

REPORT ON BOILERS.

No. 66613.

Received at London Office

Date of writing Report

19

When handed in at Local Office

22. 2. 1943

Port of

GLASGOW

No. in
Reg. Book.

Survey held at

GLASGOW

Date, First Survey

14th Dec 1941

Last Survey

16th Feb. 1943

on the

S/S

"AIRSPRITE"

(Number of Visits

57)

Gross

Tons

Net

Master

Built at

GLASGOW

By whom built

BLYTHSWOODS.B.
CO. LD.

Yard No.

72

When built

1943

Engines made at

GLASGOW

By whom made

DAVID ROWAN & CO. LD.

Engine No.

1101

When made

1943

Boilers made at

-DO-

By whom made

-DO-

Boiler No.

1101

When made

1943

Nominal Horse Power

162

Owners

THE ADMIRALTY

Port belonging to

LONDON

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Steel Company of Scotland Ltd.

(Letter for Record S)

Total Heating Surface of Boilers

2624 sq ft

Is forced draught fitted

Yes

Coal or Oil fired

Oil

No. and Description of Boilers

2 single-ended

Working Pressure

190 lb.

Tested by hydraulic pressure to

335 lb.

Date of test

27-6-42

No. of Certificate

21109

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. safety

Area of each set of valves per boiler

{per Rule

4"

{as fitted

6.28 sq ft

Pressure to which they are adjusted

190 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

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

Yes

Largest internal dia. of boilers

11'-0"

Length

11'-6"

Shell plates: Material

S

Tensile strength

29/33 tons

Thickness

15/16"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

{end

outer

long. seams

DBS TR

Diameter of rivet holes in

{circ. seams

1 1/16"

Description of riveting: circ. seams

{end

inner

Percentage of strength of circ. end seams

{plate

61.8

{rivets

53.9

Percentage of strength of circ. intermediate seam

{plate

86.2

{rivets

86

Percentage of strength of longitudinal joint

{plate

86.2

{rivets

86

Working pressure of shell by Rules

Thickness of butt straps

{outer

23/32"

{inner

27/32"

No. and Description of Furnaces in each Boiler

2 lighters

Material

S

Tensile strength

26/30 tons

Smallest outside diameter

38 1/2"

Length of plain part

{top

33/64"

{bottom

33/64"

Thickness of plates

{crown

33/64"

{bottom

33/64"

Description of longitudinal joint

welded

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

Working pressure of furnace by Rules

End plates in steam space: Material

S

Tensile strength

26/30 tons

Thickness

15/16"

Pitch of stays

15" x 14"

How are stays secured

DN

Working pressure by Rules

Tube plates: Material

{front

S

{back

Tensile strength

26/30 tons

Thickness

15/16"

{front

3/4"

{back

Mean pitch of stay tubes in nests

9.87"

Pitch across wide water spaces

13 3/4"

Working pressure

{front

15/16"

{back

Girders to combustion chamber tops: Material

S

Tensile strength

28/32 tons

Depth and thickness of girder

at centre

2 @ 6 1/2" x 7/8"

Length as per Rule

28 9/16"

Distance apart

8 1/2"

No. and pitch of stays

in each

2 @ 9 1/4"

Working pressure by Rules

Combustion chamber plates: Material

S

Tensile strength

26/30 tons

Thickness: Sides

1 1/16"

Back

1 1/16"

Top

1 1/16"

Bottom

1 1/16"

Pitch of stays to ditto: Sides

9 1/4" x 8 1/2"

Back

9" x 8 1/2"

Top

9 1/4" x 8 1/2"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

Front plate at bottom: Material

S

Tensile strength

26/30 tons

Thickness

15/16"

Lower back plate: Material

S

Tensile strength

26/30 tons

Thickness

15/16"

Pitch of stays at wide water space

13 1/2"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

Main stays: Material

S

Tensile strength

28/32 tons

Diameter

{At body of stay,

2 1/4"

{Over threads

No. of threads per inch

6

Area supported by each stay

Working pressure by Rules

Screw stays: Material

S

Tensile strength

26/30 tons

Diameter

{At turned off part,

1 5/8"

{Over threads

No. of threads per inch

9

Area supported by each stay

Working pressure by Rules _____ Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, ✓
or 1 3/4"
Over threads _____

No. of threads per inch 9 Area supported by each stay _____ Working pressure by Rules _____

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

Pitch of tubes 4" x 3 7/8" Working pressure by Rules _____ Manhole compensation: Size of opening in
shell plate 19 1/2" x 15 1/2" Section of compensating ring 6 1/4" x 15 1/16" No. of rivets and diameter of rivet holes 36 @ 1 1/8"

Outer row rivet pitch at ends 7 1/4" Depth of flange if manhole flanged 3" 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 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 _____ Working pressure as per
Rules _____ 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,
For David Rowan & Co. Ltd. Manufacturer.
Arch. H. Grierson

Dates { During progress of
of Survey { work in shops - - }
while { During erection on
building { board vessel - - - }
See accompanying machinery report Total No. of visits _____

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

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. "NASPRITE" G.R. No. 63500

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, 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.

Exl
22/2/43

Survey Fee £	When applied for, 19
Travelling Expenses (if any) £ <u>See</u>	When received, 19

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

Committee's Minute **GLASGOW 23 FEB 1943**

Assigned **SEE ACCOMPANYING MACHINERY REPORT.**