

REPORT ON BOILERS.

No. 29815

10 AUG. 1928

Received at London Office 1 AUG 1928

Date of writing Report

192

When handed in at Local Office

Port of Sunderland

No. in Reg. Book

Survey held at Sunderland

Date, First Survey

Last Survey

Aug 9 1928

on the Steel Screw Steamer "WISLA"

(Number of Visits)

Gross Tons
Net

Master _____ Built at Stockton By whom built Craig Taylor & Co. Ltd. Yard No. 224 When built 1928
 Engines made at Sunderland By whom made North Eastern Marine Engg. Co. Engine No. 2641 When made 1928
 Boilers made at Sunderland By whom made North Eastern Marine Engg. Co. Boiler No. 2641 When made 1928
 Nominal Horse Power 293 Owners Polish State S.S. Co. (P. P. Żegluga Polska) Port belonging to Lydynia

MULTITUBULAR BOILERS—MAIN, ~~AUXILIARY OR DONKEY.~~

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

Total Heating Surface of Boilers 4606 Is forced draught fitted No. Coal or Oil fired Coal.

No. and Description of Boilers Two - single ended Marine Type - corrugated furnaces. Working Pressure 180 lbs

Tested by hydraulic pressure to 320 lbs Date of test 16-7-28 No. of Certificate 3999 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 55 No. and Description of safety valves to each boiler Two Direct Spring headed.

Area of each set of valves per boiler per Rule 14.46 as fitted 16.58 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 Yes

Smallest distance between boilers uptake and bunkers woodwork 5'-1" Is oil fuel carried in the double bottom under boilers Yes

Smallest distance between shell of boiler and tank top plating 2'-5" Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 15'-6 7/32" Length 10'-6" (full) Shell plates: Material Steel. Tensile strength 29-33 tons

Thickness 1 5/16" Are the shell plates welded or flanged No. Description of riveting: circ. seams {end D.R. lap. inter. Yes

long. seams T.R.D.B.S. Diameter of rivet holes in {circ. seams FROM: 1/4" - BACK: 1 9/32" Pitch of rivets {FROM 3 3/4"; BACK 3 7/8" long. seams 1 9/32" 8 5/16"

Percentage of strength of circ. end seams {plate 66.6 & 64.5 rivets 42.2 & 42.5 Percentage of strength of circ. intermediate seam {plate 85.6 rivets 84.2

Percentage of strength of longitudinal joint {plate 85.6 rivets 84.2 combined 89.4 Working pressure of shell by Rules 181.5 lbs

Thickness of butt straps {outer 1 5/16" inner 1 1/16" No. and Description of Furnaces in each Boiler Three - corrugated - Deighton Type.

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

Length of plain part {top Yes bottom Yes Thickness of plates {crown 9/16" bottom 9/16" Description of longitudinal joint Welded.

Dimensions of stiffening rings on furnace or c.c. bottom Yes Working pressure of furnace by Rules 183.4 lbs

End plates in steam space: Material Steel. Tensile strength 26-30 tons Thickness 1 9/32" Pitch of stays 23" x 20 5/8"

How are stays secured d.n.a.w. outside. Working pressure by Rules 181 lbs

Tube plates: Material {front Steel. back Steel. Tensile strength {26-30 tons Thickness {3/4"

Mean pitch of stay tubes in nests 9.125" Pitch across wide water spaces 15 1/4" Working pressure {front 183 lbs (W.W.Space) back 189 lbs

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

at centre 8" x 2" Length as per Rule 31" Distance apart 11 1/2" No. and pitch of stays

in each 2 at 9 1/2" Working pressure by Rules 199.2 lbs Combustion chamber plates: Material Steel.

Tensile strength 26-30 tons Thickness: Sides 25/32" Back 25/32" Top 25/32" Bottom 15/16"

Pitch of stays to ditto: Sides 12" x 9 1/2" Back 11 1/2" x 10 5/16" Top 11 1/2" x 9 1/2" Are stays fitted with nuts or riveted over Fitted with nuts

Working pressure by Rules {Sides 184 lbs Backs 180 lbs Tops 194 lbs Front plate at bottom: Material Steel. Tensile strength 26-30 tons

Thickness 1 7/8" Lower back plate: Material Steel. Tensile strength 26-30 tons Thickness 1 7/8"

Pitch of stays at wide water space 15 1/4" x 10 5/16" Are stays fitted with nuts or riveted over Fitted with nuts.

Working Pressure 181 lbs Main stays: Material Steel. Tensile strength 28-32 tons

Diameter {At body of stay, 3 1/8" or over threads. No. of threads per inch 6 Area supported by each stay 444 sq. in.

Working pressure by Rules 180 lbs Screw stays: Material Steel. Tensile strength 26-30 tons

Diameter {At turned off part, 1 7/8" or over threads. No. of threads per inch 9 Area supported by each stay {Sides 114 sq. in. Backs 118 sq. in. Tops 108.5 sq. in.

Working pressure by Rules ^{Sides 184.5 lbs} ~~180 lbs~~ Are the stays drilled at the outer ends Margin stays: Diameter ^{At turned off part} $2''$ ^{or} ^{Over threads}

No. of threads per inch 9 Area supported by each stay 113.5 Working pressure by Rules 218.5

Tubes: Material Whit. Iron External diameter ^{Plain} $3\frac{1}{4}''$ ^{Stay} $3\frac{1}{4}''$ Thickness ^{8 W.G.} $5/16$ & $1/4''$ No. of threads per inch 9

Pitch of tubes $4\frac{1}{16} \times 4\frac{1}{16}$ Working pressure by Rules Plain 230 lbs; Stay 192 lbs Manhole compensation: Size of opening in end plate $16 \times 12'$ Section of compensating ring No. of rivets and diameter of rivet holes

Outer row rivet pitch at ends Depth of flange if manhole flanged $3\frac{5}{16}''$ 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 23 inclusive for boilers been complied with Yes

The foregoing is a correct description,
 FOR THE NORTH EASTERN MARINE ENGINEERS
Archd. Berry Manufacture

Dates of Survey ^{During progress of work in shops - -} Please see Machy Rpt. Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)

^{while building} ^{During erection on board vessel - - -} Total No. of visits

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

The materials and workmanship are good.
 The Boilers have been constructed under Special Survey, & satisfactory fitted in the vessel.
 For notation see Machinery Report.

Survey Fee £ Please see Machinery Report When applied for, 192

Travelling Expenses (if any) £ Please see Machinery Report When received, 192

A. I. Griffiths
 Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute TUES. 28 AUG 1928

Assigned see minute on Ind. Rpt 13401 attached