

REPORT ON BOILERS.

Got. 1. 8030.
No. 13981

23 AUG 1930

21 FEB 1930

Got. 21.8.1930.

Received at London Office

Date of writing Report 19.2.30 When handed in at Local Office

19.2.30. Port of MIDDLESBROUGH.

No. in Reg. Book. 87706

Survey held at STOCKTON

Date, First Survey 26 Nov/29

Last Survey 19.2.30

(Number of Visits 6+4)

Gross 9790

Net 5861

Master Built at Gothenburg By whom built AB. Götaverken Yard No. 432 When built 1930

Engines made at Gothenburg By whom made AB. Götaverken Engine Nos 887 888 When made 1930

Boilers made at Stockton By whom made Riley Bros. (Boilermakers) Ltd Boiler No 5944 When made 1930

Nominal Horse Power Owners Skiles & Nordheim Port belonging to Oslo.

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Witkowitz Bergbau- und Eisenhütten-Gesellschaft (Letter for Record S.)

Total Heating Surface of Boilers 1415 sq. ft. Is forced draught fitted Yes Coal or Oil fired Oil Working Pressure 180 lbs.

No. and Description of Boilers 1 S.B. Tested by hydraulic pressure to 320 lbs. Date of test 19.2.30 No. of Certificate 6766. 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 spring loaded

Area of each set of valves per boiler 3" Pressure to which they are adjusted 185 lbs. 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 29/33

Thickness 15" Are the shell plates welded or flanged No Description of riveting: circ. seams end D.R. inter. Yes

long. seams T.R.D.B.S. (Snivels) Diameter of rivet holes in circ. seams 1 3/4" Pitch of rivets 3 1/2" x 7" inter. Yes

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. Yes

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

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

Length of plain part top 9" Thickness of plates crown 9" bottom 7/8" Description of longitudinal joint Weld. Yes

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

End plates in steam space: Material Steel Tensile strength 26/30 Thickness 7/8" Pitch of stays 16 1/2" x 14" Yes

How are stays secured D.N.W. Working pressure by Rules 180 lbs. Yes

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

Mean pitch of stay tubes in nests 10 1/2" Pitch across wide water spaces 13" x 7" Working pressure front 233 lbs. back 273 lbs. Yes

Girders to combustion chamber tops: Material Steel Tensile strength 28/32 Depth and thickness of girder at centre 7 1/2" x 3 3/4" (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. Yes

Tensile strength 26/30 Thickness: Sides 11" Back 11" Top 11" Bottom 11" Combustion chamber plates: Material Steel Yes

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. Yes

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" Yes

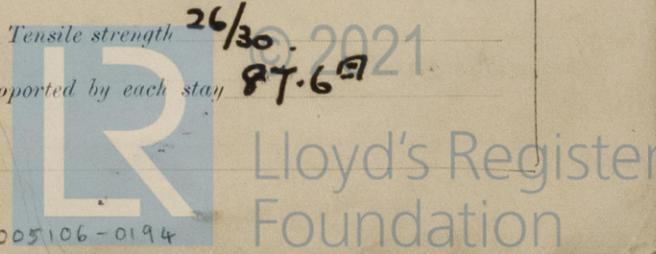
Pitch of stays at wide water space 13" x 9" Are stays fitted with nuts or riveted over nuts. Yes

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. Yes

Working pressure by Rules 196 lbs. Screw stays: Material Steel Tensile strength 26/30

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. Yes



Working pressure by Rules **207 lbs** are the stays drilled at the outer ends **no.** Margin stays: Diameter ^{At turned off part,} **1 3/8"** ^{or} **1 3/8"** ^{Over threads} ✓
 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" = 2 7/8"** ✓ Thickness ^{9 wgs.} **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 **48-1 1/2"** ✓
 shell plate **20" x 16"** ✓ Section of compensating ring **8" x 1 1/4"** ✓ No. of rivets and diameter of rivet holes **48-1 1/2"** ✓
 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 _____ 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 _____ 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.**
RILEY BROS. (BOILERMAKERS) LIMITED.
 The foregoing is a correct description,
J. B. Shields SECRETARY

Dates of Survey ^{During progress of work in shops - -} **1929: Nov 26, Dec 5, 10, 17, 20, 24, 30 1930: Jan 9, 14, 21, 24, 30 Feb 5, 12, 14, 19** Are the approved plans of boiler and superheater forwarded herewith **Yes.**
^{while building} ^{During erection on board vessel - - -} **1930: July 30, Aug 8, 12, 14.** Total No. of visits **16 + 4**
 (If not state date of approval.)

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
 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
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI. 29 AUG 1930**
 Assigned **See F. E. Rpt.**

