

b.m.  
**REPORT ON BOILERS.**

No. 52285

Received at London Office

Date of writing Report

19

When handed in at Local Office

11.1.

19

Port of HULL

1944 JAN 1944

No. in Survey held at HULL  
Reg. Book.

Date, First Survey

19.6.43

Last Survey

7.1.

1944

on the H.M. TRAWLER

AILSA CRAIG.

J.2725.

(Number of Visits

Gross 452  
Tons Net 144

Built at BEVERLEY.

By whom built Cook Weller &amp; Gummell 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

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 D.R. 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 1/2"

Percentage of strength of circ. end seams plate 65.6% rivets 44.7%

Percentage of strength of circ. intermediate seam plate rivets

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 bottom

Thickness of plates crown bottom 19/32"

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

Thickness 1 1/32" Pitch of stays 21" x 20" max.

How are stays secured Nuts inside and out

Tube plates: Material front back Steel Steel

Tensile strength 26/30 tons/sq. in. 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" 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, or Over threads 3 1/8"

No. of threads per inch 6

Screw stays: Material Steel

Tensile strength 26/30 tons/sq. in.

Diameter At turned off part, or Over threads 1 7/8"

No. of threads per inch 9



Are the stays drilled at the outer ends No. Margin stays: Diameter { At turned off part, 2" or Over threads 2" ✓

No. of threads per inch 9

Tubes: Material Steel External diameter { Plain 2 3/4" Stay 2 3/4" Thickness { 8 W.G. 5/16" 3/8" No. of threads per inch 9

Pitch of tubes 3 7/8" x 3 7/8" Manhole compensation: Size of opening in shell plate 12" (x 16") Section of compensating ring 1 5/16" x 20 No. of rivets and diameter of rivet holes 15 - 1 5/32"

Outer row rivet pitch at ends 10 1/8" Depth of flange if <sup>bottom</sup> manhole flanged 3 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 { Plate Rivets \_\_\_\_\_

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 { 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

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

Dates of Survey { During progress of work in shops - - - See machinery rep't. Are the approved plans of boiler and superheater forwarded herewith 14-5-43 (If not state date of approval.)

while building { During erection on board vessel - - - See machinery rep't. Total No. of visits ✓

Similar to H.M.T. GANILE except the C.C. back plate which have been taken.  
Is this Boiler a duplicate of a previous case \_\_\_\_\_ 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. McLean  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 28 JAN 1944

Assigned See machinery rpt