

REPORT ON BOILERS.

No. 16373

Received at London Office TUES. 4 AUG 1925

Date of writing Report 31 July 1925 When handed in at Local Office 31 July 1925 Port of WEST HARTLEPOOL

No. in Reg. Book. Survey held at West Hartlepool Date, First Survey 21 Jan Last Survey 31 July 1925

39652 on the S.S. "KARTIGI" (Number of Visits) Gross 2346.59 Tons Net 1166.62

Master Built at West Hartlepool By whom built Wm Gray & Co. Ltd. Yard No. 974 When built 1925

Engines made at West Hartlepool By whom made Central Marine Engine No. 974 When made 1925

Boilers made at ditto By whom made Engine Works Boiler No. 974 When made 1925

Nominal Horse Power Owners Union S.S. Co. Ltd of New Zealand Port belonging to Wellington, N.Z.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Steel Company of Scotland Ltd (Letter for Record S)

Total Heating Surface of Boilers 5076 sq. ft. Is forced draught fitted no Coal or Oil fired Coal

No. and Description of Boilers 2 single ended Working Pressure 190 lbs

Tested by hydraulic pressure to 335 lb Date of test 24.4.25 No. of Certificate 3660 Can each boiler be worked separately yes

Area of Firegrate in each Boiler 66 sq. ft. No. and Description of safety valves to each boiler 2 Cockburns high lift

Area of each set of valves per boiler {per Rule 10.32 as fitted 11.88 Pressure to which they are adjusted 195 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 about 2 feet. Is oil fuel carried in the double bottom under boilers

Smallest distance between shell of boiler and tank top plating Is the bottom of the boiler insulated

Largest internal dia. of boilers 16'-0" Length 11'-0" Shell plates: Material Steel Tensile strength 28/32

Thickness 1 3/8" Are the shell plates welded or flanged no Description of riveting: circ. seams {end 2 R. Lap inter. J. R. Lap

long. seams J. R. & B. S. Diameter of rivet holes in {circ. seams 1 7/8" long. seams 1 3/8" Pitch of rivets {4 3/8" end 4 5/8" inter 9 1/2"

Percentage of strength of circ. end seams {plate 67 rivets 69.5 7/8" plate Percentage of strength of circ. intermediate seam {plate 69 rivets 62.8

Percentage of strength of longitudinal joint {plate 85.5 rivets 87.5 combined 88.6 Working pressure of shell by Rules 190.

Thickness of butt straps {outer 1 3/32" inner 1 1/32" No. and Description of Furnaces in each Boiler 3 Deightons JCF

Material Steel Tensile strength 26/30 Smallest outside diameter 3'-10 1/8"

Length of plain part {top bottom Thickness of plates {crown 5 1/8" bottom 5 1/8" Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 197

End plates in steam space: Material Steel Tensile strength 26/30 Thickness 1 5/16" Pitch of stays 2 1/2" x 2 1/2"

How are stays secured D. Nuts + Washers Working pressure by Rules 192

Tube plates: Material {front Steel back Steel Tensile strength {26/30 Thickness {7/8" 13/16"

Mean pitch of stay tubes in nests 13 5/16" x 9" Pitch across wide water spaces 14" Working pressure {front 191 back 192

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

at centre 9 3/4" x 1 1/2" Length as per Rule 35 1/2" Distance apart 9" No. and pitch of stays

in each Three 9" Working pressure by Rules 192 Combustion chamber plates: Material Steel

Tensile strength 26/30 Thickness: Sides 2 3/32" Back 1 1/16" Top 2 3/32" Bottom 2 3/32"

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

Working pressure by Rules 199 Front plate at bottom: Material Steel Tensile strength 26/30

Thickness 7/8" Lower back plate: Material Steel Tensile strength 26/30 Thickness 7/8"

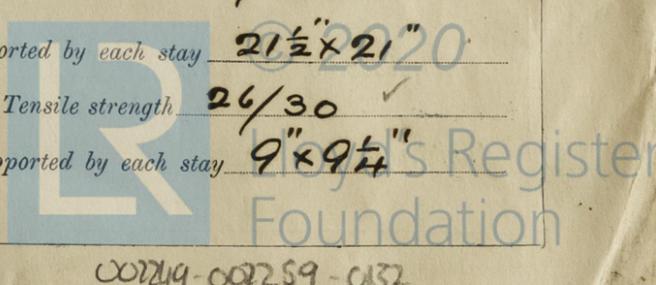
Pitch of stays at wide water space 15" x 9 1/4" Are stays fitted with nuts or riveted over nuts

Working Pressure 199 Main stays: Material Steel Tensile strength 28/32

Diameter {At body of stay, or Over threads 3 3/8" No. of threads per inch 6 Area supported by each stay 21 1/2" x 21"

Working pressure by Rules 194 Screw stays: Material Steel Tensile strength 26/30

Diameter {At turned off part, or Over threads 1 3/4" No. of threads per inch 9 Area supported by each stay 9" x 9 1/4"



Working pressure by Rules 199 Are the stays drilled at the outer ends no Margin stays: Diameter $\left\{ \begin{array}{l} \text{At turned off part, } \checkmark \\ \text{or } \\ \text{Over threads } \end{array} \right. \frac{1}{8}''$

No. of threads per inch 9 Area supported by each stay 11 1/2" x 9 1/4" Working pressure by Rules 200

Tubes: Material Iron External diameter $\left\{ \begin{array}{l} \text{Plain } 3 1/4'' \\ \text{Stay } 3 1/4'' \end{array} \right. \checkmark$ Thickness $\left\{ \begin{array}{l} 8 \text{ V V } 6 \\ \frac{3}{16}'' \frac{1}{4}'' \frac{5}{16}'' \end{array} \right. \checkmark$ No. of threads per inch 9 \checkmark

Pitch of tubes 4 7/16" x 4 1/2" Working pressure by Rules 190 Manhole compensation: Size of opening in shell plate 16 x 21 Section of compensating ring 22" x 1 3/8" No. of rivets and diameter of rivet holes 28 - 1 1/2 \checkmark

Outer row rivet pitch at ends 10" Depth of flange if manhole flanged \checkmark 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 $\left\{ \begin{array}{l} \text{Plate} \\ \text{Rivets} \end{array} \right.$

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 $\left\{ \begin{array}{l} \text{Tubes} \\ \text{Steel castings} \end{array} \right.$

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,
The foregoing is a correct description,
M. S. M. Manufacturer.
MANAGING DIRECTOR, C.M.E.W.

Dates of Survey $\left\{ \begin{array}{l} \text{During progress of work in shops - -} \\ \text{while building } \left\{ \begin{array}{l} \text{During erection on board vessel - - -} \end{array} \right. \end{array} \right.$ See attached report on March

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

Total No. of visits 1

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

See accompanying machinery report

Survey Fee £ : \checkmark : When applied for, _____ 192

Travelling Expenses (if any) £ : \checkmark : When received, _____ 192

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

Committee's Minute FRI. 7 AUG 1925

Assigned _____

