

REPORT ON BOILERS.

No. 13348

Received at London Office

2 JUL 1928

Date of writing Report 30-6-1928 When handed in at Local Office 30-6-1928 Port of MIDDLESBROUGH.

No. in Survey held at STOCKTON.

Date, First Survey 6.6.28 Last Survey 29-6-1928.

Opening in 2478. on the donkey boiler for s.s. "WISLA" (Messrs. Riley Bros No. 5817). (Number of Visits 5) Tons { Gross 3100 Net 1830.

Master Built at Stockton By whom built Craig, Taylor & Co. Yard No. 224 When built 1928.

Engines made at Sunderland By whom made North Eastern Marine Eng Co Engine No. When made 1928

Boilers made at do. By whom made do. Boiler No. When made 1928

Nominal Horse Power Owners Port belonging to Gdynia

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Steel Company of Scotland (Letter for Record S. /)

Total Heating Surface of Boilers 880 sq. ft. Is forced draught fitted no / Coal or Oil fired Coal.

No. and Description of Boilers One S.B. Working Pressure 100 lbs.

Tested by hydraulic pressure to 200 lbs Date of test 29-6-28 No. of Certificate 6653 Can each boiler be worked separately ✓

Area of Firegrate in each Boiler 29 sq. ft. No. and Description of safety valves to each boiler Pair Cockburns Improved High Lift-
Area of each set of valves per boiler { per Rule 4.78 sq. ft. as fitted 6.28 sq. ft. Pressure to which they are adjusted 105 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. /

Smallest distance between boilers on plates and bunkers on woodwork 1'-6" Is oil fuel carried in the double bottom under boilers no.

Smallest distance between shell of boiler and tank top plating 3'-0" Is the bottom of the boiler insulated no

Largest internal dia. of boilers 10'-0" Length 10'-0" Shell plates: Material Steel Tensile strength 28/32

Thickness 17/32 Are the shell plates welded or flanged no. Description of riveting: circ. seams { end D.R. inter. ✓

Long. seams D.R.D.B.S. Diameter of rivet holes in { circ. seams 15/16 long. seams 13/16 Pitch of rivets { 3"-6" 3 7/8"

Percentage of strength of circ. end seams { plate 68.7. rivets 53.3. Percentage of strength of circ. intermediate seam { plate rivets ✓

Percentage of strength of longitudinal joint { plate 79.0. rivets 116.5. combined 96.8. Working pressure of shell by Rules 100 lbs.

Thickness of butt straps { outer 15/32 inner 19/32 No. and Description of Furnaces in each Boiler 2 Corrugated.
Material Steel Tensile strength 26/30 Smallest outside diameter 2'-10 3/4"

Length of plain part { top bottom ✓ Thickness of plates { crown 3/8 bottom 1/8 Description of longitudinal joint Weld.

Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 152 lbs.

End plates in steam space: Material Steel Tensile strength 26/30 Thickness 25/32 Pitch of stays 17 x 18 1/2 (mean)

How are stays secured D.N. & W. Working pressure by Rules 107 lbs.

Tube plates: Material { front back Steel Tensile strength { 26/30 Thickness { 25/32 5/8

Mean pitch of stay tubes in nests 10 13/16 Pitch across wide water spaces 14" Working pressure { front 108 lbs. back 117 lbs.

Girders to combustion chamber tops: Material Steel Tensile strength 28/32 Depth and thickness of girder

At centre 5 3/4 x 7 1/8 (double) Length as per Rule 2'-4" Distance apart 8 1/2" No. and pitch of stays

In each 2 - 8 1/2" Working pressure by Rules 105 lbs. Combustion chamber plates: Material Steel

Tensile strength 26/30 Thickness: Sides 1/2 Back 1/2 Top 1/2 Bottom 1/2

Pitch of stays to ditto: Sides 8 3/4 x 8 1/2 Back 10 1/2 x 7 1/2 Top 8 1/2 x 8 1/2 Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 9 1/4 x 10 1/2 lbs. Front plate at bottom: Material Steel Tensile strength 26/30

Thickness 25/32 Lower back plate: Material Steel Tensile strength 26/30 Thickness 25/32

Pitch of stays at wide water space 14" x 7 1/2" Are stays fitted with nuts or riveted over nuts

Working Pressure 196 lbs. Main stays: Material Steel Tensile strength 28/32

Pitching Diameter { At body of stay, or Over threads 2 1/4" No. of threads per inch 6 Area supported by each stay 310 sq. in.

Working pressure by Rules 111 lbs. Screw stays: Material Steel Tensile strength 26/30

Diameter { At turned off part, or Over threads 1 1/4" No. of threads per inch 9 Area supported by each stay 78 3/4 sq. in.

Working pressure by Rules 101 lbs. Are the stays drilled at the outer ends no. Margin stays: Diameter ^{At turned off part.} 1 3/8"
 No. of threads per inch 9. Area supported by each stay 86 sq Working pressure by Rules 107 lbs.
Tubes: Material iron External diameter ^{Plain} 3 1/4" to 3 5/16" Thickness ^{10 W.G.} 5/16" No. of threads per inch 9.
 Pitch of tubes 4 1/4" x 4 3/8" Working pressure by Rules p. 130, s. 258 lbs. **Manhole compensation:** Size of opening in
 shell plate 20" x 16" Section of compensating ring 6" x 3/4" No. of rivets and diameter of rivet holes 44 - 15/16"
 Outer row rivet pitch at ends 6" 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}
 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 23 inclusive for boilers been complied with Yes

RILEY BROS. (BOILERMAKERS) LIMITED.
 The foregoing is a correct description,

J. H. Shields **SECRETARY**, Manufacturer

Dates of Survey ¹⁹²⁸
 { During progress of work in shops - - } Jan 6-15-19-22-29
 { During erection on board vessel - - - }
 while building

Are the approved plans of boiler and superheater forwarded herewith Yes
 (If not state date of approval.)

Total No. of visits 5

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

This boiler is a duplicate of Messrs Riley's No 5813 - Ind Rpt No 13235.
 It has been built under special survey in accordance with the Rules and approved Plan. The materials and workmanship are good.

This boiler has been securely fitted aboard and its safety valves adjusted and tested under steam with satisfactory results.

M. Ma
9.8.28

Survey Fee ... £ 5-18-0 When applied for, 192
 Travelling Expenses (if any) £ : : When received, 192

MONTHLY A/C

M. Ma & S. Wood
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **TUES. 28 AUG 1928**

Assigned see minute on
Indb. Rpt. 13401 attached



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