

REPORT ON BOILERS.

No. 64171

Received at London Office 7 AUG 1941

Date of writing Report

19

When landed at Local Office

4: 8: 19

Port of GLASGOW

No. in
Reg. Book.

Survey held at GLASGOW

Date, First Survey 12: 9: 39

Last Survey 30th July 1941

on the S.S. "NORTON."

(Number of Visits 54)

Gross
Tons
Net

Built at BURNTISLAND

By whom built BURNTISLAND S.B. CO. LD.

Yard No. 248 When built 1941

Engines made at

GLASGOW

By whom made DAVID ROWAN & CO. LD.

Engine No. 1044 When made 1941

Boilers made at

-Do-

By whom made

-Do-

Boiler No. 1044 When made 1941

Nominal Horse Power

468

Owners

Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Coltrilles, Ltd.

(Letter for Record S)

Total Heating Surface of Boilers

5322 sq ft

Is forced draught fitted Yes

Coal or Oil fired coal

No. and Description of Boilers

2 Single-ended

Working Pressure 220 lbs.

Tested by hydraulic pressure to

380 lb.

Date of test 30-6-41

No. of Certificate 20787

Can each boiler be worked separately Yes

Area of Firegrate in each Boiler

63.25 sq ft

No. and Description of safety valves to each boiler

1-3 1/4" donkey

Area of each set of valves per boiler

per Rule 15 sq ft

as fitted 16.50 sq ft

Pressure to which they are adjusted 220 lbs.

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

FRONT OF BOILERS TO BULKHEAD = 9'-0"

Is oil fuel carried in the double bottom under boilers

Smallest distance between shell of boiler and tank top plating

2'-6"

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

16'-0"

Length 11'-6"

Shell plates: Material

Steel

Tensile strength

29/33 tons

Thickness

1 33/64"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end

donkey

Long. seams

DBS TR

Diameter of rivet holes in

circ. seams

F 1 7/16" B 1 9/16"

Pitch of rivets

F 3.78" B 4.4"

Percentage of strength of circ. end seams

plate

F 61.9 B 60

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate

85.1

rivets

89.6

Thickness of butt straps

outer

1 9/64"

inner

1 17/64"

No. and Description of Furnaces in each Boiler

3 Daylight

Material

Steel

Tensile strength

26/30 tons

Smallest outside diameter

3'-11 15/32"

Length of plain part

top

bottom

Thickness of plates

crown

4 7/64"

bottom

Description of longitudinal joint

welded

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

End plates in steam space: Material

Steel

Tensile strength

26/30 tons

Thickness

1 7/16"

Pitch of stays

21 5/8" x 20 3/8"

How are stays secured

DN

Tube plates: Material

front

Steel

back

Tensile strength

26/30 tons

Thickness

15/16"

25/32"

Mean pitch of stay tubes in nests

9.17"

Pitch across wide water spaces

14"

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/32 tons

Depth and thickness of girder

at centre

20 9" x 7 8"

Length as per Rule

34 1/2"

Distance apart

8 1/4"

No. and pitch of stays

in each

3 @ 8 1/4"

Combustion chamber plates: Material

Steel

Tensile strength

26/30 tons

Thickness: Sides

2 1/32"

Back

2 3/32"

Top

2 1/32"

Bottom

2 7/32"

Pitch of stays to ditto: Sides

8 1/4" x 8 1/4"

Back

10" x 8"

Top

8 1/4" x 8 1/4"

Are stays fitted with nuts or riveted over

nuts

Front plate at bottom: Material

Steel

Tensile strength

26/30 tons

Thickness

15/16"

Lower back plate: Material

Steel

Tensile strength

26/30 tons

Thickness

53/64"

Pitch of stays at wide water space

13 1/2"

Are stays fitted with nuts or riveted over

nuts

Main stays: Material

Steel

Tensile strength

28/32 tons

Diameter

At body of stay,

3 1/4" x 3 1/2"

or

Over threads

No. of threads per inch

6

Screw stays: Material

Steel

Tensile strength

26/30 tons

Diameter

At turned off part,

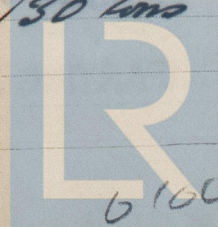
1 5/8" x 1 3/4"

or

Over threads

No. of threads per inch

9



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Lloyd's Register
Foundation

115100
Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, or Over threads 1 7/8"
No. of threads per inch 9
Tubes: Material steel External diameter { Plain 3" Stay 3" Thickness { 7/16" 5/16" 3/8" 1/2" No. of threads per inch 9
Pitch of tubes 4 1/8" x 4 3/16" Manhole compensation: Size of opening 4"
shell plate 4" Section of compensating ring 4" No. of rivets and diameter of rivet holes 4"
Outer row rivet pitch at ends 4" Depth of flange if manhole flanged 4" Steam Dome: Material none
Tensile strength 842 Thickness of shell 4" Description of longitudinal joint none
Diameter of rivet holes 842 Pitch of rivets 4" Percentage of strength of joint { Plate Rivets 842
Internal diameter 4" Thickness of crown 4" No. and diameter of stays 4"
Inner radius of crown 4"
How connected to shell 4" Size of doubling plate under dome 4" Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell 4"
Type of Superheater none Manufacturers of { Tubes Steel forgings Steel castings
Number of elements 4" Material of tubes 4" Internal diameter and thickness of tubes 4"
Material of headers 4" Tensile strength 4" Thickness 4" Can the superheater be shut off and the boiler be worked separately 4"
Is a safety valve fitted to every part of the superheater which can be shut off from the boiler 4"
Area of each safety valve 4" Are the safety valves fitted with easing gear 4"
Pressure to which the safety valves are adjusted 4" Hydraulic test pressure 4"
tubes 4" forgings and castings 4" and after assembly in place 4" Are drain cocks 4"
valves fitted to free the superheater from water where necessary 4"
Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with 4"

The foregoing is a correct description,
For David Rowan & Co. Ltd.
Arch. N. Grierson

Dates of Survey { During progress of work in shops -- During erection on board vessel --
Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) 31/10/41
SEE ACCOMPANYING MACHINERY REPORT.
Total No. of visits 4"

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. "MERTON" G.L.S. No. 63982

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 sent to Burntisland for installation in the vessel.

Rob 4/8/41 These boilers have been efficiently fitted on board and the safety valves adjusted to 220 lbs/sq. in.
J. F. Campbell

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

Committee's Minute GLASGOW 5 AUG 1941

Assigned SEE ACCOMPANYING MACHINERY REPORT.

J. F. Campbell
Engineer Surveyor to Lloyd's Register of Shipping.