

REPORT ON BOILERS.

No. 64171

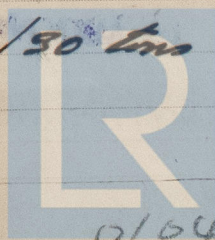
Received at London Office

7 AUG 1941

Date of writing Report 19 41 When made in at Local Office 4. 8. 1941 Port of GLASGOW
No. in 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 SB 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 Ghillies, Ltd. (Letter for Record S
Total Heating Surface of Boilers 1556 \square Is forced draught fitted Yes \checkmark Coal or Oil fired coal \checkmark
No. and Description of Boilers 1 - Single - under \checkmark Working Pressure 220 lb.
Tested by hydraulic pressure to 380 lb. Date of test 30.6.41 No. of Certificate 20788 Can each boiler be worked separately
Area of Firegrate in each Boiler 38.5 \square No. and Description of safety valves to each boiler 1 - 2 1/2" double
Area of each set of valves per boiler { per Rule 8.53 \square " as fitted 9.80 " Pressure to which they are adjusted 220 lb. Are they fitted with easing gear Yes \checkmark
In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler \checkmark
Smallest distance between boilers or uptakes and bunkers or woodwork Between main boilers. Is oil fuel carried in the double bottom under boilers \checkmark
Smallest distance between shell of boiler and tank top plating 2' - 6" Is the bottom of the boiler insulated Yes.
Largest external dia. of boilers 12' - 6" Length 11' - 6" Shell plates: Material steel \checkmark Tensile strength 29/32 tons \checkmark
Thickness 1 1/32" Are the shell plates welded or flanged No Description of riveting: circ. seams { end double \checkmark interior \checkmark
Pitch of rivets { B 3.594" F 3.157" 8 7/8" \checkmark
Diameter of rivet holes in { circ. seams B 1 5/16" F 1 3/16" 1 5/16" \checkmark long. seams
Percentage of strength of circ. end seams { plate B 63.4 F 62.3 rivets 48.5 44.8 Percentage of strength of circ. intermediate seam { plate rivets
Percentage of strength of longitudinal joint { plate 85.2 rivets 93.3 combined 89
Thickness of butt straps { outer 15/16" inner 1 1/16" No. and Description of Furnaces in each Boiler 2 Deighton \checkmark
Material steel \checkmark Tensile strength 26/30 tons \checkmark Smallest outside diameter 3' - 7 1/32" \checkmark
Length of plain part { top crown 43/64" bottom Description of longitudinal joint welded \checkmark
Dimensions of stiffening rings on furnace or c.c. bottom \checkmark
End plates in steam space: Material steel \checkmark Tensile strength 26/30 tons \checkmark Thickness 1 3/32" \checkmark Pitch of stays 14 3/4" x 15 1/2" \checkmark
How are stays secured DN \checkmark
Tube plates: Material { front steel \checkmark back steel \checkmark Tensile strength { 26/30 tons \checkmark Thickness { 29/32" \checkmark 25/32" \checkmark
Lean pitch of stay tubes in nests 9.76" \checkmark Pitch across wide water spaces 13 5/8" \checkmark
Riders to combustion chamber tops: Material steel \checkmark Tensile strength 28/32 tons \checkmark Depth and thickness of girder
Centre 20 8 5/8" x 7 7/8" Length as per Rule 2' - 7 9/16" \checkmark Distance apart 9" \checkmark No. and pitch of stays
Each 30 7 1/2" \checkmark Combustion chamber plates: Material steel \checkmark
Tensile strength 26/30 tons \checkmark Thickness: Sides 1 1/16" \checkmark Back 2 1/32" \checkmark Top 1 1/16" \checkmark Bottom 1 3/16" \checkmark
Pitch of stays to ditto: Sides 9" x 7 1/2" \checkmark Back 8 1/8" x 8 1/4" \checkmark Top 7 1/2" x 9" \checkmark Are stays fitted with nuts or riveted over Nuts \checkmark
Front plate at bottom: Material steel \checkmark Tensile strength 26/30 tons \checkmark
Thickness 29/32" \checkmark Lower back plate: Material steel \checkmark Tensile strength 26/30 tons \checkmark Thickness 29/32" \checkmark
Pitch of stays at wide water space 13 1/2" \checkmark Are stays fitted with nuts or riveted over Nuts \checkmark
Main stays: Material steel \checkmark Tensile strength 28/32 tons \checkmark
Diameter { At body of stay, 2 1/2" x 2 3/4" \checkmark No. of threads per inch 6 \checkmark Over threads
Crew stays: Material steel \checkmark Tensile strength 26/30 tons \checkmark
Diameter { At turned off part, 1 5/8" \checkmark No. of threads per inch 9 \checkmark Over threads



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Are the stays drilled at the outer ends *no*Margin stays: Diameter { At turned off part, *1 7/8"*
or
Over threadsNo. of threads per inch *9*Tubes: Material *steel*External diameter { Plain *3"*
Stay *3"*Thickness { *7/16"*
*5/16"*No. of threads per inch *9*Pitch of tubes *4 1/8" x 4 3/8"*

Manhole compensation: Size of opening

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 *4"*Steam Dome: Material *none*

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

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 *none*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

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,
For David Rowan & Co. Ltd. Manufacture
Arch. N. GriersonDates of Survey { During progress of
work in shops - -
while building { During erection on
board vessel - -Are the approved plans of boiler and superheater forwarded herewith *24/4/41*
(If not state date of approval.)

SEE ACCOMPANYING MACHINERY REPORT.

Total No. of visits

Is this Boiler a duplicate of a previous case

If so, state Vessel's name and Report No.

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

*This boiler has been built under special survey in accordance with the Rules and approved plans, and the materials and workmanship are good. It has been sent to Burntisland for installation in the vessel.**This boiler has been efficiently fitted on board and the safety valves adjusted to 220 lbs/sq. in.**J. I. Campbell.*

Survey Fee

£

When applied for,

19

Travelling Expenses (if any) £

See

When received,

19

Committee's Minute

GLASGOW

5 AUG 1941

Assigned

SEE ACCOMPANYING MACHINERY REPORT.

Engineer Surveyor to Lloyd's Register of Shipping.

FRI, 12 SEP 1941

J. E. 20483

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