

REPORT ON BOILERS.

No. 22176

Received at London Office 29 JAN 1937

Date of writing Report 15th JAN. 1937. When handed in at Local Office

Port of HAMBURG.

No. in Reg. Book. Survey held at HAMBURG

Date, First Survey 4th SEPT.Last Survey 29th DEC. 1936

on the STEEL SC. JOEGH SILVERLIGHT

(Number of Visits 10.)

Gross 5127
Tons Net 3186

Master Built at HAMBURG By whom built DEUTSCHE WERFT A.G. Yard No. 180. When built 1936.

Engines made at AUGSBURG By whom made N. A. V. Engine No. 691190 When made 1936.

Boilers made at HAMBURG By whom made DEUTSCHE WERFT A.G. Boiler No. 638 When made 1936

Nominal Horse Power 973 Owners { SKIPS A/S: NORUEGA, ASTREA, ARUBA, ABACO. Port belonging to OSLO.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Güterhofnung, hütte Mt. Watzwerk, Oberhausen (Letter for Record S.)

Total Heating Surface of Boilers 8619 m. Is forced draught fitted yes Coal or Oil fired oil

No. and Description of Boilers 1 single ended multitubular Working Pressure 7 kg/cm²Tested by hydraulic pressure to 14 kg/cm² Date of test 28.9.36 No. of Certificate 638 Can each boiler be worked separately

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler 2 spring loaded

Area of each set of valves per boiler { per Rule 6500 kg/cm² as fitted 7697 kg/cm² Pressure to which they are adjusted 7 kg/cm² Are they fitted with easing gear yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler (vertical) no, non return valve fitted

Smallest distance between boilers or uptakes and bunkers or woodwork 500 mm Is oil fuel carried in the deep double bottom under boilers vegetable

Smallest distance between shell of boiler and tank top plating 400 mm Is the bottom of the boiler insulated yes

Largest internal dia. of boilers 3000 mm Length 3048 mm Shell plates: Material S.M. Steel Tensile strength 44-50 kg/cm²

Thickness 15 mm Are the shell plates welded or flanged flanged Description of riveting: circ. seams { end double lap. inter. }

long. seams Double D.B. Diameter of rivet holes in { circ. seams 26 mm long. seams 26 mm Pitch of rivets { 84.0 mm 90 mm }

Percentage of strength of circ. end seams { plate 69.3% rivets 68.4% Percentage of strength of circ. intermediate seam { plate 71.2% rivets 120% }

Percentage of strength of longitudinal joint { plate 71.2% rivets 120% combined 102.5% Working pressure of shell by Rules 7.35 kg/cm²

Thickness of butt straps { outer 15 mm inner 15 mm No. and Description of Furnaces in each Boiler 2 - morism. 200

Material S.M. Steel Tensile strength 41-47 kg/cm² Smallest outside diameter 820 mm

Length of plain part { top bottom Thickness of plates { crown 10 mm bottom 10 mm Description of longitudinal joint welded.

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 12.1 kg/cm²End plates in steam space: Material S.M. Steel Tensile strength 41-47 kg/cm² Thickness { front 20 mm back 18 mm Pitch of stays 400 x 450 mmHow are stays secured Double uni-riveted washers Working pressure by Rules 7.8 kg/cm²Tube plates: Material { front back S.M. Steel Tensile strength { 41-47 kg/cm² Thickness { 20 mm }Mean pitch of stay tubes in nests 208 x 208 mm Pitch across wide water spaces 360 mm Working pressure { front 7.85 kg/cm² back 20.8 kg/cm²Girders to combustion chamber tops: Material S.M. Steel Tensile strength 44-50 kg/cm² Depth and thickness of girder

at centre 160 - 2 x 10 mm Length as per Rule 650 mm Distance apart 200 mm No. and pitch of stays

in each 2 - 180 mm Working pressure by Rules 7 kg/cm² Combustion chamber plates: Material S.M. Steel.Tensile strength 41-47 kg/cm² Thickness: Sides 12 mm Back 14.5 mm Top 12 mm Bottom 20 mm

Pitch of stays to ditto: Sides 200 x 180 mm Back 200 x 200 mm Top 200 x 180 mm Are stays fitted with nuts or riveted over uni-riveted over.

