

REPORT ON BOILERS.

No. 11375

Received at London Office 14 SEP 1936

Date of writing Report 8/9/ 1936 When handed in at Local Office 11/9/ 1936 Port of Trieste

No. in Reg. Book. 84182 Survey held at Newcastle & Monfalcone Date, First Survey July 13 Last Survey Aug 29 1936

on the M S Solarium (Number of Visits 1) Gross Tons 6239 Net Tons 3681

Master Built at Monfalcone By whom built Cantieri Riuniti dell'Adriatico Yard No. 1136 When built 1936

Engines made at Amsterdam By whom made N. V. Werkspoor Engine No. When made 1936

Boilers made at Newcastle By whom made R. W. Hawthorn Leslie & Co Boiler No. 9190 When made 1935

Nominal Horse Power — Owners Anglo Saxon Petroleum Co Port belonging to London

Please see also Newcastle Rep. No. 92836

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

Manufacturers of Steel The Steel Co. of Scotland (Letter for Record S)

Total Heating Surface of Boilers 2317 ft^2 Is forced draught fitted yes Coal or Oil fired Oil and waste gases

No. and Description of Boilers One Single Ended Multitubular Working Pressure 180 lbs

Tested by hydraulic pressure to 320 lbs Date of test 2.8.35 No. of Certificate 645 Can each boiler be worked separately —

Area of Firegrate in each Boiler — No. and Description of safety valves to each boiler Two 3/4 John Grant & Co

Area of each set of valves per boiler { per Rule 16.02 as fitted 16.58 Pressure to which they are adjusted 180 lbs 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 3 feet Is oil fuel carried in the double bottom under boilers —

Smallest distance between shell of boiler and tank top plating 3 feet Is the bottom of the boiler insulated yes

Largest internal dia. of boilers 14'-3 3/8" Length 11'-6" Shell plates: Material Steel Tensile strength 28-32 T.

Thickness 1 3/16" Are the shell plates welded or flanged no Description of riveting: circ. seams { end 8. P. lap inter. —

long. seams 8. P. lap Diameter of rivet holes in { circ. seams 1 1/4" long. seams — Pitch of rivets 3 1/2" 8 3/4"

Percentage of strength of circ. end seams { plate 64.28 rivets 48.5 Percentage of strength of circ. intermediate seam { plate — rivets —

Percentage of strength of longitudinal joint { plate 85.7 rivets 91 combined 89.7 Working pressure of shell by Rules 183 lbs

Thickness of butt straps { outer 29/32" inner 1 1/2" No. and Description of Furnaces in each Boiler 3 Morrison

Material Steel Tensile strength 26-30 T Smallest outside diameter 3'-7 1/8"

Length of plain part { top / bottom / Thickness of plates { crown 9/16" bottom / Description of longitudinal joint Weld

Dimensions of stiffening rings on furnace or c.c. bottom — Working pressure of furnace by Rules 189 lbs

End plates in steam space: Material Steel Tensile strength 36-30 T Thickness 1 7/32" Pitch of stays 17 3/4" x 21"

How are stays secured Nuts Working pressure by Rules 183 lbs

Tube plates: Material { front Steel back Steel Tensile strength 26/30 T Thickness { 15/16" 13/16"

Mean pitch of stay tubes in nests 9" Pitch across wide water spaces 13 3/4" Working pressure { front 242 lbs back 293 lbs

Girders to combustion chamber tops: Material Steel Tensile strength 28-32 T Depth and thickness of girder

at centre 10" x 1 1/2" Length as per Rule 2'-10 3/4" Distance apart 10" No. and pitch of stays

in each 328" Working pressure by Rules 194 lbs Combustion chamber plates: Material Steel

Tensile strength 26/30 T Thickness: Sides 45/64" Back 45/64" Top 45/64" Bottom 7/8"

Pitch of stays to ditto: Sides 8" x 8" Back 8" x 8" Top 8" x 10" Are stays fitted with nuts or riveted over inset

Working pressure by Rules 180 lbs Front plate at bottom: Material Steel Tensile strength 26-30 T

Thickness 15/16" Lower back plate: Material Steel Tensile strength 26-30 T Thickness 27/32"

Pitch of stays at wide water space 15" x 8" Are stays fitted with nuts or riveted over nuts

Working Pressure 200 lbs Main stays: Material Steel Tensile strength 28-32 T

Diameter { At body of stay 3" No. of threads per inch 6 Area supported by each stay 372.75

Working pressure by Rules 181 lbs Screw stays: Material Steel Tensile strength 26-30 T

Diameter { At turned off part 1 1/2" 1 5/8" No. of threads per inch 9 Area supported by each stay 64.7

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Working pressure by Rules 196 Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 1 3/4" or Over threads
No. of threads per inch 9 Area supported by each stay 92.7" Working pressure by Rules 197 76s
Tubes: Material Iron External diameter { Plain 2 3/4" Thickness { 9 1/16" No. of threads per inch 9
Pitch of tubes 4 x 3 7/8" Working pressure by Rules 215 76s Manhole compensation: Size of opening in
shell plate 21" x 17" Section of compensating ring 21 x 1 3/16 No. of rivets and diameter of rivet holes 40 @ 1 1/4
Outer row rivet pitch at ends 8 3/4" Depth of flange if manhole flanged 3 1/2" 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 _____ 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 { 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 easing 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 _____

The foregoing is a correct description,

Manufacturer.

Dates { During progress of see Newcastle Lpt 92836 Are the approved plans of boiler and superheater forwarded herewith
of Survey { work in shops - - - (If not state date of approval.)
while { During erection on July 13, 20. Aug 27, 29. Total No. of visits four
building { board vessel - - -

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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This Boiler has been con-
structed at Newcastle under special survey in accordance
with the Rules and approved plan and has been fitted at Man-
gione on board this vessel and securely fastened. The ar-
rangment of pipes in general and the oil fuel burning
arrangement have been fitted in accordance with
the approved plans. The OF system after joining has
been hydraulically tested satisfactorily. The safety val-
ves of Boiler adjusted to blow at 185 76s. Thickness of
adjusting washers: 1 1/2" for starb. valve. - 1 3/4" for port valve

Survey Fee ... £ 356 +

Travelling Expenses (if any) £ ✓ :

When applied for, 8/9/19

When received, 12.10.19

Engineer, Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 18 SEP 1936

Assigned see Tr. 11375



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