

# REPORT ON BOILERS.

Received at London Office... 30 OCT 1956

Date of writing Report 24th Oct. 56 When handed in at Local Office 29th Oct. 56 Port of MIDDLESBROUGH.

No. in Reg. Book. Survey held at Stockton on Tees. Date, First Survey 4th July. Last Survey 22nd Oct. 19 56

(Number of Visits 34 Two Boilers. Tons Gross Net

Built at Uddevalla By whom built Messrs. Uddevallavarvet Yard No. 160. When built

Engines made at By whom made Engine No. When made

Boilers made at Stockton on Tees. By whom made Stockton Chemical Engineers & Riley Boilers Ltd. Boiler No. 7511 7512 When made 1956

MN as per Rule Owners Port belonging to

## MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Appleby Frodingham Steel Co. Ltd. Scunthorpe.

Total Heating Surface of Boilers 2 @ 2720 = 5440 sq. ft. Of Superheaters -

Total for Register Book 5440 sq. ft. Is forced draught fitted Yes Coal or Oil fired Oil

No. and Description of Boilers 2 - single ended multitubular. Working Pressure 150lbs.

Tested by hydraulic pressure to 275lbs. Date of test 22.10.56 No. of Certificate 7467 7468 Can each boiler be worked separately

Area of Firegrate in each Boiler - No. and Description of safety valves to each boiler

Area of each set of valves per boiler { per Rule as fitted Pressure to which they are adjusted Are they fitted with easing gear

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

Smallest distance between boilers or uptakes and bunkers or woodwork Is oil fuel carried in the double bottom under boilers

Smallest distance between boilers or uptakes and bunkers or woodwork Is the bottom of the boiler insulated

Largest internal dia. of boilers 14'3" Length 11'6" Shell plates: Material steel Tensile strength 29-33 tons.

If fusion welded, state name of welding Firm Have all the requirements of the Rules for Class I vessels been complied with Thickness 31/32" Are the shell plates welded or flanged Description of riveting: circ. seams end D.R

long. seams T.R - D.B.S Diameter of rivet holes in { circ. seams 1.1/16" long. seams 1.1/16" Pitch of rivets { 3.3575 7.5625

Percentage of strength of circ. end seams { plate 68.3 rivets 43.25 Percentage of strength of circ. intermediate seam { plate 85.71 rivets 91.5 Working Pressure of Shell by Rule 153.1 lbs.

Percentage of strength of longitudinal joint { plate 85.71 rivets 91.5 combined Thickness of butt straps { outer 3/4" inner 7/8" No. and Description of Furnaces in each Boiler 3 Deighton corrugated.

Material steel Tensile strength 26-30 tons. Smallest outside diameter 3'5 1/4" Length of plain part { top bottom Thickness of plates 7/16" Description of longitudinal joint welded.

Dimensions of stiffening rings on furnace or c.c. bottom End plates in steam space: Material steel Tensile strength 26.30 tons. Thickness 31/32" Pitch of stays 19" x 17 1/2"

How are stays secured screwed through both plates with double nuts and washers. Tube plates: Material { front steel back steel Tensile strength { 26.30 tons 26.30 tons. Thickness { 3/4" 3/4"

Mean pitch of stay tubes in nests 11.1/16" Pitch across wide water spaces 10 1/2" Girders to combustion chamber tops: Material steel Tensile strength 28-32 tons. Depth and thickness of girder at centre 7 1/2" x 1 1/4" Length as per Rule 2'5.19/32" Distance apart 9" at centre No. and pitch of stays in each welded to comb. chamber top. Combustion chamber plates; Material steel 1

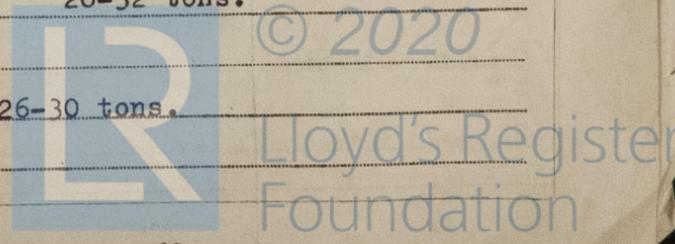
Tensile strength 26-30 tons Thickness Sides 21/32" Back 21/32" Top 21/32" Bottom 21/32" Pitch of stays to ditto: Sides 10" x 9 1/2" Back 9 3/4" x 9 1/2" Top - Are stays fitted with nuts or riveted over welded - nutted at shell

Front plate at bottom: Material steel Tensile strength 26 - 30 tons. Thickness 3/4" Lower back plate: Material steel Tensile strength 26- 30 tons. Thickness 13/16"

Pitch of stays at wide water space 13 1/2" Are stays fitted with nuts or riveted over screwed and welded. Main stays: Material steel Tensile strength 28-32 tons.

