

REPORT ON BOILERS.

No. 16423

Received at London Office

28 JUL 1926

Date of writing Report

192

When handed in at Local Office

27.7.26

Port of

WEST HARTLEPOOL

No. in
Reg. Book.

Survey held at

West Hartlepool

Date, First Survey

31st December

Last Survey

22nd July 1926

(Number of Visits)

Gross 4867

Net 2999

on the

S.S. "OTTERPOOL"

Master

Built at

West Hartlepool

By whom built

Wm Gray & Co. Ltd.

Yard No.

980 When built 1926

Engines made at

West Hartlepool

By whom made

Central Marine Engine Works

Engine No.

980 When made 1926

Boilers made at

ditto

By whom made

The Pool Shipping Co.

Boiler No.

980 When made 1926

Nominal Horse Power

Owners

The Pool Shipping Co.

Port belonging to

West Hartlepool

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

D. Colville & Sons Ltd

(Letter for Record S)

Total Heating Surface of Boilers

927 sq. ft.

Is forced draught fitted

no

Coal or Oil fired

coal

No. and Description of Boilers

One single ended

Working Pressure 150 lbs

Tested by hydraulic pressure to

275

Date of test

4-6-26

No. of Certificate

3685

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

34.2

No. and Description of safety valves to each boiler

2 direct spring

Area of each set of valves per boiler

per Rule 7.02

as fitted 7.96

Pressure to which they are adjusted

150 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 or uptakes and bunkers or woodwork

18"

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

no

Largest internal dia. of boilers

10'-6"

Length

10'-0"

Shell plates: Material

Steel

Tensile strength

28/32

Thickness

3/4"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end D.R. Lap

long. seams

J.R. D.B.S.

Diameter of rivet holes in

circ. seams 15"

long. seams 16"

Pitch of rivets

3 1/2"

Percentage of strength of circ. end seams

plate 75.9
rivets 32.55

Percentage of strength of circ. intermediate seam

plate 86.75
rivets 87.1

Percentage of strength of longitudinal joint

plate 86.75
rivets 87.1
combined 89

Working pressure of shell by Rules

154 lbs

Thickness of butt straps

outer 9/16"
inner 11/16"

No. and Description of Furnaces in each Boiler

2 plain

Material

Steel

Tensile strength

26/30

Smallest outside diameter

38 5/8"

Length of plain part

top 5'-11 3/8"
bottom 5'-5 3/8"

Thickness of plates

crown 21"
bottom 32"

Description of longitudinal joint

welded

Dimensions of stiffening rings on furnace or c.c. bottom

Working pressure of furnace by Rules

157

End plates in steam space: Material

Steel

Tensile strength

26/30

Thickness

27/32

Pitch of stays

16 1/2" x 17 1/2"

How are stays secured

D nuts & washers

Working pressure by Rules

150

Tube plates: Material

front Steel
back steel

Tensile strength

26/30

Thickness

27/32 3/4"

Mean pitch of stay tubes in nests

13 1/2" x 9"

Pitch across wide water spaces

14 1/4"

Working pressure

front 171
back 158

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/32

Depth and thickness of girder

at centre

7 3/8" x 1 1/4"

Length as per Rule

27 1/2"

Distance apart

10 1/2"

No. and pitch of stays

in each

2 9 1/4"

Working pressure by Rules

153

Combustion chamber plates: Material

Steel

Tensile strength

26/30

Thickness: Sides

21/32

Back

23/32

Top

21/32

Bottom

1"

Pitch of stays to ditto: Sides

9 1/4" x 10 1/2"

Back

10 1/2" x 11 1/4"

Top

9 1/4" x 10 1/2"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

153

Front plate at bottom: Material

Steel

Tensile strength

26/30

Thickness

27/32

Lower back plate: Material

Steel

Tensile strength

26/30

Thickness

27/32

Pitch of stays at wide water space

14 1/4" x 11 1/4"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

176

Main stays: Material

Steel

Tensile strength

28/32

Diameter

At body of stay 2 3/8"
Over threads

No. of threads per inch

6

Area supported by each stay

18 1/4" x 12 3/4"

Working pressure by Rules

168

Screw stays: Material

Steel

Tensile strength

26/30

Diameter

At turned off part 1 5/8" x 1 3/4"
Over threads

No. of threads per inch

9

Area supported by each stay

9 1/4" x 10 1/2" x 10 1/2" x 11 1/4"

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Working pressure by Rules 153 Are the stays drilled at the outer ends *no* Margin stays: Diameter { At turned off part, *1 7/8"* or Over threads *1 7/8"* ✓
No. of threads per inch *9* ✓ Area supported by each stay *11 1/4" x 12 5/8"* Working pressure by Rules 150
Tubes: Material *Iron* ✓ External diameter { Plain *3 1/4"* ✓ Thickness { *8 W G* ✓ No. of threads per inch *9* ✓
Pitch of tubes *4 1/2" x 4 1/2"* ✓ Working pressure by Rules 187 Manhole compensation: Size of opening in
shell plate *16" x 20"* ✓ Section of compensating ring *19 1/2" x 15"* ✓ No. of rivets and diameter of rivet holes *32* ✓ *1 1/2"* ✓
Outer row rivet pitch at ends *6 5/8"* ✓ Depth of flange if manhole flanged ✓ Steam Dome: Material *none* ✓
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 *none* 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 FOR THE CENTRAL MARINE ENGINE WORKS,
(M. Gray & Co. Ltd.)
The foregoing is a correct description,
inscribed
MANAGING DIRECTOR, C.M.E.W.

Dates of Survey { During progress of work in shops - -
while building { During erection on board vessel - - -

See report on Machinery

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval)
Total No. of visits

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

See accompanying machinery report

Survey Fee ... £ *See survey report* When applied for, 192
Travelling Expenses (if any) £ : : When received, 192

R.D. Shilston
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI. 30 JUL 1925**

Assigned *See report attached*



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Foundation