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WEST HARTLEPOOL

16. 19259

REPORT ON BOILERS.

No. 108433

Received at London Office... 6 JUN 1951

Date of writing Report... 5.6.51 When handed in at Local Office... 5.6.51 Port of... NEWCASTLE-on-TYNE
No. in Reg. Book... 21180 Survey held at... WALLSEND-ON-TYNE Date, First Survey... 5.4.50 Last Survey... 31.5.51
on the... M.V. "CALLISTO" (Number of Visits... 38...)
Built at... SUNDEELAND By whom built... SHOOT Bros L^{td} Yard No... 506 When built... 1951
Engines made at... HARTLEPOOL By whom made... RICHARDSON'S, WESTGARTH & CO. L^{td} Engine No... 3203 When made... 1951
Boilers made at... WALLSEND By whom made... NORTH EASTERN MACHINE ENG. CO (1938) L^{td} Boiler No... 3203 When made... 1951
Nominal Horse Power... 2799 1/2 = 233 Owners... HUDIG & VEDEL N.V. Port belonging to... ROTTERDAM

MULTITUBULAR BOILERS — MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel... COLVILLES L^{td} (Letter for Record... G...)
Total Heating Surface of Boilers... 2799 sq ft Is forced draught fitted... YES Coal or Oil fired... OIL
No. and Description of Boilers... ONE SINGLE ENDED Working Pressure... 150 LBS/SQ IN
Tested by hydraulic pressure to... 275 LBS/SQ IN Date of test... 19.2.51 No. of Certificate... 1436 Can each boiler be worked separately... YES
Area of Firegrate in each Boiler... 10.58 SQ FT No. and Description of safety valves to each boiler... 2-2 3/4" ENCLOSED IMPROVED HIGH LIFT.
Area of each set of valves per boiler... 11.88 SQ FT Pressure to which they are adjusted... 11.88 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... NO MAIN BOILERS
Smallest distance between boilers or uptakes and bunkers or woodwork... 2'-0 1/2" Is oil fuel carried in the double bottom under boilers... NO
Smallest distance between shell of boiler and tank top plating... 2'-0 1/2" Is the bottom of the boiler insulated... YES
Largest internal dia. of boilers... 14'-10" Length... 11'-6" OVERALL Shell plates: Material... MILD STEEL Tensile strength... 29/33 TONS/SQ IN
Thickness... 1" Are the shell plates welded or flanged... NO Description of riveting: circ. seams... 3/2" end... DR OVERLAP
Pitch of rivets... 7 1/2"
Percentage of strength of circ. end seams... plate... 68 rivets... 45 Percentage of strength of circ. intermediate seam... plate... 85.8 rivets... 88.1
Percentage of strength of longitudinal joint... combined... 89.3 Working pressure of shell by Rules... 152.6 LBS/SQ IN
Thickness of butt straps... outer... 3/4" inner... 7/8" No. and Description of Furnaces in each Boiler... THREE CORRUGATED DEIGHTON TYPE
Material... MILD STEEL Tensile strength... 26/30 TONS/SQ IN Smallest outside diameter... 3'-5 1/8"
Length of plain part... top... 7/16" bottom... 7/16" Description of longitudinal joint... WELD.
Dimensions of stiffening rings on furnace or c.c. bottom... NONE Working pressure of furnace by Rules... 151.7 LBS/SQ IN
Stays in steam space: Material... MILD STEEL Tensile strength... 26/30 TONS/SQ IN Thickness... 1 3/16" Pitch of stays... 20 1/4" x 21 1/4"
Are stays secured... NOTTED IN & OUT Working pressure by Rules... 152.5 LBS/SQ IN
Stays plates: Material... MILD STEEL Tensile strength... 26/30 TONS/SQ IN Thickness... 25/32"
Pitch of stay tubes in nests... 7 1/2" Pitch across wide water spaces... 14" Working pressure... front... 164 LBS/SQ IN back... 191 LBS/SQ IN
Boilers to combustion chamber tops: Material... MILD STEEL Tensile strength... 28/32 TONS/SQ IN Depth and thickness of girder... 8 1/2" x 5/8" DOUBLE
Length as per Rule... 2'-9" Distance apart... 8 1/2" No. and pitch of stays... 22 10 1/2"
Working pressure by Rules... 160 LBS/SQ IN Combustion chamber plates: Material... MILD STEEL
Tensile strength... 26/30 TONS/SQ IN Thickness: Sides... 2 1/32" Back... 1 1/16" Top... 2 1/32" Bottom... 2 1/32"
Pitch of stays to ditto: Sides... 10 1/2" x 8 1/2" Back... 10" x 10 1/8" Top... 8 1/2" x 10 1/2" Are stays fitted with nuts or riveted over... NUTS
Working pressure by Rules... 154.5 LBS/SQ IN Front plate at bottom: Material... MILD STEEL Tensile strength... 26/30 TONS/SQ IN
Thickness... 25/32" Lower back plate: Material... MILD STEEL Tensile strength... 26/30 TONS/SQ IN Thickness... 25/32"
Pitch of stays at wide water space... 14" Are stays fitted with nuts or riveted over... NUTS
Working pressure... 165.6 LBS/SQ IN Main stays: Material... MILD STEEL Tensile strength... 28/32 TONS/SQ IN
Pitch of stays... 2 3/4" No. of threads per inch... 6 Area supported by each stay... 20 1/4" x 21 1/4"
Working pressure by Rules... 152.3 LBS/SQ IN Screw stays: Material... MILD STEEL Tensile strength... 26/30 TONS/SQ IN
Pitch of stays... 1 5/8" No. of threads per inch... 9 Area supported by each stay... 10" x 10 1/8"

