

REPORT ON BOILERS.

No. 1437

Received at London Office

7 AUG 1951

Date of writing Report 23rd. Feb. 1951 When handed in at Local Office

Port of HAMBURG

No. in Survey held at HAMBURG

Date, First Survey 3rd. August 1950

Last Survey 12th December 1950

933 on the Twin Screw Tanker "IRLAND"

(Number of Visits 19)

Gross 10000

Tons Net 3000

Built at Hamburg

By whom built Deutsche Werft A.G.

Yard No. 235

When built 1950

Engines made at Augsburg

By whom made Maschinenfabrik Augsburg Nürnberg

Cert. 681760

Engine No. 681770 When made 1943

Boilers made at Hamburg

By whom made Deutsche Werft A.G.

Boiler No. 1132/33 When made 1940

Nominal Horse Power 1170

Owners A/S Det Danske Franske Dampskibsselskab

Port belonging to Copenhagen

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Messrs. Rheinische Röhrenwerke A.G., Mülheim (Ruhr)

(Letter for Record S)

Total Heating Surface of Boilers each Boiler 200 sq. metres

Is forced draught fitted yes

Coal or Oil fired oil fired

Name and Description of Boilers Two Single Ended Multitubular Donkey Boiler

Working Pressure 12 kg/sq. cm

Tested by hydraulic pressure to 307 lbs. Date of test 12-10-50 No. of Certificate 361/362 Can each boiler be worked separately yes

Area of Firegrate in each Boiler -

No. and Description of safety valves to each boiler One Double Spring Loaded Ordinary Lift

Area of each set of valves per boiler { per Rule 9333
as fitted 11349 sq. mm

Pressure to which they are adjusted 12 kg/sq. cm 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 and bunkers 460 mm

Is oil fuel carried in the bunkers under boilers yes

Smallest distance between shell of boiler and bunker top plating 460 mm

Is the bottom of the boiler insulated yes

Largest internal dia. of boilers 4100 mm

Length 3373 mm

Shell plates: Material S.M. Steel Tensile strength 47-53 kg/sq. mm

Thickness 25,5 mm

Are the shell plates welded or flanged no

Description of riveting: circ. seams { end D.R. ✓
inter. -

Seams T.R. D.B.S. ✓

Diameter of rivet holes in { circ. seams 29 mm ✓
long. seams 29 mm ✓Pitch of rivets { 92,7 mm ✓
185 mm ✓Percentage of strength of circ. end seams { plate 68,7
rivets 42,8Percentage of strength of circ. intermediate seam { plate -
rivets -Percentage of strength of longitudinal joint { plate 84,3
rivets 100,5
combined 88,75

Working pressure of shell by Rules 12,8 kg/sq. cm

Thickness of butt straps { outer 25,5 mm
inner 25,5 mm

No. and Description of Furnaces in each Boiler three, Morison Type

Material S.M. Steel

Tensile strength 41-47 kg/sq. mm

Smallest outside diameter 974 mm

Length of plain part { top -
bottom -

Thickness of plates 12 mm

Description of longitudinal joint watertight lapwelded

Dimensions of stiffening rings on furnace or c.c. bottom -

Working pressure of furnace by Rules 12,4 kg/sq. cm

Plates in steam space: Material S.M. Steel

Tensile strength 41-47 kg/sq. mm

Thickness 24 mm

Pitch of stays 460 x 400 mm

Are stays secured Double nuts, Single washed

Working pressure by Rules 12,3 kg/sq. cm

Furnace plates: Material { front S.M. Steel
back S.M. SteelTensile strength { 41-47 kg/sq. mm ✓
41-47 kg/sq. mm ✓Thickness { 24, - mm ✓
22, - mm ✓

