

# REPORT ON BOILERS.

64614  
No. 10,353

Received at London Office FEB 3 1941

Date of writing Report 28/1/41 1941 When handed in at Local Office 28/1/41 19 Port of MANCHESTER

No. in Survey held at Hyde Reg. Book. Date, First Survey 23/9/40 Last Survey 15/1/1941

on the M/V "NOTTINGHAM" (Number of Visits 7) Tons } Gross Net

Built at Govan By whom built Alex. Stephen & Sons Yard No. 575 576 When built 1941

Engines made at Glasgow By whom made Barclay Curle & Co Ltd Engine No. 8W129 When made 1941

Boilers made at Hyde By whom made J. Adamson & Co Ltd Boiler No. 2567 When made 1940

Owners The Federal Steam Navig. Co Ltd Port belonging to London

## VERTICAL DONKEY BOILER.

Made at Hyde By whom made J. Adamson & Co. Ltd. Boiler No. 2567 When made 1940 Where fixed ✓

Manufacturers of Steel Guest Keen Baldwins Iron & Steel Co. Ltd. Port Talbot.

Total Heating Surface of Boiler 675 Sq. Ft. Forced draught fitted ✓ Coal or Oil fired and/or Exh. Gas.

No. and Description of Boilers One Clark's Shell Tube Boiler Working pressure 100 lbs per sq. inch

Tested by hydraulic pressure to 200 lbs per sq. inch. Date of test 21<sup>st</sup> December 1940 No. of Certificate 95

Area of Firegrate in each Boiler ✓ No. and Description of safety valves to each boiler Not fitted by J. Adamson & Co. Ltd. Two enclosed spring

Area of each set of valves per boiler } per rule 7.33 Sq. ins. } as fitted 9.820" Pressure to which they are adjusted ✓ Are they fitted with easing gear ✓

State whether steam from main boilers can enter the donkey boiler ✓ Smallest distance between boiler or uptake and bunkers

or woodwork ✓ Is oil fuel carried in the double bottom under boiler ✓ Smallest distance between base of boiler and tank top plating

Is the base of the boiler insulated ✓ Largest internal dia. of boiler 4'-6" Height 14'-9" ✓

Shell plates: Material O.H. Steel Tensile strength 28/32 tons per sq. inch Thickness 1/2"

Are the shell plates welded or flanged ✓ Jo. At butt straps ends only. Description of riveting: circ. seams } end SR } inter. SR } long. seams D.R. Butt Straps

Dia. of rivet holes in } circ. seams 13/16" } Pitch of rivets } Upper 2.782" } Percentage of strength of circ. seams } plate 59.3% } rivets 42.7% } of Longitudinal joint } plate 69.5% } rivets 115% } combined ✓

Working pressure of shell by rules 110 lbs per sq. inch Thickness of butt straps } outer 1/2" } inner 1/2" ✓

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat Yes. Material O.H. Steel.

Tensile strength 26/30 tons per sq. inch Thickness 13/16" Radius 6'-6" Working pressure by rules 105 lbs per sq. inch.

Description of Furnace: Plain, spherical, or dished crown Material Tensile strength

Thickness External diameter } top } bottom } Length as per rule Working pressure by rules

Pitch of support stays circumferentially and vertically Are stays fitted with nuts or riveted over

Diameter of stays over thread Radius of spherical or dished furnace crown Working pressure by rule

Thickness of Ogee Ring (Both lower plate) 15/16" Diameter as per rule } D ✓ } d ✓ Working pressure by rule 101 lbs per sq. inch.

Combustion Chamber: Material O.H. Steel Tensile strength 26/30 tons per sq. inch Thickness of top plate 21/32"

Radius if dished 4'-0" Working pressure by rule 113 lbs per sq. inch Thickness of back plate 1 1/8" Diameter if circular 4'-5 7/8" inside

Length as per rule 4'-8 1/8" Pitch of stays ✓ Are stays fitted with nuts or riveted over ✓

Diameter of stays over thread Working pressure of back plate by rules As approved.

