

## REPORT ON BOILERS.

No. 73410  
THU. AUG. 12 1920

Received at London Office

Date of writing Report

1920

When handed in at Local Office

11. 8. 1920

Port of

Newcastle-on-Tyne

No. in  
Reg. Book.

Survey held at

Newcastle-on-Tyne

Date, First Survey

2nd Mar. 1920

Last Survey

6th Aug. 1920

on the

Horizontal Multitubular Boiler, No 979, for "Crossbill"

Gross  
Tons

Net

Master

Built at G. Yarmouth

By whom built

Creston &amp; Co. Ltd. No 179

When built 1920

Engines made at

G. Yarmouth

By whom made

Palmer's Shipbuilding &amp; Iron Co. Ltd.

When made

1920

Boilers made at

Hilburn

By whom made

A. W. Paul &amp; Co. Ipswich

Port belonging to

Ipswich

Registered Horse Power

(Owners)

## MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.

Manufacturers of Steel

John Spencer &amp; Sons, Ltd. Newcastle

(Letter for record S.) Total Heating Surface of Boilers

1120 sq ft

Is forced draft fitted

No.

No. and Description of

Boilers 1. Horizontal Multitubular

Working Pressure 140 lbs

Tested by hydraulic pressure to 280 lbs

Date of test 6/8/20

No. of Certificate 9445 Can each boiler be worked separately

Area of fire grate in each boiler 35 sq ft

No. and Description of

safety valves to each boiler 2 Spring loaded

Area of each valve 4.9 sq in

Pressure to which they are adjusted 144 lbs

Are they fitted with easing gear Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

Smallest distance between boilers or uptakes and bunkers or woodwork 12 in

Inside

Mean dia. of boilers 12'-0"

Length 10'-0"

Material of shell plates Steel

Thickness 13/16"

Range of tensile strength 29-33

Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams DR-L.J. long. seams TR-B.S.

Diameter of rivet holes in long. seams 1"

Pitch of rivets 5 1/4"

Lap of plates or width of butt straps 1'-3 1/2"

Per centages of strength of longitudinal joint rivets 82.5%

plate 80.95%

Working pressure of shell by

rules 140 lbs

Size of manhole in shell 16" x 12"

Size of compensating ring 7' x 13 1/8"

No. and Description of Furnaces in each

boiler 2 Plain

Material Steel

Outside diameter 3'-7 3/8"

Length of plain part top 6'-1" bottom 6'-1"

Thickness of plates crown 3/4" bottom 3/4"

Description of longitudinal joint Welded

No. of strengthening rings 14

Working pressure of furnace by the rules 176 lbs

Combustion chamber

plates: Material Steel

Thickness: Sides 19/32" Back 19/32" Top 19/32" Bottom 13/16"

Pitch of stays to ditto: Sides 9 1/2" x 8 1/2" Back 9" x 9"

Top 9 1/2" x 8 1/2" If stays are fitted with nuts or riveted heads

Working pressure by rules 150 lbs

Material of stays Steel

Area at

smallest part 1'4 5/8" Area supported by each stay 81'7 1/2"

Working pressure by rules 142

End plates in steam space: Material Steel

Thickness 29/32"

Pitch of stays 16 1/2" x 16 1/2"

How are stays secured DN &amp; W.

Working pressure by rules 143 1/2 lbs

Material of stays Steel

Area at smallest part 4'11"

Area supported by each stay 244 sq ft

Working pressure by rules 151 1/2 lbs

Material of Front plates at bottom Steel

Thickness 7/8"

Material of

Lower back plate Steel

Thickness 13/16"

Greatest pitch of stays 13" x 9"

Working pressure of plate by rules 182 1/2 lbs

Diameter of tubes 3 1/2"

Pitch of tubes 4 7/8" x 4 3/4"

Material of tube plates Steel

Thickness: Front 7/8" Back 3/4"

Mean pitch of stays 11 9/16"

Pitch across wide

water spaces 14"

Working pressures by rules 140 lbs

Girders to Chamber tops: Material Steel

Depth and thickness of

girder at centre 8 1/4" x 16"

Length as per rule 30 1/4"

Distance apart 9 1/2"

Number and pitch of Stays in each 2 - 8 1/2"

% of strength of joint

Working pressure by rules 171 1/2 lbs

Steam dome: description of joint to shell

Diameter

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet holes

Pitch of rivets

Working pressure of shell by rules

Crown plates

Thickness

How stayed

SUPERHEATER. Type

Date of Approval of Plan

Tested by Hydraulic Pressure to

Date of Test

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Diameter of Safety Valve

Pressure to which each is adjusted

Is Easing Gear fitted

The foregoing is a correct description,

J. Cameron

Manufacturer.

Manager Boiler Shop Dept.

Dates of Survey  
During progress of work in shops - - -  
while During erection on board vessel - - -1920  
Mar. 2. Apr. 17. May 31. Jul. 9. 20. Aug. 6. Is the approved plan of boiler forwarded herewith

Yes.

Total No. of visits 6

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

This main boiler has been constructed under special survey, &amp; the materials &amp; workmanship are sound &amp; good

Survey Fee ... £ 3 : 15 :

When applied for, 11 Aug. 1920

Travelling Expenses (if any) £ :

When received, 27.9.20

TUE. JAN. 4 1921

A. E. Fabian &amp; Co. N. Stuart

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

Lloyd's Register

002916-002922-0025