

REPORT ON BOILERS.

6177.
No. 88606

Received at London Office - 9 FEB 1925

Date of writing Report - 8 FEB 1925 When handed in at Local Office 3rd Feb 1925 Port of London and Gothenburg

No. in Survey held at Loughborough Date, First Survey 22nd Dec 1924 Last Survey 3rd Feb 1925
Reg. Book Supplement 37904 on the Donkey Boiler No 4/46 on the Tug named "AXEL JOHNSON" (Number of Visits 4) Gross 4896 Net 2853 Tons

Built at Gothenburg By whom built A/B Götaverken Yard No. 391 When built 1915
Engines made at Gothenburg By whom made A/B Götaverken Engine No. 1676/677 When made 1925
Boilers made at By whom made Boiler No. When made
Owners Rederiaktiebolaget Nordstjärnan Port belonging to Stockholm

VERTICAL DONKEY BOILER.

Made at Loughborough By whom made H.W. Colman & Co^{sd} Boiler No. 4/46 When made 1925 Where fixed ✓

Manufacturers of Steel David Colville & Sons Ltd

Total Heating Surface of Boiler 14 m² = 150.7 Sqft Is forced draught fitted ✓ Coal or Oil fired Oil ✓

No. and Description of Boilers One Vertical Cross Tube Working pressure 85 lbs ✓

Tested by hydraulic pressure to 140 lbs ✓ Date of test 2nd February 1925 ✓ No. of Certificate 1283 ✓

Area of Firegrate in each Boiler ✓ No. and Description of safety valves to each boiler Double 2" dia marine Spring type

Area of each set of valves per boiler { per rule... as fitted 3.140" ✓ Pressure to which they are adjusted 85 lbs ✓ Are they fitted with easing gear Yes ✓

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 Yes ✓ Smallest distance between base of boiler and tank top plating

abt. 3' Is the base of the boiler insulated No ✓ Largest internal dia. of boiler 4'-9" ✓ Height 13'-0" ✓

Shell plates: Material Steel ✓ Tensile strength 28/32 tons ✓ Thickness 3" ✓

Are the shell plates welded or flanged No ✓ Description of riveting: circ. seams { end S.R. Lap inter. ✓ long. seams S.R. Lap

Dia. of rivet holes in { circ. seams 13" ✓ Pitch of rivets { 2" ✓ Percentage of strength of circ. seams { plate 59.3 rivets 57 of Longitudinal joint { plate 68.5 rivets 89 combined...

Working pressure of shell by rules 116 lbs ✓ Thickness of butt straps { outer ✓ inner ✓

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat ✓ yes ✓ Material Steel ✓

Tensile strength 26/30 tons ✓ Thickness 7/16" ✓ Radius 4'-9" ✓ Working pressure by rules 116 lbs ✓

Description of Furnace: Plain, spherical, or dished crown ✓ yes ✓ with ✓ Material Steel ✓ Tensile strength 26/30 tons ✓

Thickness 1/2" External diameter { top 4'-0" ✓ bottom 4'-2" ✓ Length as per rule 2'-8" between stays ✓ Working pressure by rules 109 lbs ✓

Pitch of support stays circumferentially 8" ✓ and vertically 2'-8" ✓ Are stays fitted with nuts or riveted over riveted ✓

Diameter of stays over thread 1 1/8" ✓ Radius of spherical or dished furnace crown 4'-0" x 9/16" ✓ Working pressure by rule 138 lbs ✓

Thickness of Ogee Ring Furnace flanged 1/2" Diameter as per rule { D ✓ Working pressure by rule ✓

Combustion Chamber: Material ✓ Tensile strength ✓ Thickness of top plate ✓

Radius if dished ✓ Working pressure by rule ✓ Thickness of back plate ✓ Diameter if circular ✓

Length as per rule ✓ Pitch of stays ✓ Are stays fitted with nuts or riveted over ✓

Diameter of stays over thread ✓ Working pressure of back plate by rules ✓

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

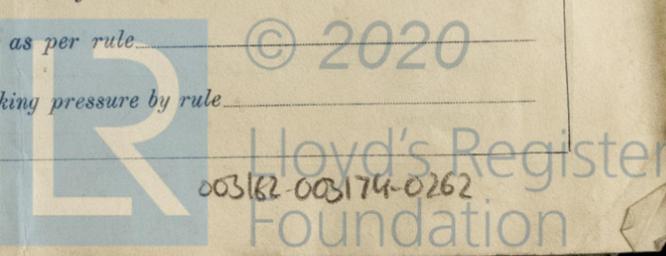
If comprising shell, Dia. as per rule { front ✓ back ✓ Pitch in outer vertical rows { Dia. of tube holes FRONT { stay ✓ plain ✓ BACK { stay ✓ plain ✓

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 Steel Tensile strength 26/30 tons Diameter { at turned off part, _____ or over threads, 1 1/8 No. of threads per inch 12

Area supported by each stay ✓ Working pressure by rules _____ Are the stays drilled at the outer ends _____

Tubes: Material ✓ External diameter { plain _____ stay _____ Thickness { _____ Working pressure by rules _____

No. of threads per inch _____ Pitch of tubes _____

Manhole Compensation: Size of opening in shell plate 12" Section of compensating ring 12" x 1/2" No. of rivets and diameter of rivet holes 42 @ 2 1/16" Outer row rivet pitch at ends 5" Depth of flange if manhole flanged ✓

Uptake: External diameter 14" Thickness of uptake plate 3/8"

Cross Tubes: No. Four External diameters { 10" Thickness of plates 3/8"

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

The foregoing is a correct description,

Walter D. Colman & Co Manufacturer
Walter D. Colman Director

Dates of Survey { During progress of work in shops - - } 1924 / Dec 22 1925 / Jan 6 19 FEB 2 Is the approved plan of boiler forwarded herewith Yes with invoice for plan
 (If not state date of approval.)
 building { During erection on board vessel - - } 1925: Aug 4. 20 Total No. of visits 4 + 2

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
 This boiler has been built under special survey in accordance with the rule requirements and the approved plan. The materials and workmanship are good and the boiler was sound and tight under hydraulic test.
 The boiler is intended for the above vessel being built to Class

This donkey boiler has been fitted on board this vessel under my inspection and to my satisfaction.

Survey Fee ... £ 4 4 - } When applied for, 9 FEB 1925
 Travelling Expenses (if any) £ 3 5 : } When received, 27 FEB 1925

E. J. Stoddart Engineer

TUES. 8 SEP 1925

Committee's Minute _____
 Assigned See Gen. J.E. 6177

