

REPORT ON BOILERS.

No. 52382.

11 APR 1944

Received at London Office

Date of writing Report

When handed in at Local Office

Port of HULL.

No. in Survey held at HULL.

Date, First Survey 8. 11. 43

Last Survey 1. 4. 19 44

Reg. Book.

on the H.M. DAN LAYER

FUDAY

J2735

(Number of Visits 21.)

Gross 458.60
Net 143.98

Built at BEVERLEY

By whom built Cook Weller and Gummell Ltd

Yard No. 728 When built 1944

Engines made at HULL

By whom made Chas. D. Holmes & Co Ltd

Engine No. 1675 When made

Boilers made at HULL

By whom made Chas. D. Holmes Ltd

Boiler No. 1673 When made

Nominal Horse Power

Owners THE ADMIRALTY

Port belonging to

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Steel Company of Scotland Ltd

(Letter for Record 5. ✓)

Total Heating Surface of Boilers 2650 ft² ✓

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 30.11.43. No. of Certificate 4214. Can each boiler be worked separately ✓

Area of Firegrate in each Boiler 63 ft² ✓ No. and Description of safety valves to each boiler 2. Spring loaded High Lift. ✓Area of each set of valves per boiler {per Rule 7.7 ✓
as fitted 9.8 ✓
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 ton/sq in. ✓

Thickness 1 5/16" ✓

Are the shell plates welded or flanged No.

Description of riveting: circ. seams {end D.R. Cap. ✓
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 85.5% ✓
rivets 88.5% ✓Percentage of strength of longitudinal joint {plate 85.5% ✓
rivets 88.5% ✓

Percentage of strength of longitudinal joint {combined 88.8% ✓

Thickness of butt straps {outer 1" ✓
inner 1 1/8" ✓

No. and Description of Furnaces in each Boiler 3. cf. Deighn Section. ✓

Material Steel. ✓

Tensile strength 26-30 ton/sq in. ✓

Smallest outside diameter 3'-6 7/16" ✓

Length of plain part {top -
bottom -Thickness of plates {crown 1 1/32" ✓
bottom 1 1/32" ✓

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 ton/sq in. ✓

Thickness 1 1/32" ✓

Pitch of stays 21" x 20" ✓

How are stays secured Nuts inside out. ✓

Tube plates: Material {front Steel ✓
back Steel ✓Tensile strength {26-30 ton/sq in. ✓
26-30 ton/sq in. ✓Thickness {7/8" ✓
2 1/4" / 32" ✓

Mean pitch of stay tubes in nests 9 1/16" ✓

Pitch across wide water spaces 13 7/8" ✓

Girders to combustion chamber tops: Material Steel ✓

Tensile strength 28-32 ton/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" ✓

Combustion chamber plates: Material Steel ✓

Tensile strength 26-30 ton/sq in. ✓

Thickness: Sides 2 5/32" ✓

Back 3/4" ✓

Top 2 5/32" ✓

Bottom 2 5/32" ✓

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 ton/sq in. ✓

Thickness 7/8" ✓

Lower back plate: Material Steel ✓

Tensile strength 26-30 ton/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 ton/sq in. ✓

Diameter {At body of stay, 3 1/8" ✓
or
Over threads -

No. of threads per inch 6. ✓

Screw stays: Material Steel ✓

Tensile strength 26-30 ton/sq in. ✓

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

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

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 7/16" 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 Bottom manhole flanged 3 1/4"

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

The foregoing is a correct description,
For CHARLES D. HOLMES & CO., LTD.

Manufacturer.

Dates of Survey { During progress of 1943 Nov. 8. 11. 15. 26. 30. Dec. 9. 14.
work in shops - - 1944 18. 19, Feb. 3.
while building { During erection on As on machinery report.
board vessel - - -

Are the approved plans of boiler and superheater forwarded herewith 14.5.43.
(If not state date of approval.)

Total No. of visits 21.

Is this Boiler a duplicate of a previous case Yes

If so, state Vessel's name and Report No. H.M.T. AILSA CRAIG

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

This Boiler has been constructed under Special Survey in accordance with the approved Admiralty plan and the Rules.

The Workmanship and Materials are good, and when subjected to an hydraulic test of 350 lb 10" it was found satisfactory in every respect.

Boiler installed in H.M.T. 'FUONV' at Hull, examined under steam, safety valves adjusted as overleaf, accommodation test held and found satisfactory on completion of all tests. W.S. Shields

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

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

Committee's Minute WED. 19 APR 1944

Assigned see minute on 26. Apr.