

REPORT ON BOILERS.

No. 18380

Received at London Office

Date of writing Report 27/2/1943 When handed in at Local Office 27/2/1943 Port of WEST HARTLEPOOL.

No. in Survey held at WEST HARTLEPOOL.

Date, First Survey 9th September, 1942 Last Survey 15th February 1943

Reg. Book.

(Number of Visits 11)

Gross 597

Tons {
Net 1

on the H.M. RESCUE TUG "STORMBEEK" "STORMKING"

Built at Selly
K HULL.

By whom built Messrs Cochran & Sons Ltd

Yard No. 1258 When built 1943

Engines made at Stull

By whom made Messrs S.D. Holmes & Co.

Engine No. 1637 When made

Boilers made at West Hartlepool

By whom made Central Marine Engine Works.

Boiler No. R358 When made 1943.

Nominal Horse Power 222

Owners The Admiralty

Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Messrs Boliville's Ltd Glasgow.

(Letter for Record 6.)

Total Heating Surface of Boilers

3550 sq ft

Is forced draught fitted Yes

Coal or Oil fired Oil.

No. and Description of Boilers

1 Single ended multitubular

Working Pressure 210 lbs

Tested by hydraulic pressure to 365 lbs Date of test 13.2.43 No. of Certificate 3994 Can each boiler be worked separately

Area of Firegrate in each Boiler OIL FIRED No. and Description of safety valves to each boiler Two spring loaded, high lift

Area of each set of valves per boiler { per Rule 16.14 as fitted 16.59 Pressure to which they are adjusted 210 lb 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 ft.

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 17'-0" Length 11'-6"

Shell plates: Material Steel

Tensile strength 31-35 tons

Thickness 1 1/2" Are the shell plates welded or flanged No.

Description of riveting: circ. seams { end DR LAP. inter. -

long. seams TR Double butt straps

Diameter of rivet holes in { circ. seams 1 3/16" long. seams 1 7/32"

Pitch of rivets { 3 1/2" 10 1/16"

Percentage of strength of circ. end seams { plate 62.2 rivets 43

Percentage of strength of circ. intermediate seam { plate 84.8 rivets 86.7

Percentage of strength of longitudinal joint { plate 84.8 rivets 86.7 combined 86.9

Thickness of butt straps { outer 1 1/8" inner 1 1/4"

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

Material Steel

Tensile strength 26-30 tons

Smallest outside diameter 4'-3 1/2"

Length of plain part { top - bottom -

Thickness of plates { crown 3/4" bottom 3/4"

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 tons

Thickness 1 3/16"

Pitch of stays 20 3/4" x 16"

How are stays secured Double nuts & washers.

Tube plates: Material { front Steel back Steel

Tensile strength { 26-30 tons 26-30 tons

Thickness { 1 5/16" 2 1/32"

Mean pitch of stay tubes in nests 10 5/8" x 8 1/2"

Pitch across wide water spaces 13 1/2"

Girders to combustion chamber tops: Material Steel

Tensile strength 29-33 tons

Depth and thickness of girder

at centre 9 x 1 3/4" 2 x 5/8" plates Length as per Rule 2-8 3/32"

Distance apart 9 3/4"

No. and pitch of stays

in each 3 @ 7 3/4"

Combustion chamber plates: Material Steel

Tensile strength 26-30 tons

Thickness: Sides 2 3/32"

Back 2 3/32"

Top 1 1/16"

Bottom 7/8"

Pitch of stays to ditto: Sides 10 x 8 1/2" Back 9 1/2 x 8 7/8" Top 9 3/4 x 7 3/4" Are stays fitted with nuts or riveted over nuts

Front plate at bottom: Material Steel

Tensile strength 26-30 tons

Thickness 1 5/16"

Lower back plate: Material Steel

Tensile strength 26-30 tons Thickness 2 1/32"

Pitch of stays at wide water space 13 3/4" x 8 7/8"

Are stays fitted with nuts or riveted over nuts

Main stays: Material Steel

Tensile strength 28-32 tons

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

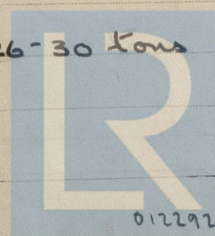
No. of threads per inch 6

Screw stays: Material Steel

Tensile strength 26-30 tons

Diameter { At turned off part, or Over threads 1 3/4"

No. of threads per inch 9



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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 LW IRON External diameter ^{Plain} 3" ^{Stay} 3" Thickness ^{2 W.G.} 5/16", 3/8", 7/16" No. of threads per inch 9

Pitch of tubes 4 1/4" x 4 1/4" Manhole compensation: Size of opening in shell plate 16" x 12" Section of compensating ring 3'-0" x 2'-4 1/2" x 1 15/32" No. of rivets and diameter of rivet holes 32 @ 1 1/32"

Outer row rivet pitch at ends 10 1/16" 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 ^{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 THE CENTRAL MARINE ENGINE WORKS
W. J. [Signature] Manufacturer.

Dates of Survey ^{During progress of work in shops - -} 1942. Sept. 9-19. Dec 15-1943-Jan 8-19-25. ^{Are the approved plans of boiler and superheater for the Central Marine Engine Works} 4-5-42.
^{while building} ^{During erection on board vessel - - -} Feb 1-8-9-10-15. ^(If not state date of approval.)

Total No. of visits 11

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.) This boiler has been constructed under special survey and in accordance with the approved plans for a working pressure of 210 lbs per square inch.

The materials and workmanship have been found good. Upon completion the boiler was tested in the presence of the undersigned by a hydraulic pressure of 365 lbs per square inch. Showed no signs of weakness and was found tight and sound in every respect at that pressure.

It has now been despatched to Hull for fitting on board.

[The above boiler examined under steam, safety valves adjusted as above, accumulation test held and boiler examined after all trials. W.S.S.]

Survey Fee ... £ 23 : 14 : 0 When applied for, 27-2-1943
Travelling Expenses (if any) £ 24 : 6 : 0 When received, 19

Arthur W. Oxford
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute WED. 28 APR 1943

Assigned See Hul/57971