

REPORT ON BOILERS.

No. 14488.

Received at London Office

1 DEC 1945

Date of writing Report 5th Dec. 19 45 When handed in at Local Office 12th Dec. 19 45 Port of Gothenburg.

No. in Reg. Book. 25399 Survey held at Gothenburg Date, First Survey 24th September Last Survey 15th November 1945.

(Number of Visits 8) Tons 1053 Gross 531 Net

on the s.s. "HALVARD BRATT"

Master — Built at Elbing By whom built F. Schichau Yard No. 1102 When built 1921

Engines made at Elbing By whom made F. Schichau Engine No. 3160 When made 1921

Boilers made at Elbing By whom made F. Schichau Boiler No. 3467-68 When made 1921

Nominal Horse Power 115 Owners Rederi A-B. Adolf Port belonging to Gothenburg

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel — (Letter for Record S)

Total Heating Surface of Boilers 2 x 86 = 172 M² = 1851 # Is forced draught fitted No Coal or Oil fired Coal

No. and Description of Boilers Two circular multitubular (Scotch boilers) Working Pressure 14 kg/cm²

Tested by hydraulic pressure to — Date of test — No. of Certificate — Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 2.7 M² = 29 # No. and Description of safety valves to each boiler One double spring loaded

Area of each set of valves per boiler per Rule 3475 mm² Pressure to which they are adjusted 205 lbs. Are they fitted with easing gear Yes

as fitted 3900 mm²

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No donkey boiler fitted.

Smallest distance between boilers or uptakes and bunkers or woodwork 230 mm. Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating — Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 3050 mm. Length 3057 mm. Shell plates: Material S.M. Steel Tensile strength 45-53 kg/mm²

Thickness 24 mm. Are the shell plates welded or flanged No Description of riveting: circ. seams Double lap

long. seams Double butt straps Diameter of rivet holes in circ. seams 25 mm. Pitch of rivets inter 90 mm.

long. seams 25 mm. Percentage of strength of circ. end seams plate — rivets — Percentage of strength of circ. intermediate seam plate — rivets —

Percentage of strength of longitudinal joint plate — rivets — combined — Working pressure of shell by Rules —

Thickness of butt straps outer 20 mm. inner 18 mm. No. and Description of Furnaces in each Boiler Two Morison

Material S.M. Steel Tensile strength 34-51 kg/mm² Smallest outside diameter 876 mm.

Length of plain part top — bottom — Thickness of plates crown 13 mm. bottom 13 mm. Description of longitudinal joint Welded

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

End plates in steam space: Material S.M. Steel Tensile strength 34-41 kg/mm² Thickness 24 mm. Pitch of stays 280 x 300 mm.

How are stays secured Double nuts and outside washers Working pressure by Rules —

Tube plates: Material front S.M. Steel Tensile strength 34-41 kg/mm² Thickness 24 mm.

back S.M. Steel Tensile strength 34-41 kg/mm² Thickness 24 mm.

Mean pitch of stay tubes in nests 285 mm. Pitch across wide water spaces 360 mm. Working pressure 14 mm. 19 in plan plate 34-41 kg/mm²

Girders to combustion chamber tops: Material S.M. Steel Tensile strength 34-41 kg/mm² Depth and thickness of girder front — back —

at centre 175 & 2x15 mm. Length as per Rule 600 mm. Distance apart 190 mm. No. and pitch of stays —

in each 2 - 200 mm. Working pressure by Rules — Combustion chamber plates: Material S.M. Steel

Tensile strength 34-41 kg/mm² Thickness: Sides 16 mm. Back 15 mm. Top 16 mm. Bottom 20 mm.

Pitch of stays to ditto: Sides 200 x 180 mm. Back 180 x 175 mm. Top 190 x 200 mm. Are stays fitted with nuts or riveted over Fitted with nuts

Working pressure by Rules — Front plate at bottom: Material S.M. Steel Tensile strength 34-41 kg/mm² Thickness 24 mm.