Diameter { At body of stay or Over threads 2 3/4" No. of threads per inch 6 Screw stays: Material steel Tensile strength 26-30 tons.

Diameter { At turned off part or Over threads 1 1/2", 1 3/4", 1 5/8" No. of threads per inch 9



Are the stays drilled at the outer ends No. Margin stays: Diameter  $\left\{ \begin{array}{l} \text{At turned off part} \\ \text{or} \\ \text{Over threads} \end{array} \right. \frac{1}{8}'' \frac{1}{4}''$

No. of threads per inch 9

Tubes: Material E.R.W Steel External diameter  $\left\{ \begin{array}{l} \text{Plain} \\ \text{Stay} \end{array} \right. \frac{2\frac{1}{2}}{2\frac{3}{8}}''$  Thickness  $\left\{ \begin{array}{l} \text{10 S.W.G} \\ \text{5/16}'' \end{array} \right.$  No. of threads per inch 9

Pitch of tubes  $\frac{3\frac{3}{4}}{3\frac{3}{8}}'' \times \frac{3\frac{3}{8}}{3\frac{3}{8}}''$  Manhole compensation: Size of opening in shell plate  $\frac{17}{21}'' \times \frac{21}{17}''$  Section of compensating ring  $\frac{7}{1\frac{1}{8}}'' \times \frac{1\frac{1}{8}}{7}''$  No. of rivets and diameter of rivet holes  $\frac{48}{1.1/16}$

Outer row rivet pitch at ends  $\frac{7\frac{1}{2}}{7\frac{1}{2}}''$  Depth of flange if manhole flanged - 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  $\left\{ \begin{array}{l} \text{Plate} \\ \text{Rivets} \end{array} \right.$  \_\_\_\_\_

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  $\left\{ \begin{array}{l} \text{Tubes} \\ \text{Steel forgings} \\ \text{Steel castings} \end{array} \right.$  \_\_\_\_\_

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 \_\_\_\_\_

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 \_\_\_\_\_

For and on behalf of  
**STOCKTON CHEMICAL ENGINEERS & RILEY BOILERS LTD.**  
 The foregoing is a correct description.

*[Handwritten Signature]*  
 MANAGING DIRECTOR

**Boiler No. 7511.**

Dates of Survey while building  $\left\{ \begin{array}{l} \text{During progress of work in shops} \\ \text{During erection on board vessel} \end{array} \right. \left( \begin{array}{l} \text{1956} \\ \text{Sept. 4. 10. 14. 19. 26. 28.} \end{array} \right. \text{Jul. 4. 11. 19. 24. Aug. 14. 22. Oct. 2. 8. 11. 15.}$

Total No. of visits 34.

**Boiler No. 7512.**  $\left( \begin{array}{l} \text{July. 4. 11. 19. 24. Aug. 14. 22. Sept. 4. 10. 14. 19. 26. 28. Oct. 2. 8. 11. 15. 18. 22.} \end{array} \right.$

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.) \_\_\_\_\_

These boilers have been built for Messrs. Uddevallavarvet Contract No.160.

These boilers have been constructed under Special Survey and in accordance with the Rule requirements and approved plan.

The Materials and workmanship are good and on completion the boilers were hydraulically tested 275 lbs/sq.inch and found satisfactory.

Survey Fee ... £ 84. - : - } When applied for, 29.10. 56

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

*[Handwritten Signature]*  
 Engineer Surveyor to Lloyd's Register of Shipping.

TUESDAY 14 MAY 1957

Committee's Minute \_\_\_\_\_

Assigned Su Rpt. 1.

