

REPORT ON BOILERS.

No. 5442

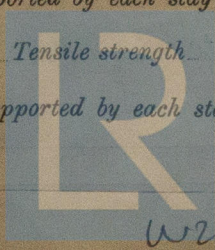
DEC 27 1939

Received at London Office

Report 11/12 1939 When handed in at Local Office 18/12 1939 Port of Oslo
by Rules
Actual
Survey held at Fredrikstad
Date, First Survey 29/9 Last Survey 29/11 1939
(Number of Visits 8) Gross 366
Actual 2 the steel screw motor vessel "HELLESUND" Tons Net 177
Built at Selsing By whom built Johs. Berg Yard No. When built 1916
at Trollhattan By whom made AB Hydqvist & Holm Engine No. 1093 When made 1939
at Fredrikstad By whom made Blommans Mek. Verksted Boiler No. When made 1939
orse Power Owners AB Veritas (O. Bjoresen) Port belonging to Oslo

TUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

ers of Steel Deutsche Rohrenwerke, Werk Thyssen, Colville Ltd. (Letter for Record 2/10/39)
ing Surface of Boilers 20 m² Is forced draught fitted ho Coal or Oil fired oil
escription of Boilers one, multitubular, Working Pressure 7 kg/cm²
hydraulic pressure to 14 kg/cm² Date of test 20/10/39 No. of Certificate 127 Can each boiler be worked separately ✓
regate in each Boiler No. and Description of safety valves to each boiler Two spring loaded
ch set of valves per boiler { per Rule 16.57 cm² Pressure to which they are adjusted 7 kg/cm² Are they fitted with easing gear Yes
as fitted 22.8 "✓
donkey boilers, state whether steam from main boilers can enter the donkey boiler ✓
stance between boilers or uptakes and bunkers or woodwork Is oil fuel carried in the double bottom under boilers ✓
stance between shell of boiler and tank top plating ✓ Is the bottom of the boiler insulated
ernal dia. of boilers 1600 mm Length 1600 mm Shell plates: Material SM steel Tensile strength 44-55 kg/cm²
10.5 mm Are the shell plates welded or flanged ho Description of riveting: circ. seams { end SR
3R. overlap. Diameter of rivet holes in { circ. seams 17 mm ✓ Pitch of rivets { 43 mm ✓
long. seams 17 " ✓ 76.5 " ✓
of strength of circ. end seams { plate 60.5 Percentage of strength of circ. intermediate seam { plate ✓
rivets 39.08 rivets ✓
of strength of longitudinal joint { plate 77.7 Working pressure of shell by Rules 9.2 kg/cm²
rivets 74.4 combined
of butt straps { outer ✓ No. and Description of Furnaces in each Boiler one plain
inner ✓ Tensile strength 41-47 kg/cm² Smallest outside diameter 628 mm ✓
plain part { top 1545 mm Thickness of plates { crown 12.5 mm Description of longitudinal joint Elbow welded (butt joint)
bottom 12.5 " ✓ Working pressure of furnace by Rules 10.5 kg/cm²
of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 10.4 kg/cm²
in steam space: Material M. steel Tensile strength 41-47 kg/cm² Thickness 21 mm Pitch of stays ✓
ays secured ho stays Working pressure by Rules 10.4 kg/cm²
ays: Material { front SM steel Tensile strength 41-47 kg/cm² Thickness { 21 mm ✓
back SM steel Thickness 21 mm ✓
of stay tubes in nests 300 x 300 mm Pitch across wide water spaces Working pressure { front 7.8 kg/cm²
back 7.8 kg/cm²
combustion chamber tops: Material ✓ Tensile strength ✓ Depth and thickness of girder
Length as per Rule ✓ Distance apart ✓ No. and pitch of stays
Working pressure by Rules ✓ Combustion chamber plates: Material ✓
Thickness: Sides ✓ Back ✓ Top ✓ Bottom ✓
ays to ditto: Sides ✓ Back ✓ Top ✓ Are stays fitted with nuts or riveted over ✓
essure by Rules ✓ Front plate at bottom: Material SM steel Tensile strength 41-47 kg/cm²
21 mm Lower back plate: Material SM steel Tensile strength 41-47 kg/cm² Thickness 21 mm
ys at wide water space ✓ Are stays fitted with nuts or riveted over ✓
essure 8.2 kg/cm² Main stays: Material ✓ Tensile strength ✓
body of stay, or No. of threads per inch ✓ Area supported by each stay ✓
s Register of threads ✓ Screw stays: Material ✓ Tensile strength ✓
essure by Rules ✓ No. of threads per inch ✓ Area supported by each stay ✓
turned off part, or
er threads



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Working pressure by Rules ☒ Are the stays drilled at the outer ends ☒ Margin stays: Diameter ☒ At turned off part, or Over threads ☒
No. of threads per inch ☒ Area supported by each stay ☒ Working pressure by Rules ☒
Tubes: Material Steel External diameter ☒ Plain 3" (75mm) Thickness ☒ 3.4 mm No. of threads per inch ☒
Pitch of tubes 100 x 100 mm Working pressure by Rules ☒ Manhole compensation: Size ☒
shell plate 400 x 300 mm Section of compensating ring 570 mm x 16 mm No. of rivets and diameter of rivet holes 30 @ 16 mm
Outer row rivet pitch at ends 38.5 mm Depth of flange if manhole flanged ☒ Steam Dome: Material ☒
Tensile strength ☒ Thickness of shell ☒ Description of longitudinal joint ☒ Plate Rivets ☒
Diameter of rivet holes ☒ Pitch of rivets ☒ Percentage of strength of joint ☒
Internal diameter ☒ Working pressure by Rules ☒ Thickness of crown ☒ No. of
stays ☒ Inner radius of crown ☒ Working pressure by Rules ☒
How connected to shell ☒ Size of doubling plate under dome ☒ Diameter of rivet
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
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
Rules ☒ Pressure to which the safety valves are adjusted ☒ Hydraulic
tubes ☒ forgings and castings ☒ and after assembly in place ☒
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
pr. pr. Glommens mek. Verksted A/s
H. C. Rude

Dates of Survey ☒ During progress of work in shops - - - 29/9 - 3/10 - 6/10 - 10/10 - 18/10 - 20/10 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
while building ☒ During erection on board vessel - - - 7/11 - 29/11 Total No. of visits 8

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.)

This boiler has been constructed in accordance with the approved plans in conformity with the Secretary's letters concerning same. The shell and end plates made from material tested by Det Norske Veritas, the furnace being made from material tested by this Society; check tests with satisfactory results were made on the shell and plates (see letter E 26/9/39). The workmanship throughout is good. - The welding work employed was carried out to our satisfaction by trained welders using approved electrodes.

On completion the boiler was tested by hydraulic pressure to 14 lbs. per sq. in. the safety valves were adjusted under steam subsequently to 7 lb.

It is recommended that this donkey boiler be classed in the Society's Register Book.

Survey Fee ... £ 49.60 } When applied for, 29/11 19 39
Travelling Expenses (if any) £ 50.- } When received, 19

Purdie
Engineer Surveyor to Lloyd's Register

Committee's Minute

Assigned

See Rgm Rpt. 2837



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