

REPORT ON BOILERS.

No. 52285

Received at London Office

174 JAN 1944

Date of writing Report 19 11.1. When handed in at Local Office 10.11.44 Port of HULL

No. in Survey held at HULL Date, First Survey 19.6.43 Last Survey 7.1.1944

on the H.M. TRAWLER AILSA CRAIG J.2725. (Number of Visits 1) Gross 452 Tons Net 144

Built at BEVERLEY By whom built Cook Wella & Gemmell Ltd Yard No. 723 When built 1944
Engines made at HULL By whom made Chas. D. Holmes Ltd Engine No. 1663 When made
Boilers made at HULL By whom made Chas. D. Holmes Ltd Boiler No. 1663 When made
Nominal Horse Power 156 Owners Admiralty Port belonging to

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Steel Corporation of Scotland (Letter for Record S)

Total Heating Surface of Boilers 2650 sq ft Is forced draught fitted Yes Coal or Oil fired Coal

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

Tested by hydraulic pressure to 350 lb/sq in Date of test 20.10.43 No. of Certificate 4208 Can each boiler be worked separately

Area of Firegrate in each Boiler 63 sq ft No. and Description of safety valves to each boiler 2 Spring loaded

Area of each set of valves per boiler per Rule 15.4 sq ft as fitted 16.6 sq ft Pressure to which they are adjusted 200 lb/sq in Are they fitted with easing gear Yes

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

Smallest distance between boilers or uptakes and bunkers or woodwork 2'-0" 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 No

Largest internal dia. of boilers 14'-9 3/8" Length 11'-6" Shell plates: Material Steel Tensile strength 29/33 tons/sq in

Thickness 1 5/16" Are the shell plates welded or flanged No Description of riveting: circ. seams {end DR lap inter. None

long. seams T.R. - D.B.S Diameter of rivet holes in {circ. seams 1 3/8" long. seams 1 3/8" Pitch of rivets {4" 9/2"

Percentage of strength of circ. end seams {plate 65.6% rivets 44.7% Percentage of strength of circ. intermediate seam {plate 85.5% rivets 88.5%

Percentage of strength of longitudinal joint {plate 85.5% rivets 88.5% combined 88.8%

Thickness of butt straps {outer 1" inner 1 1/8" No. and Description of Furnaces in each Boiler 3 - Cf Deighton section

Material Steel Tensile strength 26/30 tons/sq in Smallest outside diameter 3'-6 7/16"

Length of plain part {top Yes bottom Yes Thickness of plates {crown 19/32" bottom 19/32" Description of longitudinal joint Weld

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

End plates in steam space: Material Steel Tensile strength 26/30 tons Thickness 1 1/32" Pitch of stays 21" x 20" max.

How are stays secured Nuts inside and out

Tube plates: Material {front Steel back Steel Tensile strength {26/30 tons/sq in do do Thickness {7/8" 25/32"

Mean pitch of stay tubes in nests 9 1/16" Pitch across wide water spaces 13 5/8"

Girders to combustion chamber tops: Material Steel Tensile strength 28/32 tons/sq in Depth and thickness of girder

at centre 8 1/4" x 1 7/8" Length as per Rule 2'-6 29/32" Distance apart 10 3/4" No. and pitch of stays

in each 2 - 9 1/2" - 9 1/2" Combustion chamber plates: Material Steel

Tensile strength 26/30 tons/sq in Thickness: Sides 25/32" Back 3/4" Top 25/32" Bottom 25/32"

Pitch of stays to ditto: Sides 10 3/4" x 9 7/8" Back 9 1/4" x 9 7/8" Top 10 3/4" x 9 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 7/8" Lower back plate: Material Steel Tensile strength 26/30 tons/sq in Thickness 7/8"

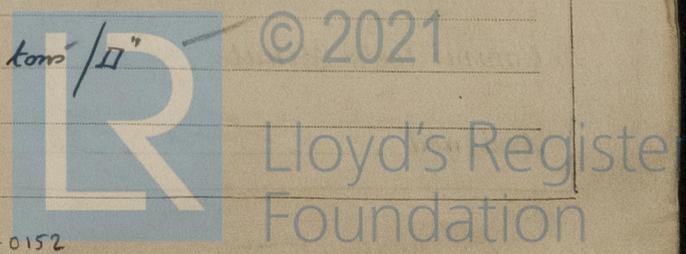
Pitch of stays at wide water space 14 1/2" x 9 7/8" Are stays fitted with nuts or riveted over Nuts

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

Diameter {At body of stay, 3 1/8" or over threads Yes No. of threads per inch 6

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

Diameter {At turned off part, 1 7/8" or over threads Yes No. of threads per inch 9



Are the stays drilled at the outer ends No. Margin stays: Diameter $\left\{ \begin{array}{l} \text{At turned off part,} \\ \text{or} \\ \text{Over threads} \end{array} \right. \checkmark 2" \checkmark$

No. of threads per inch 9

Tubes: Material Steel External diameter $\left\{ \begin{array}{l} \text{Plain } 2\frac{3}{4}" \\ \text{Stay } 2\frac{3}{4}" \end{array} \right.$ Thickness $\left\{ \begin{array}{l} \text{S.W.G. } 5/16" \\ \text{ } 3/8" \end{array} \right.$ No. of threads per inch 9

Pitch of tubes $3\frac{7}{8} \times 3\frac{7}{8}"$ Manhole compensation: Size of opening in shell plate $12" \times 16"$ Section of compensating ring $1\frac{5}{16}" \times 20$ No. of rivets and diameter of rivet holes $15 - 1\frac{5}{32}"$

Outer row rivet pitch at ends $10\frac{1}{8}"$ Depth of flange if ^{bottom} manhole flanged $3\frac{1}{4}"$ Steam Dome: Material Stone

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 _____

How connected to shell _____ Inner radius of crown _____

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 _____

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 casing 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

The foregoing is a correct description,
 FOR CHARLES D. HOLMES & CO., LTD.
 W.R. Evans Manufacturer.

Dates of Survey $\left\{ \begin{array}{l} \text{During progress of} \\ \text{work in shops - -} \\ \text{while} \\ \text{building } \left\{ \begin{array}{l} \text{During erection on} \\ \text{board vessel - - -} \end{array} \right. \end{array} \right. \text{See machinery rept.}$

Are the approved plans of boiler and superheater forwarded herewith 14-5-43
 (If not state date of approval.)

Total No. of visits 1

Is this Boiler ~~a duplicate~~ of a previous case Similar to H.M.T. GANILLE except the C.C. back plate which have been taken.
 If so, state Vessel's name and Report No. New arrangement approved 14/5/43.

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

This boiler has been constructed under Special Survey in accordance with the approved plans & the Rules. The workmanship and materials are good and when subjected to a hydraulic test of 550 lb / sq" it was found satisfactory in every respect.

The above boiler installed in "AILSA CRAIG" at Hull, examined under steam, safety valves adjusted as overleaf, accumulation test held and found satisfactory in every respect on completion of all trials. W.S. Shields.

Survey Fee £	:	:	When applied for,	19
Travelling Expenses (if any) £	:	:	When received,	19

J. Williams
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 28 JAN 1944

Assigned See machinery rpt

