

REPORT ON BOILERS.

Gothenburg 8090

No. 14054

Gothenburg 1.10.1930

Received at London Office 11 OCT 1932 MAY 1930

Date of writing Report 28.4.30. When handed in at Local Office 28.4.30 Port of MIDDLESBROUGH.

No. in Reg. Book. 71734 Survey held at STOCKTON, Gothenburg Date, First Survey 30 January Last Survey 28.4.1930.

on the boiler for Aktiefelag Gotaverken's "G.C. BRÖVIG" (Number of Visits 18+2) Gross 9718 Tons Net 5860

Master _____ Built at Gothenburg By whom built AB. Gotaverken Yard No. 437 When built 1930

Engines made at Gothenburg By whom made AB. Gotaverken Engine No. 1913 When made 1930

Boilers made at Stockton By whom made Riley Bros. (Boilermakers) Ltd Boiler No. 5946 When made 1930

Nominal Horse Power 724 Owners Th. Brövig Port belonging to Farsund.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Wittkowitz Benqbau und Eisenhütten Gewerkschaft. (Letter for Record S.)

Total Heating Surface of Boilers 1415 sq ft Is forced draught fitted Yes Coal or Oil fired Oil

No. and Description of Boilers 1 S.B. Working Pressure 180 lbs.

Tested by hydraulic pressure to 320 lbs. Date of test 28.4.30 No. of Certificate 6779. Can each boiler be worked separately Yes

Area of Firegrate in each Boiler Oil fired No. and Description of safety valves to each boiler Double springloaded.

Diam of each set of valves per boiler per Rule as fitted 3" Pressure to which they are adjusted 180 lbs/sq in Are they fitted with easing gear Yes

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

Smallest distance between boilers or uptakes and bunkers or woodwork 25" 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 11'-8" Length 11'-3" Shell plates: Material Steel Tensile strength 26/30.

Thickness 15/16 Are the shell plates welded or flanged No Description of riveting: circ. seams end DR

long. seams T.R.D.B.S. (5 rivets) Diameter of rivet holes in circ. seams 1 7/32 long. seams 1" Pitch of rivets 2 3/16

Percentage of strength of circ. end seams plate 65.1 rivets 42.5. Percentage of strength of circ. intermediate seam plate 86 rivets 86.7.

Percentage of strength of longitudinal joint combined 89.4. Working pressure of shell by Rules 181 lbs.

Thickness of butt straps outer 3/4 inner 7/8 No. and Description of Furnaces in each Boiler 2 CF.

Material Steel Tensile strength 26/30. Smallest outside diameter 3'-7 3/8"

Length of plain part top bottom Thickness of plates crown 9/16 bottom 7/16 Description of longitudinal joint weld.

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 188 lbs.

End plates in steam space: Material Steel Tensile strength 26/30 Thickness 7/8 Pitch of stays 16 1/2" x 10 1/2"

How are stays secured D. Now Working pressure by Rules 180 lbs.

Tube plates: Material front back Steel Tensile strength 26/30. Thickness 7/8 Working pressure front 233 lbs. back 273.

Mean pitch of stay tubes in nests 10 1/16 Pitch across wide water spaces 13'-7" 28/32 Working pressure front 233 lbs. back 273.

Girders to combustion chamber tops: Material Steel Tensile strength 26/30. Depth and thickness of girder

at centre 7 1/2" x 5/4" (double). Length as per Rule 2'-6" Distance apart 8 1/2" No. and pitch of stays

in each 2'-9" Working pressure by Rules 187 lbs. Combustion chamber plates: Material Steel

Tensile strength 26/30. Thickness: Sides 11/16 Back 11/16 Top 11/16 Bottom 11/16

Pitch of stays to ditto: Sides 10" x 9" Back 10" x 9" Top 8 1/2" x 9" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 182 lbs. Front plate at bottom: Material Steel Tensile strength 26/30. Thickness 7/8

Lower back plate: Material Steel Tensile strength 26/30. Thickness 7/8

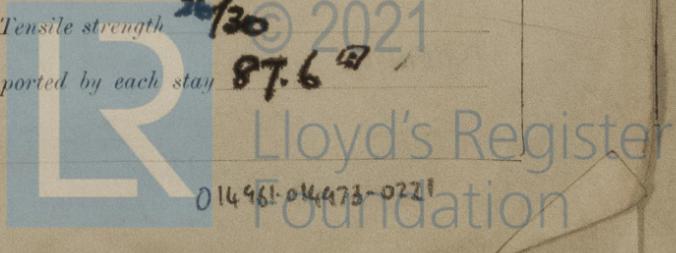
Pitch of stays at wide water space 13" x 9" Are stays fitted with nuts or riveted over nuts

Working Pressure 229 lbs. Main stays: Material Steel Tensile strength 28/32.

Diameter At body of stay, or Over threads 2 1/2" No. of threads per inch 6. Area supported by each stay 226 sq in

Working pressure by Rules 196 lbs. Screw stays: Material Steel Tensile strength 26/30. Area supported by each stay 87.6 sq in

Diameter At turned off part, or Over threads 1 3/4" No. of threads per inch 9. Area supported by each stay 87.6 sq in



Working pressure by Rules **207 lbs.** Are the stays drilled at the outer ends **no.** Margin stays: Diameter ^{At turned off part,} **17"** or ^{Over threads} **18"**
 No. of threads per inch **9.** Area supported by each stay **100.7 sq** Working pressure by Rules **211 lbs.**
 Tubes: Material **iron** External diameter ^{Plain} **2 1/2" to 2 3/4"** Thickness ^{9 w.g.} **5/16"** No. of threads per inch **9.**
 Pitch of tubes **3 3/4" x 3 1/2"** Working pressure by Rules **p. 230 lbs. s. 235 lbs.** Manhole compensation: Size of opening in shell plate **20" x 16"** Section of compensating ring **8" x 1 1/2"** No. of rivets and diameter of rivet holes **48 - 1 3/32"**
 Outer row rivet pitch at ends **8 3/4"** Depth of flange if manhole flanged _____ 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 _____
 How connected to shell _____ Inner radius of crown _____ Working pressure by Rules _____
 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 _____ 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 **Yes FOR**
RILEY BROS. (BOILERMAKERS) LIMITED.
 The foregoing is a correct description,
J. S. Shields SECRETARY/Manufacturer.

Dates of Survey ^{During progress of work in shops - -} **1930 Jan 30 Feb 5-12, 14, 19, 21 Mar 4, 6** Are the approved plans of boiler and superheater forwarded herewith **39.29.** (If not state date of approval.)
^{while building} ^{During erection on board vessel - - -} **12, 19, 25, 28, 31 Apr 1, 11, 16, 23, 28** Total No. of visits **18 + 3**
Aug. 8 Sept 11, 12

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
 This boiler is a duplicate of Messrs. Riley Bros. No. 5944 (Inst. Rpt. 13981).
 The materials and workmanship are good. This boiler has been built under special survey in accordance with the Rules and Approved Plan. It is being shipped to Sweden.
 This donkey boiler has been fitted in this vessel under my inspection and to my satisfaction.

Survey Fee £ **9.8.0** When applied for, **Monthly**
 Travelling Expenses (if any) £ : : When received, 192

P. J. Mann *G. S. Anderson*
 Engineer-Surveyor to Lloyd's Register of Shipping.

Committee's Minute **TUE. 21 OCT 1930**
 Assigned **See F.E. Rpt.**

