

REPORT ON BOILERS.

No. 52049

Date of writing Report 21-5-43. 19

When handed in at Local Office 22 JUN 1943

Received at London Office

01 JUL 1943

Port of Hull.

No. in Survey held at Hull.

Date, First Survey

Last Survey

19

on the H.M. Trawler

BOMBARDIER

(Number of Visits)

Gross 580
Net 182

Built at BEVERLEY.

By whom built

Cock Weller & Gemmell Ltd

Yard No. 708.

When built 1943

Engines made at Hull

By whom made

Chas. D. Holmes Ltd

Engine No. 1641

When made

Boilers made at Hull

By whom made

Chas. D. Holmes Ltd

Boiler No. 1641

When made

Nominal Horse Power 165

Owners

Admiralty

Port belonging to

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Steel Company of Scotland Ltd.

(Letter for Record S.

Total Heating Surface of Boilers 2551 sq. ft.

Is forced draught fitted Yes.

Coal or Oil fired Coal

No. and Description of Boilers One S.B.

Working Pressure 225.

Tested by hydraulic pressure to 388 lb./sq. in. Date of test 31-3-43. No. of Certificate 4185. Can each boiler be worked separately —

Area of Firegrate in each Boiler 64 sq. ft. No. and Description of safety valves to each boiler Two Spring loaded

Area of each set of valves per boiler (per Rule 17.5. (for Superheats). 13.28 without sp. Pressure to which they are adjusted 225. 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 12".

Is oil fuel carried in the double bottom under boilers No.

Smallest distance between shell of boiler and tank top plating —

Is the bottom of the boiler insulated No

Largest internal dia. of boilers 15'-9 1/16". Length 11'-0"

Shell plates: Material Steel

Tensile strength 31-35 ton/10"

Thickness 1 1/32".

Are the shell plates welded or flanged No

Description of riveting: circ. seams

long. seams T.R., D.B.S.

Diameter of rivet holes in

circ. seams 1 1/32"

Pitch of rivets

3 1/2"

Percentage of strength of circ. end seams (plate 62.%, rivets 44.%)

Percentage of strength of circ. intermediate seam (plate —, rivets —)

Percentage of strength of longitudinal joint (plate 84.31%, rivets 86.9%, combined 85.98%)

Thickness of butt straps (outer 1 5/32", inner 1 9/32")

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

Material Steel

Tensile strength 26-30 ton/10"

Smallest outside diameter 3'-10"

Length of plain part (top —, bottom —)

Thickness of plates (crown 3 23/32", bottom 3 23/32")

Description of longitudinal joint Welded

Dimensions of stiffening rings on furnace or c.e. bottom —

End plates in steam space: Material Steel

Tensile strength 26-30 ton/10". Thickness 1 1/4".

Pitch of stays 19 1/4" x 19 1/8"

How are stays secured Nuts & Washers inside. Nuts & large Washers outside

Tube plates: Material (front Steel, back Steel)

Tensile strength 26-30 ton/10".

Thickness 3 1/32"

Mean pitch of stay tubes in nests 10.67.

Pitch across wide water spaces 14 1/4" x 9 1/2"

Girders to combustion chamber tops: Material Steel

Tensile strength 29-33 ton/10"

Depth and thickness of girder

at centre 9" x 7 1/8" Iable.

Length as per Rule 32 1/4".

Distance apart 9 1/4".

No. and pitch of stays

in each 3 @ 7 1/2"

Combustion chamber plates: Material Steel

Tensile strength 26-30 ton/10"

Thickness: Sides 23/32"

Back 23/32"

Top 1 1/16"

Bottom 1 5/16"

Pitch of stays to ditto: Sides 9 1/8" x 8". Back 9 1/2" x 8 1/4". Top 9 1/4" x 7 1/2". Are stays fitted with nuts or riveted over Nuts.

Front plate at bottom: Material Steel

Tensile strength 26-30 ton/10"

Thickness 3 1/32".

Lower back plate: Material Steel

Tensile strength 26-30 ton/10"

Thickness 29/32"

Pitch of stays at wide water space 14 1/2" x 9 1/2".

Are stays fitted with nuts or riveted over Nuts.

Main stays: Material Steel

Tensile strength 28-32 ton/10"

Diameter (At body of stay, or Over threads) 3 3/8"

No. of threads per inch 8.

Screw stays: Material Steel

Tensile strength 26-30 ton/10"

Diameter (At turned off part, or Over threads) 1 3/4".

No. of threads per inch 10

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BOMBARDIER

Are the stays drilled at the outer ends No. Margin stays: Diameter { At turned off part or Over threads 1 7/8" 2" 2 1/8"

No. of threads per inch 10

Tubes: Material L.W. Iron. External diameter { Plain 3 1/2" Stay 3 1/2" Thickness 7 W.G. 5/16" 3/8" 7/16" No. of threads per inch 9.

Pitch of tubes 4 3/8" x 4 3/8" Manhole compensation: Size of opening in shell plate 16" x 12" Section of compensating ring 3' 8 1/2" x 1 7/32" No. of rivets and diameter of rivet holes 62 @ 1 1/2" Dia.

Outer row rivet pitch at ends 10.74" Depth of flange if manhole flanged 3 1/2" Steam Dome: Material None. Compensation plate fitted to form fitting of dome

Tensile strength Thickness of shell Description of longitudinal joint { Plate Rivets

Diameter of rivet holes Pitch of rivets Percentage of strength of joint

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 (Safety Valves fitted to allow 1 Change over to Superheat.) 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

Area of each safety valve Is a safety valve fitted to every part of the superheater which can be shut off from the boiler

Pressure to which the safety valves are adjusted Are the safety valves fitted with easing gear

tubes forgings and castings and after assembly in place

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

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 - - 23.29.30.31. Apr. 2.23 1942 1943
while building { During erection on board vessel - - - see machinery apt

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) 29.5.42.

Total No. of visits see machinery apt

Is this Boiler a duplicate of a previous case Yes. If so, state Vessel's name and Report No. H.M.T. GRENADIER.

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 plans & Rules.

The Workmanship and Materials are good and, when subjected to a hydraulic test of 388 lb./sq. in. it was found satisfactory in every respect.

The above boiler examined under steam, safety valves adjusted to 225 lb., accumulation test held, and afterwards examined after all trials found satisfactory.

Survey Fee £ : When applied for, 19

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

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

Committee's Minute

Assigned

see minute on
78. Rpt.



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Foundation