

REPORT ON BOILERS.

No. 7904

Received at London Office

15 NOV 1943

of writing Report Sept. 29, 1943 When handed in at Local Office Oct. 7, 1943 Port of Baltimore, Maryland

in Survey held at Baltimore, Maryland

Date, First Survey 9th March,

Last Survey 27th July, 1943

on the S.S. "LEONARDO da Vinci"

(Number of Visits -)
Tons { Gross 7515
Net 4205

Built at Spezia By whom built Ansaldo San Giorgia Yard No. 192 When built 1925

Lines made at Sampierdarena By whom made Gio Ansaldo & Co. Engine No. - When made -

Boilers made at Sampierdarena By whom made Gio Ansaldo & Co. Boiler No. - When made -

Horse Power 1116 Owners Ministry of War Transport Port belonging to Mombassa

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Not Known (Letter for Record)

Heating Surface of Boilers 2 @ 1073 = 2146 sq. ft. Is forced draught fitted Yes Coal or Oil fired Oil Fired

And Description of Boilers 2 Scotch Auxiliary Working Pressure 200 lbs.

Tested by hydraulic pressure to 350 lbs. Date of test 20-5-43 No. of Certificate - Can each boiler be worked separately Yes

Area of Firegrate in each Boiler Oil Fired No. and Description of safety valves to each boiler 2

Area of each set of valves per boiler { per Rule 8.32 sq. in.
as fitted 9.82 sq. in. Pressure to which they are adjusted 200 lbs. Are they fitted with easing gear Yes

Are donkey boilers, state whether steam from main boilers can enter the donkey boiler -

Least distance between boilers or uptakes and bunkers or woodwork 2' 5" Is oil fuel carried in the double bottom under boilers Yes

Least distance between shell of boiler and tank top plating 2' 8" Is the bottom of the boiler insulated No

Least internal dia. of boilers 10' 2" Length 9' 3" Shell plates: Material Steel Tensile strength Not known

Thickness 15/16" Are the shell plates welded or flanged Flanged Description of riveting: circ. seams { end lap. DR.
inter. lap. DR.Seams Double Butt Strap Diameter of rivet holes in { circ. seams 1 3/16" Pitch of rivets { 3 1/4"
long. seams 1" 7 1/4"Percentage of strength of circ. end seams { plate 63.46
rivets 59.21 Percentage of strength of circ. intermediate seam { plate 63.46
rivets 59.21Percentage of strength of longitudinal joint { plate 86.21
rivets 89.02
combined 90.21 Working pressure of shell by Rules 201.6 lbs.Thickness of butt straps { outer 3/4"
inner 13/16" No. and Description of Furnaces in each Boiler 2 "Adamson"

Material Steel Tensile strength Not known Smallest outside diameter 32 3/4"

Thickness of plates { crown 1/2"
bottom 1/2" Description of longitudinal joint lap. S.R.?

Dimensions of stiffening rings on furnace or c.c. bottom flange of furnace 3 1/2 x 1/2" Working pressure of furnace by Rules 203 lbs. 1785

Plates in steam space: Material Steel Tensile strength Not known Thickness 7/8" Pitch of stays 13 3/4"

Are stays secured Nuts on inside, Nuts and rivetted washers outside. Working pressure by Rules 265 lbs.

Plates: Material { front Steel
back Steel Tensile strength Not known Thickness { 7/8"
25/32"Pitch of stay tubes in nests 8" Pitch across wide water spaces 13 3/4" Working pressure { front 433 lbs.
back 342 lbs.

Plates to combustion chamber tops: Material Steel Tensile strength Not known Depth and thickness of girder

Size 7 1/16 x 19/32 Length as per Rule 23.6" Distance apart 7 1/4" No. and pitch of stays

2 - 7 1/16" Working pressure by Rules 182 Combustion chamber plates: Material Steel

Thickness: Sides 21/32" Back 21/32" Top 21/32" Bottom 7/8"

Are stays fitted with nuts or rivetted over others rivetted Marginal with nuts

Working pressure by Rules 200 lbs. Front plate at bottom: Material Steel Tensile strength Not known

Thickness 7/8" Lower back plate: Material Steel Tensile strength Not known Thickness 7/8"

Are stays at wide water space 12 1/4 Are stays fitted with nuts or rivetted over Fitted with nuts

Working Pressure 220 lbs. Main stays: Material Steel Tensile strength Not known

At body of stay, 2 9/32" No. of threads per inch 12 Area supported by each stay 13 3/4 x 13 3/4"

Over threads 2 1/2" Screw stays: Material Steel Tensile strength

At turned off part, 1 1/4" No. of threads per inch 12 Area supported by each stay 7 1/16 x 7 1/16"

Over threads 1 3/8"

Working pressure by Rules 200 Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, 1 5/8" or Over threads 1 3/4" Working pressure by Rules 200
No. of threads per inch 12 Area supported by each stay 85 sq. ins. Working pressure by Rules 200
Tubes: Material External diameter { Plain 2 1/2" Thickness { 9 B.W.G. No. of threads per inch 9
Pitch of tubes 4" Working pressure by Rules 230 lbs Manhole compensation: Size of opening 34 - 1 1/16"
shell plate 15.75" x 19.68" Section of compensating ring 8.268"x3.15"x.945" No. of rivets and diameter of rivet holes 34 - 1 1/16"
Outer row rivet pitch at ends 7.086 Depth of flange if manhole flanged 3.15" 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 { Plate - Rivets -
Internal diameter - Working pressure by Rules - Thickness of crown - No. and diameter of rivets -
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 NONE 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 from the boiler -
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 easing gear - Working pressure -
Rules - Pressure to which the safety valves are adjusted - Hydraulic test pressure -
tubes - forgings and castings - and after assembly in place - Are drain cocks -
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,
Manufac

Dates of Survey { During progress of work in shops - - - } Are the approved plans of boiler and superheater forwarded herewith Not (If not state date of approval.)
while building { During erection on board vessel - - - } Total No. of visits -
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.) These boilers were not built under Special Survey, but have been reconditioned, hydraulically tested and seen under full steaming conditions. The workmanship and material appears to be good. They are eligible in my opinion to be classed and recorded.

Survey Fee ... £ SEE REPT : - : } When applied for, 19
Travelling Expenses (if any) £ 9 : - : } When received, 19

Committee's Minute

NEW YORK OCT 20 1943

Assigned 2 Aux. B. - 200 lbs

Wm. B. Cowin
Engineer Surveyor to Lloyd's Register of Shipping



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