

## REPORT ON BOILERS.

No. 67815

Received at London Office

Date of writing Report

19

When handed in at Local Office

6. 12. 43

Port of

Glasgow

No. in Survey held at

Penfryn

Date, First Survey

21. 12. 42

Last Survey

24. 12. 1943

Reg. Book.

(Number of Visits 22.)

(Gross

1125

Tons

(Net

952

on the T.W. Sc. Salvage Vessel "SALVAGE DUKE"

Built at

Penfryn

By whom built

Wm. Simons &amp; Co. Ltd.

Yard No. 763

When built 1943

Engines made at

do.

By whom made

do.

Engine No. 764

When made "

Boilers made at

do.

By whom made

do.

Boiler No. 763

When made "

Nominal Horse Power

254

Owners

The Admiralty

Port belonging to

Glasgow

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Steel Company of Scotland

(Letter for Record S

Total Heating Surface of Boilers

4046 sq. ft.

Is forced draught fitted

Yes

Coal or Oil fired

Oil

No. and Description of Boilers

2- Single-ended

Working Pressure 200 lb.

Tested by hydraulic pressure to

350 lb.

Date of test

1-6-43

No. of Certificate

21438

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

-

No. and Description of safety valves to each boiler

2" I.H.L. auto

Area of each set of valves per boiler

{ per Rule 11.77 sq. ft.

{ as fitted 6.28 sq. ft.

Pressure to which they are adjusted

200 lb.

Are they fitted with casing 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

well clear

Is oil fuel carried in the double bottom under boilers

Yes

Smallest distance between shell of boiler and tank top plating

well clear

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

13'-3"

Length

11'-0"

Shell plates: Material

S

Tensile strength

28/32 tons

Thickness

1 7/32"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end double

long. seams

DBS TR

Diameter of rivet holes in

{ circ. seams 1 5/16"

{ long. seams 1 5/16"

Pitch of rivets

3 3/4"

8 7/8"

Percentage of strength of circ. end seams

{ plate 65

{ rivets 48.5

Percentage of strength of circ. intermediate seam

{ plate

{ rivets

Percentage of strength of longitudinal joint

{ plate 85.2

{ rivets 96.2

{ combined 89.7

Thickness of butt straps

{ outer 1 5/16"

{ inner 1 1/16"

No. and Description of Furnaces in each Boiler

2 Deighton

Material

S

Tensile strength

26/30 tons

Smallest outside diameter

3'-11 7/16"

Length of plain part

{ top

{ bottom

Thickness of plates

{ crown 2 1/32"

{ bottom

Description of longitudinal joint

Welded

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

End plates in steam space: Material

S

Tensile strength

26/30 tons

Thickness

1 1/4"

Pitch of stays

19" x 18"

How are stays secured

D.H.

Tube plates: Material

{ front S

{ back S

Tensile strength

26/30 tons

Thickness

1"

3/4"

Mean pitch of stay tubes in nests

9 1/16"

Pitch across wide water spaces

13"

Girders to combustion chamber tops: Material

S

Tensile strength

28/32 tons

Depth and thickness of girder

at centre

2 @ 9 1/4" x 3/4"

Length as per Rule

2'-8 1/2"

Distance apart

10"

No. and pitch of stays

in each

2 @ 10"

Combustion chamber plates: Material

S

Tensile strength

26/30 tons

Thickness: Sides

3/4"

Back

3/4"

Top

3/4"

Bottom

7/8"

Pitch of stays to ditto: Sides

10" x 9"

Back

10" x 9"

Top

10" x 10"

Are stays fitted with nuts or riveted over

nuts

Front plate at bottom: Material

S

Tensile strength

26/30 tons

Thickness

1"

Lower back plate: Material

S

Tensile strength

26/30 tons

Thickness

1 5/16"

Pitch of stays at wide water space

14"

Are stays fitted with nuts or riveted over

nuts

Main stays: Material

S

Tensile strength

28/32 tons

Diameter

{ At body of stay, 3 1/4"

{ Over threads

No. of threads per inch

6

Screw stays: Material

S

Tensile strength

26/30 tons

Diameter

{ At turned off part, 1 3/4" x 1 7/8"

{ Over threads

No. of threads per inch

9



Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part. or Over threads 2" x 2 1/4"

No. of threads per inch 9

Tubes: Material S External diameter { Plain 2 3/4" Stay 2 3/4" Thickness { 8 W 4 5/16" + 3/8" 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 3-4" x 2-7" 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 if manhole flanged 3 3/4" 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 Thickness of crown No. and diameter of stays

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

Area of each safety valve Is a safety valve fitted to every part of the superheater which can be shut off from the boiler

Pressure to which the safety valves are adjusted Are the safety valves fitted with casing gear

tubes forgings and castings and after assembly in place Hydraulic test pressure: 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,  
FOR WM. SIMONS & CO. LTD.  
Manufacturer.

Dates of Survey { During progress of work in shops -- 1942 Dec 21 1943 Jan 6 Feb 9 23 Mar 31  
while building { During erection on board vessel -- May 11 31 Jun 1 1944 Jul 19 22 30 Aug 19 24  
Are the approved plans of boiler and superheater forwarded herewith 8/2/41  
(If not state date of approval.)  
Total No. of visits 22

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. "Ocean Salvor" G.S. No. 67630

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been built under special survey in accordance with the Rules and approved plans, also in accordance with Admiralty Specification, and the materials and workmanship are good. They have been satisfactorily installed in the vessel and the safety valves have been adjusted to the working pressure.

Survey Fee ... £ 50 When applied for, 19  
Travelling Expenses (if any) £ 50 When received, 19

M. J. Brown  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 7 DEC 1943

Assigned



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Foundation