Working pressure by Rules 8.5 kg/cm² Front plate at bottom: Material S.M. Steel Tensile strength 41-47 kg/cm²Thickness 20 mm Lower back plate: Material S.M. Steel Tensile strength 41-47 kg/cm² Thickness 18 mm

Pitch of stays at wide water space diam 480 mm Are stays fitted with nuts or riveted over 2. nuts and washers

Working Pressure 8.9 kg/cm² Main stays: Material S.M. Steel Tensile strength 44-47 kg/cm² (ordered)

Diameter { At body of stay, or Over threads 58.68 mm No. of threads per inch 6 Area supported by each stay 450 x 400 mm

Working pressure by Rules 23 kg/cm² Screw stays: Material S.M. Steel Tensile strength 44-47 kg/cm²

Diameter { At turned off part, or Over threads 28.38 mm No. of threads per inch 9 Area supported by each stay 200 x 180 mm

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Working pressure by Rules 10 kg/cm² Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 98 mm - 31 mm
or 49 mm - 35 mm
Over threads }
No. of threads per inch 9 Area supported by each stay 200 x 200 mm Working pressure by Rules 11.35 kg/cm²
Tubes: Material S. M. Steel External diameter { Plain 78 mm Thickness 8 mm No. of threads per inch 9
Stay 70 mm }
Pitch of tubes 104 mm Working pressure by Rules 10 kg/cm² Manhole compensation: Size of opening in
shell plate 300 x 400 mm Section of compensating ring diam. 680 mm x 15 mm No. of rivets and diameter of rivet holes 28 - 26 mm
Outer row rivet pitch at ends 140 mm Depth of flange if manhole flanged no Steam Dome: Material S. M. Steel
Tensile strength 44-50 kg/cm² Thickness of shell 14 mm Description of longitudinal joint welded - secured by strap
Diameter of rivet holes 23 mm Pitch of rivets 74 mm Percentage of strength of joint { Plate 69%
Rivets 42% }
Internal diameter 700 mm Working pressure by Rules 14 kg/cm² Thickness of crown 16 mm No. and diameter of
stays no Inner radius of crown 560 mm Working pressure by Rules 23.8 kg/cm²
How connected to shell riveted Size of doubling plate under dome no Diameter of rivet holes and pitch
of rivets in outer row in dome connection to shell 26 mm - 98.2 mm

Type of Superheater _____ Manufacturers of { Tubes _____
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 _____ 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 _____

Deutsche Werft
Aktiengesellschaft
26 JAN 1937
Hamburg

The foregoing is a correct description,

Manufacturer.

Dates of Survey { During progress of work in shops - 4/9 - 17/9 - 18/9 - 25/9 - 28/9 - 1/10 1936
while building { During erection on board vessel - 7/12 - 8/12 - 12/12 - 29/12/36
Are the approved plans of boiler and superheater forwarded herewith yes
(if not state date of approval.)
Total No. of visits 10

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.) Material and workmanship of this
Donkey Boiler are of good quality. The materials used in its construction
are made at works recognized by the Committee and tested by the
Society's Surveyors in accordance with the requirements of the Rules.
This Donkey Boiler having been made under Special Survey in con-
formity with the approved plan, the Secretary's Letter and otherwise in
compliance with the requirements of the Rules is eligible in my
opinion to be classed in the Society's Reg. A. Donkey Boiler pressure,
100 lbs per sq. inch.

THICKNESS OF FLD. WASHERS:

FORW: 18 mm FET: 20 mm

Survey Fee ... Please see Rep. When applied for, 19
Travelling Expenses (if any) on machinery When received, 19

Friedrich Hill

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE 9 FEB 1937

Assigned See Ham. J.E. 22176