

REPORT ON BOILERS.

No. 17183

Received at London Office 11 AUG 1932

Date of writing Report 30 July 1932 When handed in at Local Office

Port of West Hartlepool

No. in
Reg. Book.

Survey held at West Hartlepool

Date First Survey

6-11-31

Last Survey

3-8-

1932

on the

S.S. "KEPWICK HALL"

(Number of Visits

112)

Gross

4830.62

Tons

Net 2810.11

Master

Built at

West Hartlepool

By whom built

Wm Gray & Co Ltd

Yard No.

1052

When built

1932

Engines made at

West Hartlepool

By whom made

Central Marine

Engine No.

1052

When made

1932

Boilers made at

ditto

By whom made

Engine Works

Boiler No.

1052

When made

1932

Nominal Horse Power

Owners

West Hartlepool Sm. Nav. Co Ltd

Port belonging to West Hartlepool

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Colvilles Ltd.

(Letter for Record S)

Total Heating Surface of Boilers

2639 square feet.

Is forced draught fitted

yes

Coal or Oil fired

coal

No. and Description of Boilers

One single ended

Working Pressure

260 lbs.

Tested by hydraulic pressure to

440 lbs.

Date of test

29.4.32

No. of Certificate

3795

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

52 sq. ft.

No. and Description of safety valves to each boiler

2 Cockburn's improved high lift

Area of each set of valves per boiler

per Rule

6.020"

as fitted

7.960"

Pressure to which they are adjusted

265 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

Centre boiler

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

15'-2 3/4"

Length

11'-6"

Shell plates: Material

Steel

Tensile strength

31/35.

Thickness

1 5/8"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

D.T.R. Lap

long. seams

J.R. D.B.S.

Diameter of rivet holes in

circ. seams

1 1/16"

long. seams

1 1/16"

Pitch of rivets

4 3/4"

11 1/4"

Percentage of strength of circ. end seams

plate

64.5

rivets

43.1

Percentage of strength of circ. intermediate seam

plate

✓

Percentage of strength of longitudinal joint

plate

85.0

rivets

85.2

combined

87.

Working pressure of shell by Rules

262 lbs

Thickness of butt straps

outer

1 1/4"

inner

1 3/8"

No. and Description of Furnaces in each Boiler

3 Deightons.

Material

Steel

Tensile strength

26/30

Smallest outside diameter

44 5/8"

Length of plain part

top

✓

Thickness of plates

crown

13/16"

Description of longitudinal joint

welded.

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

✓

Working pressure of furnace by Rules

268 lbs

End plates in steam space: Material

Steel

Tensile strength

26/30

Thickness

1 1/4"

Pitch of stays

16 1/2" x 18 1/16"

How are stays secured

Double nuts & washers.

Working pressure by Rules

274 lbs

Tube plates: Material

front

Steel

back

Steel

Tensile strength

26/30

Thickness

1 3/32"

29/32"

Mean pitch of stay tubes in nests

12 3/4" x 8 1/4"

Pitch across wide water spaces

14"

Working pressure

front

278 lbs

back

270 lbs.

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/32

Depth and thickness of girder

at centre

9 1/4" x 1 3/4"

Length as per Rule

33 3/8"

Distance apart

8"

No. and pitch of stays

in each

Three

8 1/2"

Working pressure by Rules

267 lbs

Combustion chamber plates: Material

Steel

Tensile strength

26/30

Thickness: Sides

23/32"

Back

23/32"

Top

23/32"

Bottom

15/16"

Pitch of stays to ditto: Sides

8" x 8 5/8"

Back

8 3/8" x 8 1/4"

Top

8" x 8 1/2"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

262 lbs

Front plate at bottom: Material

Steel

Tensile strength

26/30

Thickness

1 3/32"

Lower back plate: Material

Steel

Tensile strength

26/30

Thickness

15/16"

Pitch of stays at wide water space

14 1/2" x 7 1/16"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

268 lbs

Main stays: Material

Steel

Tensile strength

28/32

Diameter

At body of stay,

3 3/8"

No. of threads per inch

6

Area supported by each stay

19 1/4" x 16 1/4"

Working pressure by Rules

280 lbs.

Screw stays: Material

Steel

Tensile strength

26/30

Diameter

At turned off part,

1 3/4"

No. of threads per inch

9

Area supported by each stay

8 1/4" x 8 3/8"



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Working pressure by Rules **262 lb** Are the stays drilled at the outer ends **no** Margin stays: Diameter ^{At turned off part.} **2"**
 No. of threads per inch **9** Area supported by each stay **11 1/8" x 8 3/8"** Working pressure by Rules **265 lb**
 Tubes: Material **Steel** External diameter ^{Plain} **3"** Thickness ^{W.C.} **7/16" x 3/8"** No. of threads per inch **9**
 Pitch of tubes **4 1/8" x 4 1/4"** Working pressure by Rules **300 lb** Manhole compensation: Size of opening in
 shell plate **16" x 20"** Section of compensating ring **22" x 1 5/8"** No. of rivets and diameter of rivet holes **28 1 1/16"**
 Outer row rivet pitch at ends **11 1/4"** 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 **✓**
 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 **Smoke tube** Manufacturers of ^{Tubes} **The Superheater Co Ltd.**
 Number of elements **58** Material of tubes **S.D. Steel** ^{Steel castings} **ditto**
 Material of headers **Forged steel** Tensile strength **✓** Thickness **✓** Can the superheater be shut off and
 the boiler be worked separately **yes** Is a safety valve fitted to every part of the superheater which can be shut off from the boiler **yes**
 Area of each safety valve **1.74" improved high lift** Are the safety valves fitted with easing gear **yes** Working pressure as per
 Rules **260 lb.** Pressure to which the safety valves are adjusted **270 lb.** Hydraulic test pressure:
 tubes **1000 lb.** ^{castings forgings} **780 lb.** and after assembly in place **520 lb.** Are drain cocks or valves fitted
 to free the superheater from water where necessary **yes**
 Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with **yes.**

The foregoing is a correct description.
 FOR THE CENTRAL MARINE ENGINE WORKS.

(W. Gray & Co. Ltd.)

Manufacturer.

Dates of Survey ^{During progress of work in shops - -} **See accompanying**
 while ^{During erection on board vessel - -} **Machinery Report**

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

Total No. of visits **112**

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

See accompanying machinery report.

Survey Fee ... £ : : 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 **TUE. 16 AUG 1932**

Assigned **See F.C. Rpt.**



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