

REPORT ON BOILERS.

No. 53634.

Dec. 7. 1946

Received at London Office 17 AUG 1946

Date of writing Report 19 When handed in at Local Office 19 34 AUG 1946 Port of HULL.

No. in Survey held at HULL. Date, First Survey 20. 3. 45. Last Survey 5-7. 19 46.

Reg. Book. on the Steam Tug "NEREIDIA". A/MS 1194. (Number of Visits 36.) Gross 274.92. Net Nil

Built at Selby By whom built Cochrane & Sons Ltd. Yard No. 1307 When built 1946.

Engines made at Hull By whom made Amos & Smith Ltd. Engine No. 771 When made -do-

Boilers made at Hull By whom made Amos & Smith Ltd. Boiler No. 771 When made -do-

Nominal Horse Power 132 Owners Ministry of War Transport Port belonging to London.

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Appleby Frodingham Steel Co. Ltd. (Letter for Record S)

Total Heating Surface of Boilers 2390 sq.ft. Is forced draught fitted No Coal or Oil fired Oil

No. and Description of Boilers One S.B. Working Pressure 200 lbs/sq.in.

Tested by hydraulic pressure to 350 lbs/sq.in. Date of test 19.11.45 No. of Certificate 4255 Can each boiler be worked separately -

Area of Firegrate in each Boiler - (O.F.) No. and Description of safety valves to each boiler 2 spring loaded

Area of each set of valves per boiler {per Rule 13.9 sq.in. as fitted 14.137" Pressure to which they are adjusted 200 lbs Are they fitted with easing gear Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler none

Smallest distance between boilers or uptakes and bunkers or woodwork 1' 6" Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating none Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 15' 6 1/2" Length 11' 6" Shell plates: Material Steel Tensile strength 29-33 tons/in²

Thickness 1 1/8" Are the shell plates welded or flanged No Description of riveting: circ. seams {end D.R. Lap. inter. -

long. seams T.R. D.B.S. Diameter of rivet holes in {circ. seams 1.13/32" long. seams 1.13/32" Pitch of rivets {4.3/16" 9.7/8"

Percentage of strength of circ. end seams {plate 66.4% rivets 42.7% Percentage of strength of circ. intermediate seam {plate - rivets -

Percentage of strength of longitudinal joint {plate 85.7% rivets 85.9% combined 90.15%

Thickness of butt straps {outer 1.1/16" inner 1.3/16" No. and Description of Furnaces in each Boiler 3 C.F. Deighton section..

Material Steel Tensile strength 26-30 tons/sq.in. Smallest outside diameter 3' 11.3/8"

Length of plain part {top - bottom - Thickness of plates {crown 11/16" bottom - Description of longitudinal joint Weld

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

End plates in steam space: Material Steel Tensile strength 26-30 tons/in² Thickness 1.3/16" Pitch of stays 18 1/2" x 18 1/2"

How are stays secured Nuts inside & out

Tube plates: Material {front Steel back Steel Tensile strength {26-30 tons/sq.in. -do- Thickness {15/16" 7/8"

Mean pitch of stay tubes in nests 9 1/2" x 9 1/2" Pitch across wide water spaces 14 1/2" x 9 1/2"

Girders to combustion chamber tops: Material Steel Tensile strength 29-33 tons/in² Depth and thickness of girder at centre 9 1/2" x 7/8" double Length as per Rule 2' 11" Distance apart 9" No. and pitch of stays in each 3 @ 8 1/2"

Combustion chamber plates: Material Steel

Tensile strength 26-30 tons/sq.in. Thickness: Sides 3/4" Back 23/32" Top 23/32" Bottom 3/4"

Pitch of stays to ditto: Sides 9 1/2" x 8 1/2" Back 9 1/2" x 8 1/2" Top 9" x 8 1/2" Are stays fitted with nuts or riveted over Nuts

Front plate at bottom: Material Steel Tensile strength 26-30 tons/sq.in.

Thickness 15/16" Lower back plate: Material Steel Tensile strength 26-30 tons/in² Thickness 7/8"

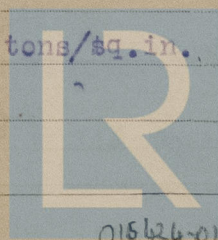
Pitch of stays at wide water space 14 1/2" x 8 1/2" Are stays fitted with nuts or riveted over Nuts

Main stays: Material Steel Tensile strength 28-32 tons/sq.in.

Diameter {At body of stay, 3 1/4" or Over threads - No. of threads per inch 6

Screw stays: Material Steel Tensile strength 26-30 tons/sq.in.

Diameter {At turned off part, 1 1/2" or Over threads - No. of threads per inch 9



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Steam Tug "NEREIDIA".

Are the stays drilled at the outer ends No. Margin stays: Diameter { At turned off part, -
or 1 7/8" & 2"
Over threads 1 7/8" & 2"

No. of threads per inch 9

Tubes: Material Steel External diameter { Plain 3 1/2"
Stay 3 1/2" Thickness { 8 W.G.
5/16" No. of threads per inch 9

Pitch of tubes 4 1/2" Manhole compensation: Size of opening in
shell plate 16" x 12" Section of compensating ring 1 3/8" x 15" No. of rivets and diameter of rivet holes 28 @ 1.13/32"
Outer row rivet pitch at ends 9 7/8" Depth of flange if/manhole flanged 3.3/8" 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 of
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 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

For AMOS & SMITH LTD.
The foregoing is a correct description,

A. E. Bentley Manufactures.

Dates of Survey { During progress of work in shops - - 1945 Mar. 20. June 16. Aug. 20. Sept. 3. 21. Oct. 5-25.31.
while building { During erection on board vessel - - - see Mch. Rpt. Nov. 5-14.21.

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

Total No. of visits 36

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. "EMPIRE BARBARA" Hul Rpt. No. 52761

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

This boiler has been constructed under Special Survey in accordance with the Rules and the approved plans.

The workmanship and materials are good, & when subjected to an hydraulic test of 350 lbs/sq.in. it was found satisfactory in every respect.

The above boiler fitted on board under Special Survey, examined under steam & safty valves adjusted as overleaf, accumulation test held, trials carried out and boiler found satisfactory on completion.

Survey Fee see Mch. Report. £ : : When applied for, 19

Travelling Expenses (if any) £ : : When received, 19

W. L. Shields

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned For minute see J.E. Mch. Rpt

FRI. 8 SEP 1946



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