Thickness 24 mm. Lower back plate: Material S.M. Steel Tensile strength 34-41 kg/mm² Thickness 24 mm.

Pitch of stays at wide water space 340 mm. Are stays fitted with nuts or riveted over Fitted with nuts

Working Pressure — Main stays: Material S.M. Steel Tensile strength 44-50 kg/mm²

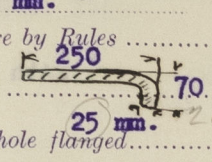
Diameter At body of stay, 60 mm. No. of threads per inch, 8 in plan Area supported by each stay, 380 x 380 mm.

Over threads — Working pressure by Rules, — Screw stays: Material, S.M. Steel Tensile strength, 41-47 kg/mm²

At turned off part, — No. of threads per inch, 4.5 Area supported by each stay, 175 x 180 mm.

Over threads 31 — 180 x 200 mm.

004238-004248-0147

Working pressure by Rules --- Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part 34 & 42 mm. or --- Over threads ---
No. of threads per inch --- Area supported by each stay 260 x 175 mm. Working pressure by Rules ---
Tubes: Material Steel External diameter { Plain 83 mm. Thickness { 3.5 mm. No. of threads per inch 11
Stay 83 mm. 8.0 mm.
Pitch of tubes 110 x 110 mm. Working pressure by Rules --- Manhole compensation: Size of opening in
shell plate 400 x 510 mm. Section of compensating ring  No. of rivets and diameter of rivet holes 36 x 28 mm.
Outer row rivet pitch at ends 370 mm. Depth of flange if manhole flanged 70 mm. 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
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 Schmidt Manufacturers of { Tubes ---
Steel forgings ---
Steel castings ---
Number of elements 12 each boiler Material of tubes Steel Internal diameter and thickness of tubes 15 & 2.5 mm.
Material of headers Cast Steel Tensile strength --- Thickness 19 mm. 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 Yes
Area of each safety valve --- Are the safety valves fitted with easing gear Yes Working pressure as per
Rules --- Pressure to which the safety valves are adjusted 205 lbs. per square inch. Hydraulic test pressure:
tubes --- forgings and castings --- and after assembly in place 28 kg/cm² Are drain cocks or
valves fitted to free the superheater from water where necessary Yes

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 { Are the ~~approved~~ plans of boiler ~~and superheater~~ forwarded herewith Yes
of Survey { work in shops - - {
while { During erection on { 1945: Sept. 24, Oct. 1, 9, 16, 22, Nov. 9, 13, 15.
building { board vessel - - { 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.) The boilers and superheaters opened up and examined with safety valves and mountings and their ~~safety valves and their~~ scantlings checked and found to be in accordance with the plans referred to in the Secretary's letter, initialled "E", of the 14th September 1945, regarding the machinery of this vessel. The boilers found in very good condition and the furnaces, the front tube plate at wide water space and the combustion chamber girders specially examined and found free from distortion.

The superheaters have been tested in place with water pressure to 28 kg/cm² and found tight.

The boilers and superheaters found marked.

Boilers,

F.SCHICHAU, ELBING
1921
14 ATM.MAX. S.P.
No. 3467-3468
28 ATM.PROBEDRUCK.
25.2.1921

Superheaters:

OTTENSENER EISENWERK A.G.
ALTONA
DAMPFUEBERHITZER PATENT WILH.SCHMIDT
No. 3751, 3753
21.9.1920

Note: The tensile strength of the material given in the report has been taken from the plan. No certificate for the material was available.

Repairs effected due to wear and tear: The insulation of the boilers renewed. The feed check valve lids renewed.

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

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

FRI. 8 FEB 1946

see minutes
on Rpts 8 & 9

ELANDERS BOKTRYCKERI AKTIEBOLAG (WS)



© 2020

Lloyd's Register
Foundation