

REPORT ON BOILERS.

No. 18228

Received at London Office 23 JAN 1942

Date of writing Report 21/1/1942 When handed in at Local Office 21/1/1942 Port of WEST HARTLEPOOL.

No. in Survey held at WEST HARTLEPOOL.

Date, First Survey 7th July, 1941, Last Survey 15th January 1942(Number of Visits 55)
Tons { Gross 2861.06
Net 1711.36

on the S.S. EMPIRE PILGRIM

Built at West Hartlepool By whom built Wm Gray & Co. Ltd.

Yard No. 1126 When built 1942.

Engines made at West Hartlepool By whom made Central Marine Engine Works, Engine No. 1126 When made 1942.

Boilers made at West Hartlepool By whom made Central Marine Engine Works Boiler No. 1126 When made 1942.

Nominal Horse Power 269.

Owners Ministry of War Transport Port belonging to West Hartlepool.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Messrs Colvilles, Ltd.

(Letter for Record S.)

Total Heating Surface of Boilers 3854 sq ft

Is forced draught fitted Yes

Coal or Oil fired Coal.

No. and Description of Boilers 2 single ended multitubular

Working Pressure 200 lbs.

Tested by hydraulic pressure to 350 lbs. Date of test 19-11-41 No. of Certificate 3949 Can each boiler be worked separately Yes.

Area of Firegrate in each Boiler 43.25 sq ft No. and Description of safety valves to each boiler 2 lockburns High Lift.

Area of each set of valves per boiler { per Rule 5.6 sq ft
as fitted 7.95 sq ft Pressure to which they are adjusted 200 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

24"

Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating

24"

Is the bottom of the boiler insulated Yes.

Largest internal dia. of boilers 13'-6" 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 TR Double butt straps Diameter of rivet holes in { circ. seams 1 5/16"
long. seams 1 1/4"Pitch of rivets { 4"
8 1/16"Percentage of strength of circ. end seams { plate 67.2
rivets 44.6Percentage of strength of circ. intermediate seam { plate -
rivets -Percentage of strength of longitudinal joint { plate 85.9
rivets 86.
combined 89.Thickness of butt straps { outer 1 5/16"
inner 1 1/16"

No. and Description of Furnaces in each Boiler 3 corrugated Deighton section

Material Steel

Tensile strength 26-30 tons

Smallest outside diameter 3'-2 1/2"

Length of plain part { top -
bottom -Thickness of plates { crown 9/16"
bottom 9/16"

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 3/16"

Pitch of stays 18 1/4" x 17 3/4"

How are stays secured Double.

Tube plates: Material { front Steel
back SteelTensile strength { 26-30 tons.
26-30 tons.Thickness { 29/32"
13/16"

Lean pitch of stay tubes in nests 12 3/8" x 8 3/8" 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 7 1/4" x 1 3/4" 2-3/8" plates length as per Rule 2'-9 1/2"

Distance apart 8"

No. and pitch of stays

In each 2 @ 10 3/4"

Combustion chamber plates: Material Steel

Tensile strength 26-30 tons

Thickness: Sides 23/32"

Back 23/32"

Top 23/32"

Bottom 23/32"

Pitch of stays to ditto: Sides 11" x 7 3/4" Back 10 1/2" x 8 3/8" Top 10 3/4" x 8" Are stays fitted with nuts or riveted over Nuts.

Front plate at bottom: Material Steel

Tensile strength 26-30 tons

Thickness 29/32"

Lower back plate: Material Steel

Tensile strength 26-30 tons

Thickness 29/32"

Pitch of stays at wide water space 14 3/8" x 10 1/2"

Are stays fitted with nuts or riveted over Nuts

Main stays: Material Steel

Tensile strength 28-32 tons

Diameter { At body of stay, -
or Over threads 3"

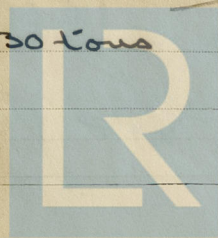
No. of threads per inch 6

Crew 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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Are the stays drilled at the outer ends Yes Margin stays: Diameter { At turned off part, 2 or Over threads 2 }
No. of threads per inch 9
Tubes: Material WS HR External diameter { Plain 3" Stay 3" } Thickness { 8/16 5/16 3/8 } No. of threads per inch 9
Pitch of tubes 4 3/16 x 4 1/8 Manhole compensation: Size of opening
shell plate None Section of compensating ring _____ No. of rivets and diameter of rivet holes
Outer row rivet pitch at ends _____ Depth of flange if manhole flanged _____ 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 _____ Thickness of crown _____ No. and diameter _____
stays _____ Inner radius of crown _____
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 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 from the boiler _____
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 _____
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,
THE CENTRAL MARINE ENGINE WORKS,
(Ld. Eng & Co. Ltd.)

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

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. SS EMPIRE CAREY RPTN° 18223

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The boilers of this vessel have been constructed under special survey for a working pressure of 200 lbs per square inch and are in accordance with the approved plans and specification.

The materials and workmanship have been found good. Upon completion the boilers were tested in the presence of the undersigned to 350 lbs per square inch, and were found sound and tight in every respect at that pressure.

Survey Fee ... £ : : 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. 30 JAN 1942

Assigned

See machine rpt.



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