Working pressure by Rules. 150 LBS/p Are the stays drilled at the outer ends No Margin stays: Diameter At turned off part 1 1/8" 2"
 No. of threads per inch 9 Area supported by each stay 160 sq in Working pressure by Rules 155 LBS/p
 Tubes: Material SEAMLESS STEEL External diameter 2 1/2" Thickness 3/16" No. of threads per inch 9
 Pitch of tubes 3 3/4" x 3 3/4" Working pressure by Rules 218.5 LBS/p Manhole compensation: Size of opening in
 shell plate NONE Section of compensating ring ✓ No. of rivets and diameter of rivet holes ✓
 Outer row rivet pitch at ends ✓ 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 ✓
 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 pitch
 of rivets in outer row in dome connection to shell ✓
 Type of Superheater NONE Manufacturers of ✓
 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 casing gear ✓ Working pressure as per
 Rules ✓ 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,
Harry Hunter Manufacturer

Dates of Survey while building During progress of work in shops - - - During erection on board vessel - - -
1.1950 APR. 5, SEPT. 8, NOV. 6, 7, 22, DEC. 28, 1951 Are the approved plans of boiler and superheater forwarded herewith YES
JAN. 10, 23, 29, FEB. 6, 19, 22, 27, MAR. 13, 14, 15, 19, 20, 23, 29, 30,
APR. 3, 4, 5, 9, 10, 11, 12, 16, 18, 23, 24, MAY. 7, 9, 22, 24, 25, 31. (If not state date of approval.)
 Total No. of visits 38

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.) The boiler has been constructed
under Special Survey in accordance with the approved plan of the Society's Rules.
The materials & workmanship are good.
The boiler has been satisfactorily installed on board.

Survey Fee 233 Mk £ 46 : 12 : 0 When applied for 5 JUN 1951
 Travelling Expenses (if any) £ : : When received 19

J. A. Onle
 Engineer Surveyor to Lloyd's Register of Shipping.

TUES. 31 JUL 1951

Committee's Minute

Assigned See F.E. mchey rpt