

REPORT ON BOILERS.

No. 18885

Received at London Office.

29 DEC 1947

5a.

Writing Report. 24-12-1947 When handed in at Local Office. 24-12-1947

Port of

WEST HARTLEPOOL

Survey held at WEST HARTLEPOOL

Date, First Survey. 25th January, 1944, Last Survey. 28th August, 1945

Book.

(Number of Visits. 82)

Gross.....

Net.....

on the S.S. 'CUILLIN SOUND'

(YARD NO 1171)

Built at WEST HARTLEPOOL By whom built W. GRAY & CO LTD Yard No. 1171 When built 1945

Engines made at GLASGOW By whom made GLENFIELD & KENNEDY LTD Engine No. A. 176 When made 1945

Boilers made at WEST HARTLEPOOL By whom made CENTRAL MARINE ENGINE WORKS. Boiler No. 1171 When made 1945

Indicated Horse Power. 542. Owners. ADMIRALTY. Port belonging to

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel. MESSRS. COLVILLES LTD GLASGOW (Letter for Record. 4)

Heating Surface of Boilers. 7941 sq. ft. (5 ft. 2866 sq. ft.) Is forced draught fitted. YES. Coal or Oil fired. OIL

Description of Boilers. 3 SINGLE ENDED MULTITUBULAR Working Pressure. 220 lbs/sq. in.

Tested by hydraulic pressure to 380 lbs/sq. in. Date of test. 6-11-44 No. of Certificate. 4087 Can each boiler be worked separately. YES.

Area of Firegrate in each Boiler. 2-2 1/4" COCKBURNS (H.L.) 3 L.H.L.

Area of each set of valves per boiler. 6.425 sq. ft. 14.67 sq. ft. ordinary valves Pressure to which they are adjusted. 220 lbs/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. 21" Is oil fuel carried in the double bottom under boilers. YES (NOS)

Smallest distance between shell of boiler and tank top plating. 20 3/4" Is the bottom of the boiler insulated. YES

Largest internal dia. of boilers. 15'-0 1/2" Length. 11'-6" Shell plates: Material. STEEL Tensile strength. 29-30 T

Thickness. 1 1/2" Are the shell plates welded or flanged. NO Description of riveting: circ. seams { end. 2 R L.A.A. inter. 4 R L.A.A. }

g. seams. T.R. DOUBLE BUTT STRAPS. Diameter of rivet holes in { circ. seams. 1 1/2" long. seams. 1 1/2" Pitch of rivets { 4 R L.A.A. 10 3/8" }

Percentage of strength of circ. end seams { plate. 63.1 rivets. 46.8 Percentage of strength of circ. intermediate seam { plate. 86.2 rivets. 86.2 }

Percentage of strength of longitudinal joint { plate. 86.2 rivets. 86.2 combined. 85.85 Working pressure of shell by Rules.

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 T Smallest outside diameter. 45 1/4"

Length of plain part { top. - bottom. - Thickness of plates { crown. 1 1/16" bottom. 1 1/16" Description of longitudinal joint. WELDED.

Dimensions of stiffening rings on furnace or c.c. bottom. Working pressure of furnace by Rules. -

End plates in steam space: Material. STEEL Tensile strength. 26-30 T Thickness. 1 1/32" Pitch of stays. 21" x 20"

How are stays secured. DOUBLE NUTS. Working pressure by Rules. -

Tube-plates: Material { front. STEEL back. STEEL Tensile strength. 26-30 T Thickness. 25/32"

Pitch across wide water spaces. 14" Working pressure { front. - back. -

Orders to combustion chamber tops: Material. STEEL Tensile strength. 28-32 T Depth and thickness of girder

centre. 10 1/2" x 1 3/8" (2-1/2" plates) Length as per Rule. 2'-9 7/32" Distance apart. 9 1/4" No. and pitch of stays

each. 3 at 8" Working pressure by Rules. - Combustion chamber plates: Material. STEEL

Tensile strength. 26-30 T Thickness: Sides. 1 1/16" Back. 1 1/16" Top. 1 1/16" Bottom. 1 3/16"

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

Working pressure by Rules. - Front plate at bottom: Material. STEEL Tensile strength. 26-30 T Thickness. 27/32"

Lower back plate: Material. STEEL Tensile strength. 26-30 T Thickness. 27/32"

Pitch of stays at wide water space. 14" x 8" Are stays fitted with nuts or riveted over. NUTS.

