

REPORT ON BOILERS.

No. 16912

Received at London Office OCT 29 1940

Date of writing Report 14/8/1940 When handed in at Local Office 31/8/1940 Port of MIDDLESBROUGH.

No. in Survey held at Stockton-on-Tees Date, First Survey 21-3-40 Last Survey 7-8-1940

on the

"L.C. 10" SALVAGE LIGHTER

(Number of Visits 8) Gross 918.22 Tons Net 814.30

Built at Haverton Hill By whom built Furness S. B. & Co Ltd Yard No. 336 When built 1940

Engines made at - By whom made - Engine No. - When made 1940

Boilers made at Stockton By whom made Stockton B. Eng. & Riley Bros Ltd 6442 Boiler No. 6443 When made 1940

Owners The Admiralty.

Port belonging to

Hartlepool

VERTICAL DONKEY BOILER.

Made at Stockton By whom made Stockton C. E. & R. Bros Ltd 6442 Boiler No. 6443 When made 1940 Where fixed Boiler Room

Manufacturers of Steel South Durham Steel & Iron Co Ltd

Total Heating Surface of EACH Boiler 535 sq ft

Is forced draught fitted No

Coal or Oil fired Coal

No. and Description of Boilers 2- Vertical Multitubular

Working pressure 130 lbs

Tested by hydraulic pressure to 245 lbs

Date of test 7/8/40

No. of Certificates 5002

Area of Firegrate in each Boiler 25 sq ft

No. and Description of safety valves to each boiler Double Spring Loaded

Area of each set of valves per boiler per rule 4.61 sq ft as fitted 6.28 sq ft

Pressure to which they are adjusted 130 lbs

Are they fitted with easing gear Yes

State whether steam from main boilers can enter the donkey boiler -

Smallest distance between boiler and bunkers

Is oil fuel carried in the double bottom under boiler No

Smallest distance between base of boiler and tank top plating

Is the base of the boiler insulated Fire bricks on tank top

Largest internal dia. of boiler 6'-7" Height 14'-6"

Shell plates: Material Steel

Tensile strength 28-32 tons

Thickness Ends 1/2"

Are the shell plates welded or flanged No

Description of riveting: circ. seams

end Top Bott

inter DR DR

long. seams D. R. D. B. S.

Dia. of rivet holes in circ. seams 15/16" long seams 15/16" Pitch of rivets 2.12" 2.93" 2.97"

percentage of strength of circ. seams 3.21 3.14 3.5

plate 55.8 68

rivets 53.3 47

Longitudinal joint plate 43.3 rivets 94.0

Working pressure of shell by rules 134.5 lbs

Thickness of butt straps

outer 5/8" inner 5/8"

combined 1/2"

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat Dished

Material Steel

Tensile strength 26-30 tons Thickness 29/32"

Radius 6'-0" (outer)

Working pressure by rules 153 lbs

Description of Furnace: Plain, spherical, or dished crown Dished

Material Steel

Tensile strength 26-30 tons

Thickness 13/16"

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

dished furnace crown

4'-6" (outer)

Working pressure by rule 183 lbs

Thickness of Ogee Ring plate 13/16"

Diameter as per rule

D. 6'-6" a. 5'-10"

Working pressure by rule 140 lbs

Combustion Chamber: Material Steel

Tensile strength 26-30 tons

Thickness of top plate 21/32"

Radius if dished

Working pressure by rule

Thickness of back plate 21/32"

Diameter if circular

Length as per rule

Pitch of stays 8" x 9 1/2"

Are stays fitted with nuts or riveted over Riveted

Diameter of stays over thread 1 3/8"

Working pressure of back plate by rules 130 lbs

Tube Plates: Material

front back Steel

Tensile strength 26-30 tons

Thickness 21/32"

Mean pitch of stay tubes in nests 8 3/8"

If comprising shell, Dia. as per rule

front 29/32" back 29/32"

Pitch in outer vertical rows

P. 3" 56" do do

Dia. of tube holes FRONT

stay 2 1/4" plain 2 1/16"

BACK

stay 2" plain 2"

Is each alternate tube in outer vertical rows a stay tube Yes

Working pressure by rules

front 134 lbs back 285 lbs

Girders to combustion chamber tops: Material Steel

Tensile strength 28-32 tons

Depth and thickness of girder at centre 4" 2 @ 5/8"

Length as per rule 21 3/16"

Distance apart 12"

No. and pitch of stays in each 1 @ 10 1/2"

Working pressure by rule 184 lbs

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 *1 3/8"* No. of threads per inch *9*

Area supported by each stay *44.5 sq"* Working pressure by rules *135 lbs* Are the stays drilled at the outer ends ☒

Tubes: Material *Steel (H.R. Weldless)* External diameter *2"* Thickness *10 S.W.G.*

No. of threads per inch *9* Pitch of tubes *3" x 3"* Working pressure by rules *P. 215 lbs S. 175 lbs*

Manhole Compensation: Size of opening in 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 *3 1/4"*

Uptake: External diameter ☒ Thickness of uptake plate ☒

Cross Tubes: No. ☒ External diameters ☒ Thickness of plates ☒

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with ☒

for and on behalf of

The foregoing is a correct description,

G. H. Riley

Manufacturer.

Dates of Survey while building { During progress of work in shops - - Mar. 21. Apr. 17. May 19. July 1. 12. 17. 26. Aug. 7. Is the approved plan of boiler forwarded herewith 12. 2. 40. (If not state date of approval.)

{ During erection on board vessel - - Total No. of visits 8

Is this Boiler a duplicate of a previous case *No* If so, state Vessel's name and Report No. ☒

GENERAL REMARKS

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

This boiler has been constructed under Special Survey, in accordance with the Rule Requirements, or approved plan. The materials & workmanship are good, & on completion the boiler was tested by hydraulic pressure to 245 lbs/sq", & found tight & satisfactory. The boiler securely fitted on board, & safety valves adjusted under steam to 130 lbs/sq", & found in order.

Survey Fee ... £ *See Mch. 19* When applied for, ☒ 19

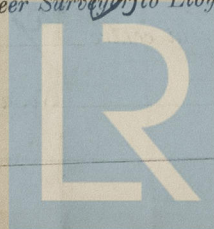
Travelling Expenses (if any) £ *Report. 19* When received, ☒ 19

Committee's Minute

Assigned

See Mch. 26. 16912

Robert R. J. Easthope
Engineer Surveyor to Lloyd's Register of Shipping.



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