

REPORT ON BOILERS.

No. 18204

Received at London Office

Date of writing Report 27/10/1941 When handed in at Local Office 27/10/1941 Port of WEST HARTLEPOOL

No. in Survey held at WEST HARTLEPOOL
Reg. Book.

Date, First Survey 22nd October, 1940. Last Survey 21st October 1941

on the S.S. EMPIRE PARSONS

(Number of Visits 77) Gross 6742.15
Tons Net 4841.71

Built at West Hartlepool By whom built Wm Gray & Co. Yard No. 1121 When built 1941

Engines made at West Hartlepool By whom made Central Marine Engine Works Engine No. 1121 When made 1941

Boilers made at West Hartlepool By whom made Central Marine Engine Works Boiler No. 1121 When made 1941

Nominal Horse Power 505 Owners Ministry of War Transport Port belonging to West Hartlepool

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Messrs. Colvilles, Glasgow. (Letter for Record S)

Total Heating Surface of Boilers 1786 sq ft Is forced draught fitted Yes Coal or Oil fired Coal

No. and Description of Boilers 1 single ended multitubular Working Pressure 220 lbs

Tested by hydraulic pressure to 380 lbs Date of test 18.7.41 No. of Certificate 3939 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 45 sq ft No. and Description of safety valves to each boiler 2 Cockburn's High Lift

Area of each set of valves per boiler {per Rule 4.75 sq ft as fitted 6.28 sq ft Pressure to which they are adjusted 220 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 5'9" 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 Yes

Largest internal dia. of boilers 12'9 1/2" Length 11'6" Shell plates: Material Steel Tensile strength 29/33 tons

Thickness 1 1/4" Are the shell plates welded or flanged No Description of riveting: circ. seams {end D.R. LAP inter. -

Long. seams T.R. Double butt strap Diameter of rivet holes in {circ. seams 1 5/16" long. seams 1 5/16" Pitch of rivets {3.79" 9.125"

Percentage of strength of circ. end seams {plate 65.3 rivets 45.2 Percentage of strength of circ. intermediate seam {plate - rivets -

Percentage of strength of longitudinal joint {plate 85.6 rivets 88.2 combined 88.9

Thickness of butt straps {outer 1 1/8" inner 1 1/8" No. and Description of Furnaces in each Boiler 3 Corrugated, Dighton section

Material Steel Tensile strength 26/30 tons Smallest outside diameter 37 3/16"

Length of plain part {top - bottom - Thickness of plates {crown 19/32 bottom 32 Description of longitudinal joint welded

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

End plates in steam space: Material Steel Tensile strength 26/30 tons Thickness 1 3/32" Pitch of stays 19 x 16"

How are stays secured Double nuts

Tube plates: Material {front Steel back Steel Tensile strength {26/30 tons 26/30 tons Thickness {15/16 25/32

Mean pitch of stay tubes in nests 9 7/16" Pitch across wide water spaces 14"

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

at centre 8 1/2 x 1 1/4, 2-5/8 plates Length as per Rule 31 17/32" Distance apart 7" No. and pitch of stays

in each 2 @ 10" Combustion chamber plates: Material Steel

Tensile strength 26/30 tons Thickness: Sides 11/16" Back 11/16" Top 11/16" Bottom 3/4"

Pitch of stays to ditto: Sides 10 x 7" Back 9 1/4 x 8" Top 10 x 7" Are stays fitted with nuts or riveted over Yes

Front plate at bottom: Material Steel Tensile strength 26/30 tons

Thickness 15/16" Lower back plate: Material Steel Tensile strength 26/30 tons Thickness 21/32"

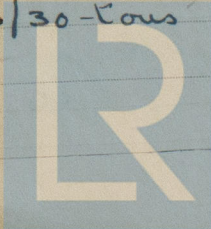
Pitch of stays at wide water space 14 x 8" Are stays fitted with nuts or riveted over Yes

Main stays: Material Steel Tensile strength 28/32 tons

Diameter {At body of stay, or Over threads 3 No. of threads per inch 6

Screw stays: Material Steel Tensile strength 26/30 tons

Diameter {At turned off part, or Over threads 1 3/4" No. of threads per inch 9



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Foundation

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Are the stays drilled at the outer ends Yes
Margin stays: Diameter { At turned off part, or Over threads 1 1/8"
No. of threads per inch 9
Tubes: Material H.R.W.S. External diameter { Plain 3" Stay 3 1/4" Thickness { 8.15 W.G. No. of threads per inch 9
Pitch of tubes 4 1/4" x 4 1/8" Manhole compensation: Size of opening in shell plate 20 1/2" x 16 1/2" Section of compensating ring 3 1/4" x 2 1/2" x 1 1/4" No. of rivets and diameter of rivet holes 40 - 1 5/16"
Outer row rivet pitch at ends 9 3/8" Depth of flange if manhole flanged None Steam Dome: Material None
Tensile strength Thickness of shell Description of longitudinal joint
Diameter of rivet holes 15 1/16" Pitch of rivets Percentage of strength of joint { Plate Rivets
Internal diameter Thickness of crown No. and diameter of stays
How connected to shell Inner radius of crown
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 forgings 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
Pressure to which the safety valves are adjusted Hydraulic test pressure:
tubes forgings and 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 22 inclusive for boilers been complied with Yes

The foregoing is a correct description,
for THE CENTRAL MARINE ENGINE WORKS,
(L.L. & Co. Ltd.) Manufacturer.

Dates { During progress of work in shops - - } Are the approved plans of boiler and superheater for GENERAL MANAGER
of Survey while { During erection on board vessel - - } (If not state date of approval.)
building { Total No. of visits

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. S.S. EMPIRE CABOT N° 18183

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been constructed under special survey for a working pressure of 220 lbs per square inch and is in accordance with the approved plans and specification
The materials and workmanship have been found good.
Upon completion the boiler was tested in the presence of the undersigned by a hydraulic pressure of 380 lbs per square inch, showed no signs of weakness and was found sound and tight in every respect at that pressure.

Survey Fee 10 £ : : When applied for, 19
Travelling Expenses (if any) £ : : When received, 19

Arthur W. Oxford
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 31 OCT 1941
Assigned See Hpl. 7.6. 182024