

Holl. Rpt 20274.

15 SEP 1954

# REPORT ON BOILERS.

No. 111314

Received at London Office 17 APR 1954

Report 19 When handed in at Local Office 13-4-1954 Port of NEWCASTLE-ON-TYNE  
 Survey held at Date, First Survey 8-12-53 Last Survey 4-3-1954  
 (Number of Visits 33) Tons { Gross 1 Net 4  
 the MY "CYGNUS"  
 13 BERTON ONTRES By whom built FURNESS SB. CO. LTD Yard No 463. When built  
 at HARTLEPOOL By whom made RICHARDSONS WESTGARTH G. LTD Engine No 3242 When made  
 at WALSEND TYNE By whom made NORTH EASTERN MARINE ENG. CO (1938) LTD Boiler No 3242 When made 1954  
 Owners SOC. TRANSOCEANIC. CANOPUS. S.A. Port belonging to

BULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Mark of Steel COLVILLE  
 Marking Surface of Boilers  $2 \times 3437 = 6874$  sq. ft. Of Superheaters 1580 sq. ft.  
 Test Register Book Is forced draught fitted Yes Coal or Oil fired OIL  
 Description of Boilers Two SINGLE ENDED MULTI. SCOTCH. Working Pressure 150 LB/IN  
 Hydraulic pressure to 275 LB/IN Date of test 4.3.54 No. of Certificate 1565 NWC Can each boiler be worked separately Yes  
 Grate in each Boiler No. and Description of safety valves to each boiler Two - 3" ENCLOSED IMPROVED HIGH LIFT.  
 Set of valves per boiler { per Rule 13.2 0" as fitted 14.1 0" Pressure to which they are adjusted 150 LB/IN Are they fitted with easing gear Yes  
 Donkey boilers, state whether steam from main boilers can enter the donkey boiler No MAIN BOILER  
 Distance between boilers or uptakes and bunkers or woodwork Is oil fuel carried in the double bottom under boilers  
 Distance between shell of boiler and tank top plating Is the bottom of the boiler insulated Yes  
 External dia. of boilers 15'-9 7/8" Length 12'-0" Shell plates: Material MILD STEEL Tensile strength 29-33 TONS  
 Welded, state name of welding Firm Have all the requirements of the Rules for Class 1 vessels  
 Thickness 1 1/16" Are the shell plates welded or flanged No Description of riveting: circ. seams { end D.R. LAP. inter 3.13"  
 TREBLE R.D. BUTT STRAPS Diameter of rivet holes in { circ. seams 1 1/16 long. seams 1 1/16 Pitch of rivets { plate 7.125" rivets 7  
 of strength of circ. end seams { plate 66.1 rivets 42.8 Percentage of strength of circ. intermediate seam { plate 85.08 rivets 87.25  
 of strength of longitudinal joint { plate 85.08 rivets 87.25 W.P. SHELL PER RULES 151.3 LB/IN  
 of butt straps { outer 13/16" inner 15/16" No. and Description of Furnaces in each Boiler THREE DEIGHTON CORRUGATED  
 MILD STEEL Tensile strength 26-30 TONS/IN Smallest outside diameter 31 9 3/4"  
 plain part { top 36 7/32" bottom 36 7/32" Thickness of plates 1 1/16" Description of longitudinal joint WELD  
 of stiffening rings on furnace or c.c. bottom NONE  
 in steam space: Material MILD STEEL Tensile strength 26-30 TONS Thickness 1 9/32" Pitch of stays 24" x 20 1/2"  
 stays secured DOUBLE NUTS  
 Material { front MILD STEEL back MILD STEEL Tensile strength { 26-30 TONS/IN Thickness { 1 3/16" 25/32"  
 of stay tubes in nests 9 1/8" Pitch across wide water spaces 13 1/2" x 7"  
 combustion chamber tops: Material MILD STEEL Tensile strength 29-33 TONS/IN Depth and thickness of girder  
 7 1/4" x 3/4" Length as per Rule 36 7/32" Distance apart 7" No. and pitch of stays  
 CONTINUOUS DOUBLE FILLET WELDS Combustion chamber plates: Material MILD STEEL  
 length 26-30 TONS/IN Thickness: Sides 1 1/16" Back 1 1/16" Top 1 1/16" Bottom 1 1/16"  
 stays to ditto: Sides 9 1/2" x 10 1/2" Back 8 1/2" x 10 1/2" Top 7" Are stays fitted with nuts or riveted over BACK E.W. THRU' PLATES  
 at bottom: Material MILD STEEL Tensile strength 26-30 TONS/IN Thickness 3/4"  
 13/16" Lower back plate: Material MILD STEEL Tensile strength 26-30 TONS Thickness 3/4"  
 of stays at wide water space 13 1/2" x 10 1/2" Are stays fitted with nuts or riveted over E.W. THRU' PLATES  
 Material MILD STEEL Tensile strength 28-32 TONS/IN  
 At body of stay 3 1/4" No. of threads per inch 6  
 Over threads 3 1/2"  
 stays: Material MILD STEEL Tensile strength 26-30 TONS/IN  
 At turned off part 1 1/2" 1 3/4" No. of threads per inch 15/8 - 9 TPI 1 1/2" 1 3/4" plain Bars  
 Over threads E.W. 15/8"