Tube Plates: Material } front } back } Tensile strength } Thickness } Mean pitch of stay tubes in nests

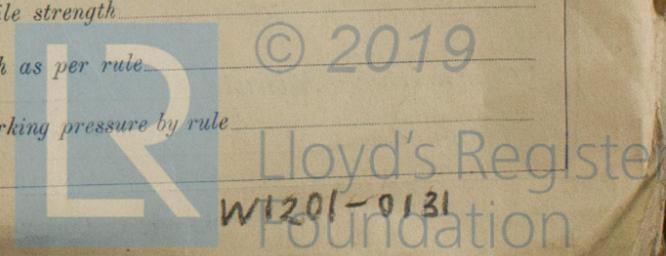
If comprising shell, Dia. as per rule } front } back } Pitch in outer vertical rows } Dia. of tube holes FRONT } stay } plain } BACK } stay } plain }

Is each alternate tube in outer vertical rows a stay tube Working pressure by rules } front } back }

Girders to combustion chamber tops: Material Tensile strength

Depth and thickness of girder at centre Length as per rule

Distance apart No. and pitch of stays in each Working pressure by rule



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**Crown stays:** Material \_\_\_\_\_ Tensile strength \_\_\_\_\_ Diameter { at body of stay, .....  
or  
over threads.....

No. of threads per inch \_\_\_\_\_ Area supported by each stay \_\_\_\_\_ Working pressure by rules \_\_\_\_\_

**Screw stays:** Material \_\_\_\_\_ Tensile strength \_\_\_\_\_ Diameter { at turned off part, .....  
or  
over threads..... No. of threads per inch \_\_\_\_\_

Area supported by each stay \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ Are the stays drilled at the outer ends \_\_\_\_\_

**Shimble Tubes:** Material Steel External diameter { plain 4" ✓  
stay \_\_\_\_\_ Thickness { 9 LSG. ✓

No. of threads per inch ✓ Pitch of tubes Vent. 4 3/8" Horiz. 7.053" Working pressure by rules ✓

**Manhole Compensation:** Size of opening in shell plate 6" x 4" Section of compensating ring 11 1/4" x 9 1/4" x 5/8" No. of rivets and diameter \_\_\_\_\_

of rivet holes 8 - 13/16" dia. ✓ Outer row rivet pitch at ends 3" ✓ Depth of flange if manhole flanged 3" ✓

**Uptake:** External diameter 2'-11" ✓ Thickness of uptake plate 1/2" ✓

**Cross Tubes:** No. ✓ External diameters { ✓ Thickness of plates ✓

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with Yes.

The foregoing is a correct description,  
FOR JOSEPH ADAMSON & CO. LIMITED.  
J. Adamson  
Manufacturer.  
Joint Managing Director.

Dates of Survey { During progress of work in shops - - } 23.9.40, 2.11.40, 4.11.40, 30.11.40  
while building { During erection on board vessel - - } 21.12.40, 27.12.40, AND 15.1.41.

Is the approved plan of boiler forwarded herewith (If not state date of approval.) Yes.

Total No. of visits Seven.

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

This boiler has been constructed under Special Survey of tested materials and is in accordance with the Secretary's letters, approved plans and Rule Requirements. The materials and workmanship are of good quality and the boiler, when tested in the shop under hydraulic pressure of 200 lb per sq. inch, was found sound and tight. This boiler is, in my opinion, eligible to be fitted on board a vessel classed with this Society.

FOR IDENTIFICATION PURPOSES  
BOILER MARKED:-

No 95  
LOYDS TEST  
200 LBS.  
W.P. 100 LBS.  
W.T.M. 21.12.40

Glasgow 3-11-41 The boiler has been satisfactorily fitted in the vessel and its safety valves adjusted under steam to 100 lb.

Safety valves made by A. Leveburn and tested by J. Sim 28-3-40 to 200 lb per sq. inch. LLO.

Survey Fee ... .. £ 4 : 4/- } When applied for. 31st Jan 1941  
Travelling Expenses (if any) £ 1 : 1/- } When received, ..... 19

L. P. Mathison L. Davis  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 11 NOV 1941**  
Assigned SEE ACCOMPANYING MACHINERY REPORT.