Pitch of stay tubes in nests 208 x 208 mm

Pitch across wide water spaces 360 mm

Working pressure { front 13,5 kg/sq. cm
back 14,16 kg/sq. cm

Plates to combustion chamber tops: Material S.M. Steel

Tensile strength 47-53 kg/sq. mm

Depth and thickness of girder

Centre 275 x 18 mm

Length as per Rule 709 mm

Distance apart 200 mm

No. and pitch of stays

Welded ✓

Working pressure by Rules as approved

Combustion chamber plates: Material S.M. Steel

Tensile strength 41-47 kg/sq. mm

Thickness: Sides 16,5 mm

Back 19 mm

Top 16,5 mm

Bottom 22 mm

Pitch of stays to ditto: Sides 200x215 mm

Back Centre 200 x 208 mm

girders welded ordinary stays fitted with nuts or riveted over riveted, margin

Working pressure by Rules -

Front plate at bottom: Material S.M. Steel

Tensile strength 41-47 kg/sq. mm

Thickness 24 mm

Lower back plate: Material S.M. Steel

Tensile strength 41-47 kg/sq. mm

Thickness 24 mm

Pitch of stays at wide water space 500 mm

Are stays fitted with nuts or riveted over

doubling plates riveted to end plates and double nuts.

Working Pressure 19,6 kg/sq. cm

Main stays: Material S.M. Steel

Tensile strength 41-47 kg/sq. mm

At body of stay, 62,58 mm

No. of threads per inch 6

Area supported by each stay 460 x 400 mm

Over threads 68, - mm

Screw stays: Material S.M. Steel

Tensile strength 41-47 kg/sq. mm

At turned off part, 35,38 mm

No. of threads per inch 9

Area supported by each stay 200 x 208 mm

Over threads 39 mm

Lloyd's Register
Foundation

003421-003428-0061

Working pressure by Rules 14.4 kg/sq. cm Are the stays drilled at the outer ends ☒ no Margin stays: Diameter $\begin{cases} \text{At turned off part, } 47.38 - 38.38 \text{ in.} \\ \text{or} \\ \text{Over threads } 51 - 42 - \text{in.} \end{cases}$

No. of threads per inch 9 Area supported by each stay $285 \times 200 \text{ mm}$ Working pressure by Rules 12.60 kgs/sq. cm

Tubes: Material S.M. Steel External diameter $\begin{cases} \text{Plain } 76 \text{ mm} \\ \text{Stay } 76 \text{ mm} \end{cases}$ Thickness $\begin{cases} 4 \text{ mm} \\ 4 \text{ mm} \end{cases}$ No. of threads per inch welded in

Pitch of tubes $104 \times 104 \text{ mm}$ Working pressure by Rules 14.5 kgs/sq. cm Manhole compensation: Size of opening $104 \times 104 \text{ mm}$

shell plate $320 \times 425 \text{ mm}$ Section of compensating ring $1127 \times 20 \text{ mm}$ No. of rivets and diameter of rivet holes $115 \times 29 \text{ mm}$

Outer row rivet pitch at ends 185 Depth of flange if manhole flanged $-$ Steam Dome: Material S.M. Steel

Tensile strength $41-47 \text{ kgs/sq. mm}$ Thickness of shell 14 mm Description of longitudinal joint welded

Diameter of rivet holes 31.8 mm Pitch of rivets $-$ Percentage of strength of joint $\begin{cases} \text{Plate } \\ \text{Rivets } \end{cases}$ welded

Internal diameter 872 mm Working pressure by Rules as approved Thickness of crown 16 mm No. and diameter of rivets $115 \times 29 \text{ mm}$

stays none Inner radius of crown 720 mm Working pressure by Rules as approved

How connected to shell flanged Size of doubling plate under dome 20 mm Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell $29 \text{ mm} - 114 \text{ mm}$

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 _____

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 while building	During progress of work in shops - -	Aug. 3, 23, 25, 28, 30, Sep. 2, 8, 13, 14, 22, 28, Oct. 3, 7, 9, 12 1950	Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
	During erection on board vessel - - -	Nov. 14, Dec. 5, 8, 12 1950	Total No. of visits 19

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 built under Special Survey in conformity with the Society's Rules. The scantlings and arrangements are in accordance with those shown on the approved plans. Materials and workmanship are good. They have been properly installed in the above vessel, examined under working conditions and found good.

Survey Fee	£ 40 : 0 : 0	When applied for,	19
Travelling Expenses (if any)	£	4	: 15 : 0	When received,	19

Bluenchard. & F.T. Coe
Engineer Surveyors *Sto Lloyd's Register of Ships*

Committee's Minute

TUES. 14 AUG 1951

Assigned

See F. E. mch. rpt.

© 2020

Lloyd's Register
Foundation