Are the stays drilled at the outer ends No. ✓ Margin stays: Diameter At turned off part ✓  
 No. of threads per inch —  
 Tubes: Material MILD STEEL External diameter 2 1/2" ✓ Plain 2 1/2" ✓ Thickness 8 W.G. ✓ No. of threads per inch —  
 Pitch of tubes 3 1/2" x 3 3/4" ✓ Manhole compensation: —  
 shell plate — Section of compensating ring — No. of rivets and diameter of rivet holes —  
 Outer row rivet pitch at ends — Depth of flange if manhole flanged 4" - 3" ✓ Steam Dome: Material —  
 Tensile strength — Thickness of shell — Description of longitudinal joint —  
 Diameter of rivet holes — Pitch of rivets — Percentage of strength of joint —  
 Internal diameter — Thickness of crown —  
 stays — Inner radius of crown —  
 How connected to shell — Size of doubling plate under dome — Diameter of rivet —  
 of rivets in outer row in dome connection to shell —  
 Type of Superheater None. Smoke Tube Manufacturers of TUBES. LTD.  
APPLEBY - FRODINGHAM  
 Number of elements 230 Material of tubes SOLID DRN. STEEL Internal diameter and thickness of tubes 1 5/8"  
 Material of headers MILD STEEL BILLETS Tensile strength 26-30 TONS Thickness 1 5/8" Can the superheater  
 the boiler be worked separately Yes Is a safety valve fitted to every part of the superheater which can be shut off from the boiler  
 Area of each safety valve 3.14 16 sq. ins Are the safety valves fitted with easing gear Yes ✓  
 Pressure to which the safety valves are adjusted —  
 tubes 1500 LB / 0 forgings and castings 450 LB / 0 and after assembly in place 300 LB / 0  
 valves fitted to free the superheater from water where necessary Yes ✓ See also NWE. cert. 44  
 Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Yes ✓

The foregoing is a correct description  
P. L. H.

Dates of Survey while building During progress of work in shops - 11.15.18.20.21.25.27.28. Feb. 1.2.3.4.5. 9.10.12.15.17.18.19.22.23.24.25.  
During erection on board vessel - Mar. 2.4.  
 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)  
 Total No. of visits 33

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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)  
These boilers have been constructed under special Survey in accordance with approved plans and the requirements of the Rules of their class to my satisfaction.  
The superheaters have been made & tested under special Survey in accordance with the approved plans & the requirements of the Rules.  
The materials and workmanship are good.  
The boilers & superheaters have been despatched to the ship for installation in their Hull No 463.

#  
20.9.54

Const. Doulay Boilers  
 Survey Fee £109: 10: 0.  
 Travelling Expenses (if any) £ —

When applied for 15 APR 1954  
 When received —

L. H. Hudson  
 Engineer Surveyor to Lloyd's Register

Committee's Minute FRIDAY 15 OCT 1954  
 Assigned See Rpt. 4 h.