

REPORT ON BOILERS.

No. 13662

Received at London Office 14 APR 1944

Date of writing Report 19 When handed in at Local Office 11.4.1944 Port of Belfast.
 No. in Reg. Book. Survey held at Belfast. Date, First Survey Vitals included in 7-2. report (w. 2) Last Survey 30th March 1944.
 on the M.V. "NASSARIUS" (Number of Visits) Gross 8246 Tons Net 4768.
 Built at Belfast By whom built Harland & Wolff Ltd Yard No. 1195 When built 1944
 Engines made at By whom made Engine No. When made
 Boilers made at Belfast By whom made Harland & Wolff Ltd. Boiler No. 8459 When made 1943.
 Nominal Horse Power Owners Anglo Paxon Petroleum Co. Ltd. Port belonging to London.

MULTITUBULAR BOILERS ~~MAIN, AUXILIARY, OR~~ DONKEY.

Manufacturers of Steel Colvilles Ltd. (Letter for Record 5)
 Total Heating Surface of Boilers 2 x 1918 sq ft Is forced draught fitted Yes Coal or Oil fired EXH. GAS.
 No. and Description of Boilers 2 Single ended multitubular Working Pressure 150 lbs/sq in.
 Tested by hydraulic pressure to 275 lbs/sq in. Date of test 24.10.42 No. of Certificate 1208 5th AB. PORT Can each boiler be worked separately yes.
 Area of Firegrate in each Boiler No. and Description of safety valves to each boiler 2 1/4" dia double spring Lockburis, I.H.L.
 Area of each set of valves per boiler per Rule 3.63 sq inches 7.26 Pressure to which they are adjusted 150 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 will clear Is oil fuel carried in the double bottom under boilers
 Smallest distance between shell of boiler and tank top plating 30" Is the bottom of the boiler insulated yes
 Largest internal dia. of boilers 12'-6" Length 11'-0" Shell plates: Material Steel Tensile strength 29-33 tons
 Thickness 7/8" Are the shell plates welded or flanged No Description of riveting: circ. seams end inter. DR
 long. seams TR. DBS Diameter of rivet holes in circ. seams 1 3/32" Pitch of rivets 3.038"
 Percentage of strength of circ. end seams plate 64 rivets 56.1 Percentage of strength of circ. intermediate seam plate rivets 84.6
 Percentage of strength of longitudinal joint plate rivets 106.7 combined 90.5 Working pressure of shell by Rules 154.6 lbs/sq in.
 Thickness of butt straps outer 1 1/16" inner 1 3/16" No. and Description of Furnaces in each Boiler Two Corrugated "Brighton" Section
 Material Steel Tensile strength 26-30 tons Smallest outside diameter 42"
 Length of plain part top bottom Thickness of plates crown 1/2" bottom Description of longitudinal joint Fire weld
 Dimensions of stiffening rings on furnace or c.e. bottom
 End plates in steam space: Material Steel Tensile strength 26-30 tons Thickness 15/16" Pitch of stays various
 How are stays secured Nuts and washers inside and outside
 Tube plates: Material front Steel Tensile strength 26-30 tons Thickness 7/8"
 back Steel Tensile strength 26-30 tons Thickness 13/16"
 Mean pitch of stay tubes in nests 8.54" Pitch across wide water spaces 13 1/2"
 Girders to combustion chamber tops: Material Steel Tensile strength 28-32 tons Depth and thickness of girder
 at centre 8 1/4 x 2 x 3/4 Length as per Rule 29.94 Distance apart 11" No. and pitch of stays
 in each 3 @ 7 1/4" Combustion chamber plates: Material Steel
 Tensile strength 26-30 tons Thickness: Sides 3/4" Back 3/4" Top 3/4" Bottom 3/4"
 Pitch of stays to ditto: Sides 8 1/4 x 9 3/4 Back 8 x 9 1/4 Top 7 1/4 x 11 Are stays fitted with nuts or riveted over all other rivets over
 Front plate at bottom: Material Steel Tensile strength 26-30 tons
 Thickness 7/8" Lower back plate: Material Steel Tensile strength 26-30 tons Thickness 15/16"
 Pitch of stays at wide water space 13" Are stays fitted with nuts or riveted over riveted over.
 Main stays: Material Steel Tensile strength 28-32 tons
 Diameter At body of stay, or over threads 2 1/2" No. of threads per inch 6
 Screw stays: Material Steel Tensile strength 26-30 tons
 Diameter At turned off part, or over threads 1 1/2 x 1 5/8 x 2 No. of threads per inch 9

Are the stays drilled at the outer ends no ✓

Margin stays: Diameter { At turned off part, 1 7/8" or Over threads

No. of threads per inch 9 ✓

Tubes: Material Steel ✓ External diameter { Plain 2 1/2 Stay 2 1/2 Thickness { 10 LSG 1/4 5/16 3/8 No. of threads per inch 9 ✓

Pitch of tubes 3 3/4 x 3 5/8 ✓ Manhole compensation: Size of opening in shell plate 18" x 14" ✓ Section of compensating ring 2[10 x 3/4 + (1 x 1)] ✓ No. of rivets and diameter of rivet holes 28 @ 1 7/32 ✓

Outer row rivet pitch at ends 9 ✓ Depth of flange if manhole flanged 3 3/8 - probe plate ✓ 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 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 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 casing 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

For HARLAND & WOLFE LIMITED
The foregoing is a correct description,
W. M. Lally Manufacturer.
Secretary

Dates of Survey { During progress of work in shops - - } Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)

while building { During operation on board vessel - - } Total No. of visits

Is this Boiler a duplicate of a previous case yes. If so, state Vessel's name and Report No. M.V. "NORRISIN"

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been constructed under special Survey in accordance with the Rules and approved plans. The materials and workmanship are good. S.

These boilers have been efficiently installed on board the vessel.
J. D. Philston.

These boilers have been satisfactorily fitted on board, tried under full working conditions with satisfactory results.

Safety valves adjusted under steam to 150 lbs per sq. inch and found in order.

Safety valve compression washer sizes Port Boiler P. 3/8" Starb 1/32 Starboard Boiler P. 1/32 S. 5/16" G. E. Murdoch.

Survey Fee £ 25 : 10 : 0 } When applied for, 17/1 1944

Travelling Expenses (if any) £ : ✓ : } When received, 19

L. Shaw.

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

GLASGOW 12 APR 1944

Assigned



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Foundation