

REPORT ON BOILERS.

No. 18121

Received at London Office

MAR 13 1941

Date of writing Report 10/3/1941 When handed in at Local Office 10/3/1941 Port of WEST HARTLEPOOL.

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

Date, First Survey 19th January, 1940. Last Survey 5th March, 1941

(Number of Visits 118)

Gross 6793.06

Tons Net 3969.29

on the S.S. "IKAUHA"

Built at West Hartlepool By whom built Wm. Gray & S^o.

Yard No. 1106 When built 1941

Engines made at West Hartlepool By whom made Central Marine Engine Works. Engine No. 1106 When made 1941

Boilers made at West Hartlepool By whom made Central Marine Engine Works. Boiler No. 1106 When made 1941

Nominal Horse Power 669. Owners British India Steam Nav S^o. Port belonging to LONDONMULTITUBULAR BOILERS—MAIN, ~~AUXILIARY~~, OR DONKEY.Manufacturers of Steel Mess^{rs} Colvilles & S^o Glasgow.

(Letter for Record 5)

Total Heating Surface of Boilers 8,500 sq

Is forced draught fitted Yes

Coal or Oil fired Coal

No. and Description of Boilers Four single ended multitubular

Working Pressure 250 lbs

Tested by hydraulic pressure to 425 lbs Date of test 26-9-40 No. of Certificate 3920 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 55 sq

No. and Description of safety valves to each boiler Two Cockburn High Lift

Area of each set of valves per boiler

per Rule 5.01 sq

as fitted 6.28 sq Pressure to which they are adjusted 250 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 2'-3"

Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 2'-6"

Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 14'-0"

Length 11'-6"

Shell plates: Material Steel

Tensile strength 31/35 tons

Thickness 1 7/16"

Are the shell plates welded or flanged No

Description of riveting: circ. seams

end DR. LAP

long. seams TR Double Butts

Diameter of rivet holes in

circ. seams 1 1/2"

long. seams 1 9/16"

Pitch of rivets

4 1/2"

Percentage of strength of circ. end seams

plate 63.6

rivets 44.2

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate 84.75

rivets 90.5

combined 87.6

Thickness of butt straps

outer 1 1/8"

inner 1 1/4"

No. and Description of Furnaces in each Boiler 3 Deighton Section Goulay necks

Material Steel

Tensile strength 26/30 tons

Smallest outside diameter 40 1/16"

Length of plain part

top

Thickness of plates

crown 2 3/32"

bottom 3/32"

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 3/8"

Pitch of stays 19 3/4" x 17 3/4"

How are stays secured Double nuts

Tube plates: Material

front Steel

back Steel

Tensile strength

26/30 tons

Thickness

1"

Mean pitch of stay tubes in nests 12 3/4" x 8 1/4"

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 9 3/4" x 1 3/4" 2-3/8" flange

Length as per Rule 2'-9 1/2"

Distance apart 9 1/4"

No. and pitch of stays

in each 3 @ 8 1/2"

Combustion chamber plates: Material Steel

Tensile strength 26/30 tons

Thickness: Sides 3/4"

Back 3/4"

Top 3/4"

Bottom 2 7/32"

Pitch of stays to ditto: Sides 9 3/8" x 8 5/8"

Back 9 1/4" x 8 1/2"

Top 9 1/4" x 8 1/2"

Are stays fitted with nuts or riveted over Nuts

Front plate at bottom: Material Steel

Tensile strength 26/30 tons

Thickness 1"

Lower back plate: Material Steel

Tensile strength 26/30 tons

Thickness 3 1/2"

Pitch of stays at wide water space 14 3/8"

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 1/2"

No. of threads per inch 6

Screw stays: Material Steel

Tensile strength 26/30 tons

Diameter

At turned off part, or Over threads 1 3/8"

No. of threads per inch 9

Are the stays drilled at the outer ends ☒ No. Margin stays: Diameter { At turned off part, 2 1/8" or Over threads 2 1/8" ✓

No. of threads per inch 9 ✓

Tubes: Material S.D. Steel External diameter { Plain 3" ✓ Stay 3" ✓ Thickness { 8 SWG ✓ 1/4" 5/16" 3/8" No. of threads per inch 9 ✓

Pitch of tubes 4 1/4" x 4 1/8" Manhole compensation: Size of opening in shell plate _____ 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 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 _____ Thickness of crown _____ No. and diameter of 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 Smoke tube Manufacturers of { Tubes Stewart & Lloyd's 2nd Steel forgings S. S. Sonster & Sons 2nd Steel castings Stophenians 2nd

Number of elements 46 per boiler Material of tubes S.D. Steel Cold finish Internal diameter and thickness of tubes 17 1/4" x 2 1/2" 1/4"

Material of headers Steel Tensile strength 26/30 tons Thickness 1 7/16" 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 1.76"² @ 1 1/2" dia. Stigh lift Are the safety valves fitted with easing gear Yes ✓

Pressure to which the safety valves are adjusted 260 lbs.² ✓ Hydraulic test pressure: tubes 1200 lbs.² ✓ forgings and castings 750 lbs.² ✓ and after assembly in place 1000 lbs.² ✓ 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 _____

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

(M. Eng & Co. Ltd.)

Manufacturer.

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

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

GENERAL MANAGER.

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. ISMAILA R.N. 18096

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been constructed under special survey and in accordance with the approved plans for a working pressure of 250 lbs per square inch.

The materials and workmanship have been found good. Upon completion the boilers were tested in the presence of the undersigned by a hydraulic pressure of 425 lbs per square inch, showed no signs of weakness 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

TUE. 18 MAR

Assigned

See Hpl. J.E. 18121



© 2021

Lloyd's Register
Foundation