T.R.D.B.S.

Diameter of rivet holes in

circ. seams

1 1/4"

Description of riveting: circ. seams

end D.R.L.

inter.

Pitch of rivets

27"

Pitch of rivets

878"

Percentage of strength of circ. end seams

plate

64.7

rivets

46.5

Percentage of strength of circ. intermediate seam

plate

—

rivets

—

Percentage of strength of longitudinal joint

plate

85.2

rivets

96

combined

94

WD = 202 lb

Thickness of butt straps

outer

15/16"

inner

1 1/16"

No. and Description of Furnaces in each Boiler

2 Right-angled. Stephen-furley necks

Material

Steel

Tensile strength

26/30

Smallest outside diameter

3'-11 5/16"

Length of plain part

top

—

bottom

—

Thickness of plates

crown

21/32"

bottom

21/32"

Description of longitudinal joint

weld

Dimensions of stiffening rings on furnace or c.c. bottom

End plates in steam space: Material

Steel

Tensile strength

26/30

Thickness

1 1/4"

Pitch of stays

19" x 18

How are stays secured

double nuts

Tube plates: Material

front

Steel

back

Steel

Tensile strength

26/30

Thickness

1 1/4"

Mean pitch of stay tubes in nests

9.7"

Pitch across wide water spaces

13 3/4" x 7 3/4"

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/32

at centre

9 1/4" x 1 1/2"

Length as per Rule

32 1/2"

Distance apart

10"

in each

2 at 10"

Tensile strength

26/30

Thickness: Sides

3/4"

Back

3/4"

Top

3/4"

Bottom

4/8"

Pitch of stays to ditto: Sides

9" x 10"

Back

9" x 10"

Top

10" x 10"

Are stays fitted with nuts or riveted over

nuts fitted

Front plate at bottom: Material

Steel

Tensile strength

26/30

Thickness

1"

Lower back plate: Material

Steel

Tensile strength

26/30

Thickness

15/16"

Pitch of stays at wide water space

14" x 9"

Are stays fitted with nuts or riveted over

nuts fitted

Main stays: Material

Steel

Tensile strength

28/32

Diameter

At body of stay,

or

3 1/4"

No. of threads per inch

6

Screw stays: Material

Steel

Tensile strength

26/30

Diameter

At turned off part,

or

1 3/4"

No. of threads per inch

9



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Lloyd's Register  
Foundation

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Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 2" or Over threads

No. of threads per inch 9

Tubes: Material Steel External diameter { Plain 2 3/4" Stay 2 3/4" Thickness { 8 W.G. 3/8", 5/16" No. of threads per inch 9

Pitch of tubes 3 7/8" x 3 7/8" Manhole compensation: Size of opening in shell plate 20" x 16" Section of compensating ring 22" x 1 1/4" No. of rivets and diameter of rivet holes 40, 1 5/16"

Outer row rivet pitch at ends 8 7/8" Depth of flange 3 3/4" Steam Dome: Material Steel

Tensile strength — Thickness of shell — Description of longitudinal joint —

Diameter of rivet holes 0.95 Pitch of rivets — Percentage of strength of joint { Plate — Rivets —

Internal diameter 8.82 Thickness of crown — No. and diameter of stays —

Inner radius of crown —

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 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 —

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 { During progress of work in shops - - 22/ Nov. 18, Dec. 23, 4, 8, 10, 14, 17, 22 Are the approved plans of boiler and superheater forwarded herewith 21.3.42 (If not state date of approval.)

while building { During erection on board vessel - - 30 + 31/ Jan 4, 13, 15, 19, 20 Total No. of visits 15

Is this Boiler a duplicate of a previous case Not known. If so, state Vessel's name and Report No. —

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

*These boilers have been constructed under Special Survey in accordance with the approved plans and the requirements of the Rules. Workmanship and materials are good. The boilers are being despatched to Zoolu.*

*The above boilers installed on board PRINCE SALVOR at Goolu under Special Survey in accordance with the Admiralty Specification, approves plans & the Rules. Boilers tested under working conditions, safety valves adjusted as required, accumulation test held and boilers found satisfactory after all tests.*

*L. R. Home*

Survey Fee £ ... £ When applied for, 19

Travelling Expenses (if any) £ ... £ When received, 19

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute —

Assigned See for marks