

REPORT ON BOILERS.

Received at London Office.....

of writing Report... 19-1-1953 When handed in at Local Office... 19-1-1953 Port of WEST HARTLEPOOL

Survey held at WEST HARTLEPOOL Date, First Survey 25th November, 1952 Last Survey 9th January, 1953

on the M.V. "SILVERBROOK" (Number of Visits... 7.....) Tons Gross..... Net.....

Built at Middlesbrough By whom built Smiths & Co. Ltd Yard No. FW 1225 When built.....

Engines made at..... By whom made..... Engine No..... When made.....

Boilers made at West Hartlepool By whom made Gen. M. & W. (Wm. Gray & Co. Ltd) Boiler No. L 416 When made 1953

Horse Power..... Owners..... Port belonging to.....

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Colvilles Ltd. (Letter for Record.....)

Total Heating Surface of Boilers 5814 sq ft Is forced draught fitted Yes Coal or Oil fired Oil or Gas

and Description of Boilers Two Single Ended Multitubular Working Pressure 180 lbs/sq in

Tested by hydraulic pressure to 320 lbs/sq in Date of test 8.23.12.52 No. of Certificate 419223 Can each boiler be worked separately.....

Area of Firegrate in each Boiler Oil Fuel No. and Description of safety valves to each boiler 2 1/2" DIA. DOUBLE SPRING I.H.L.

Area of each set of valves per boiler per Rule 9.81 Pressure to which they are adjusted 180 Are they fitted with easing gear Yes

Use of donkey boilers, state whether steam from main boilers can enter the donkey boiler —

Least distance between boilers or uptakes and bunkers or woodwork Approx - 2'-0" Is oil fuel carried in the double bottom under boilers No

Least distance between shell of boiler and tank top plating Boiler Flat - 18" Is the bottom of the boiler insulated Yes

Least internal dia. of boilers 15'-0" Length 12'-6" Shell plates: Material S.M. Steel Tensile strength 29-33 Yons

Thickness 1 1/32" Are the shell plates welded or flanged No Description of riveting: circ. seams { end A.R. Lab inter.....

Longitudinal seams Y.R.D.B. Straps Diameter of rivet holes in { circ. seams 1 5/16" long. seams 1 5/16" Pitch of rivets { 14'-01" 8 15/16"

Percentage of strength of circ. end seams { plate 64.3 rivets 43.9 Percentage of strength of circ. intermediate seam { plate..... rivets.....

Percentage of strength of longitudinal joint { plate 85.3 rivets 92.4 Working pressure of shell by Rules 184.9

Combined 89.1

Thickness of butt straps { outer 1 5/16" inner 1 1/16" No. and Description of Furnaces in each Boiler 3. Deighon Section

Material S.M. Steel Tensile strength 26-30 Yons Smallest outside diameter 3'-8 5/8"

Thickness of plates { crown 9/16" bottom 9/16" Description of longitudinal joint Welded

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

Plates in steam space: Material S.M. Steel Tensile strength 26-30 Yons Thickness 1 1/4" Pitch of stays 19 3/4" x 20"

Are stays secured Double nuts Working pressure by Rules.....

Front plates: Material S.M. Steel Tensile strength 26-30 Yons Thickness 2 1/32"

Back plates S.M. Steel Tensile strength 26-30 Yons Thickness 1 1/16"

Pitch of stay tubes in nests 9 3/8" Pitch across wide water spaces 13 1/2" Working pressure { front..... back.....

Boilers to combustion chamber tops: Material S.M. Steel Tensile strength 28-32 Yons Depth and thickness of girder

Centre 9 1/2 x 13/4 (2-1/8" plates) Length as per Rule 2'-11 21/32" Distance apart 9 1/8" No. and pitch of stays

Pitch 3 at 8 3/4" Working pressure by Rules..... Combustion chamber plates: Material S.M. Steel

Tensile strength 26-30 Yons Thickness: Sides 2 1/32" Back 2 1/32" Top 2 1/32" Bottom 2 3/32"

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

Working pressure by Rules..... Front plate at bottom: Material S.M. Steel Tensile strength 26-30 Yons

Thickness 2 1/32" Lower back plate: Material S.M. Steel Tensile strength 26-30 Yons Thickness 1 3/16"

Pitch of stays at wide water space 13 3/4 x 9 1/2" Are stays fitted with nuts or riveted over Nuts

Working pressure..... Main stays: Material S.M. Steel Tensile strength 28-32 Yons

At body of stay 3 1/8" No. of threads per inch 6 Area supported by each stay.....

Over threads..... Working pressure by Rules..... Screw stays: Material S.M. Steel Tensile strength 26-30 Yons

At turned off part 1 5/8" No. of threads per inch 9 Area supported by each stay.....

Over threads.....

Working pressure by Rules..... Are the stays drilled at the outer ends 10 ✓ Margin stays: Diameter { At turned off part..... 1 1/8" & 2" pt. 4c.
No. of threads per inch..... 9 Area supported by each stay..... Working pressure by Rules.....
Tubes: Material A.R.W. Steel External diameter { Plain..... 2 1/2" "5 wire 1/16" Thickness { 3/16" 1/4" & 5/16" No. of threads per inch..... 9 ✓
Pitch of tubes..... 3 3/4" x 3 3/4" Working pressure by Rules..... Manhole compensation: Size of opening.....
shell plate..... 20" x 16" Section of compensating ring..... 3'-1" x 2'-9" x 1 1/32" No. of rivets and diameter of rivet holes..... 32 - 1 1/16"
Outer row rivet pitch at ends..... 9 1/8" Depth of flange if manhole flanged..... Steam Dome: Material.....
Tensile strength..... Thickness of shell..... Description of longitudinal joint.....
Diameter of rivet holes..... Pitch of rivets..... Percentage of strength of joint { Plate.....
Internal diameter..... Working pressure by Rules..... Thickness of crown..... No. and diameter.....
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..... 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
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 casing gear..... Working pressure as
Rules..... Pressure to which the safety valves are adjusted..... Hydraulic test press
tubes..... forgings and castings..... and after assembly in place..... Are drain cock
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 THE GENERAL MARINE ENGINE WORKS
(E. Gray & Co. Ltd.)

Dates of Survey while building { During progress of work in shops - - - 1952 Nov. 25 Dec. 1-5-9-23.
During erection on board vessel - - - 1953 Jan. 5-9.
Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) Yes GENERAL MANAGER
Total No. of visits..... 7

Is this Boiler a duplicate of a previous case Yes. If so, state Vessel's name and Report No. Boiler L 419. (Hpl. Rpt No. 1930)

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

The boilers referred to herein have been constructed under Special Survey in accordance with the Approved Plans, Secretary's letters, and the Rules of the Society. The material and workmanship are good.

The boilers have been despatched to Middlesbrough for installation in Messrs Smiths & Co. ship No. E.W. 1225.

These boilers have been securely fitted on board, tried under working conditions and found satisfactory. On completion the safety valves were adjusted under steam to 180 lbs./sq. in.

U.C. Smith

Survey Fee £ 90 : 0 : 0 } When applied for..... 19-1-1953.
Travelling Expenses (if any) £ : : } When received..... 19.....

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute.....

Assigned.....

See F.E. mch. rpt.

FRI. 22 MAY 1953



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Foundation