Working pressure. - Main stays: Material. STEEL Tensile strength. 28-32 T

Diameter { At body of stay. 3 1/2" No. of threads per inch. 6 Area supported by each stay. -

Working pressure by Rules. - Screw stays: Material. STEEL Tensile strength. 26-30 T

Diameter { At turned off part. 1 3/4" No. of threads per inch. 9 Area supported by each stay. -

Working pressure by Rules. -

Working pressure by Rules. -

Working pressure by Rules. -

Working pressure by Rules. -

Working pressure by Rules. -

Working pressure by Rules. -

Working pressure by Rules. -

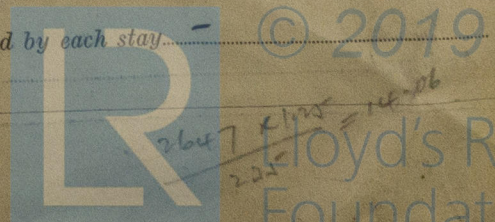
Working pressure by Rules. -

Working pressure by Rules. -

Working pressure by Rules. -

Working pressure by Rules. -

W426-0113



Working pressure by Rules. - Are the stays drilled at the outer ends. NO ✓ Margin stays: Diameter { At turned off part. 7/8" or Over threads. 1 1/8" }

No. of threads per inch. 9 ✓ Area supported by each stay. 3" ✓ Working pressure by Rules. -

Tubes: Material H. R. W. STEEL ✓ External diameter { Plain. 3" ✓ Stay. 3" ✓ Thickness { 3/16" - 3/8" ✓ No. of threads per inch. 9 ✓

Pitch of tubes. 4 1/8" x 4 1/4" ✓ Working pressure by Rules. - Manhole compensation: Size of opening shell plate. - Section of compensating ring. -

Outer row rivet pitch at ends. - Depth of flange if manhole flanged. 4 1/4" Top. 3 1/4" Bottom } IN END PLATE ✓ No. of rivets and diameter of rivet holes. -

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. - Working pressure by Rules. - Thickness of crown. - No. and diameter of stays. - Inner radius of crown. - Working pressure by Rules. -

How connected to shell. - Size of doubling plate under dome. - Diameter of rivet holes and of rivets in outer row in dome connection to shell. -

Type of Superheater. SUPERHEATER CO SMOKE TUBE TYPE Manufacturers of

Number of elements. 47 Material of tubes. S. D. STEEL Internal diameter and thickness of tubes. 17 7/8" x 2 1/2 7/8"

Material of headers. - Tensile strength. - Thickness. - Can the superheater be shut off the boiler be worked separately. (NO) Is a safety valve fitted to every part of the superheater which can be shut off from the boiler. YES ✓

Area of each safety valve. 1.767 sq" ✓ Are the safety valves fitted with easing gear. YES ✓ Working pressure as Rules. - Pressure to which the safety valves are adjusted. 230 lbs per sq" ✓ Hydraulic test pressure. 660 lbs per sq" ✓ forgings and castings. 660 lbs per sq" ✓ and after assembly in place. 660 lbs per sq" ✓ Are drain cocks valves fitted to free the superheater from water where necessary. YES ✓

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,

Dates of Survey { During progress of work in shops - - } while building { During erection on board vessel - - }

Are the approved plans of boiler and superheater for GENERAL MANAGER (If not state date of approval)

Total No. of visits.

Is this Boiler a duplicate of a previous case. YES ✓ If so, state Vessel's name and Report No. 1166.

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

These Boilers have been constructed under Special Survey and in accordance with the approved plans for a working pressure of 220 lbs per square inch.
The materials and workmanship have been found good.
Upon completion these boilers were tested, in the presence of the undersigned, by hydraulic pressure to 380 lbs per square inch and were found tight and sound & showed no signs of weakness at that pressure.

Survey Fee ... £ : Travelling Expenses (if any) £ :

When applied for, 19... When received, 19...

John Findlay per pro. A. O. Oxford.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

Rpt. 13.

REP

Date of writing Report. 16.

No. in Survey held Reg. Book.

38360 on the

Built at W. HART

Owners MARGARET

Electrical Installation

Is vessel fitted for

Have plans been submitted

Heating 220 Power.

has the governing been

trip switch as per Rule.

if not compound wound

arranged to run in para

POSITIVE

test for machines under

of the generators as per

near unprotected combu

injury and damage from

contact. YES S

GENERATORS

are they in accessible

and oil. YES, if

material is used for the

semi-insulating materi

Is the construction as

to pilot and earth tan

side of switches. YES

BREAKER

and for each outgoing

PATTERN H

Are compartments co

ammeters. 2

equaliser connection.

Switches, Circuit

per Rule. YES

protection devices co

did they operate.

Cables, are they ins

state maximum fall

square inch and abov



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