

REPORT ON BOILERS.

No. 16338

Received at London Office 18 SEP 1925

Writing Report 7th Aug 1925 When handed in at Local Office 12 Sept 1925 Port of

Survey held at West Hartlepool Date, First Survey while building Last Survey 192

on the S.S. "KIWITEA" (Number of Visits) Tons

Built at West Hartlepool By whom built Wm Gray & Co. Ltd. Yard No. 975 When built 1925

Machinery made at West Hartlepool By whom made Central Marine Engine Engine No. 975 When made 1925

Machinery made at ditto By whom made Works Boiler No. 975 When made 1925

Owners Union S.S. Co. Ltd New Zealand Port belonging to Wellington N.Z.

WATER TUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel D. Colville & Sons Ltd (Letter for Record S)

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

Description of Boilers 2 single ended Working Pressure 190 lbs

Tested by hydraulic pressure to 335 lbs Date of test 21.5.25 No. of Certificate 3662 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

Pressure of each set of valves per boiler per Rule 10.32 as fitted 11.88 Pressure to which they are adjusted 195 lbs Are they fitted with easing gear yes

Use of donkey boilers, state whether steam from main boilers can enter the donkey boiler

Least distance between boilers or uptakes and bunkers or woodwork about 2 feet Is oil fuel carried in the double bottom under boilers no

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

Least 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 D.R. Lap inter J.R. Lap

Seams J.R. D.R.S. Diameter of rivet holes in circ. seams 1 7/16 long. seams 1 3/8 Pitch of rivets 4 3/8 end 4 3/8 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 lbs

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

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

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

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

Stays plates in steam space: Material Steel Tensile strength 26/30 Thickness 1 5/16 Pitch of stays 21 1/2 x 21

Are stays secured D nuts & washers Working pressure by Rules 192

End plates: Material front Steel back Steel Tensile strength 26/30 Thickness 3/8 13/16

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

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

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

Each Three 9 Working pressure by Rules 192 Combustion chamber plates: Material Steel

Tensile strength 26/30 Thickness: Sides 23/32 Back 11/16 Top 23/32 Bottom 23/32

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

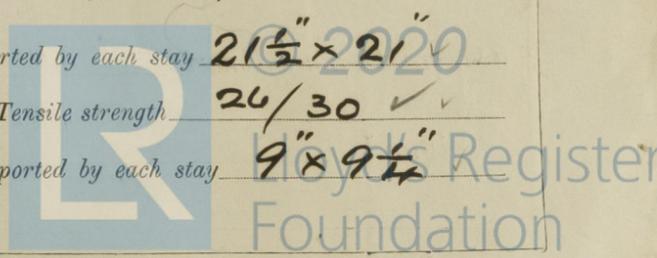
Pitch of stays at wide water space 15 x 9 1/4 Are stays fitted with nuts or riveted over nuts

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

Diameter At body of stay 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 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 ^{At turned off part,} 1 7/8 ✓
 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 ^{Plain} 3 3/4 ✓ ^{Stay} 3 3/4 ✓ Thickness ^{S.W.G.} 3/16, 1/4, 5/16 ✓ No. of threads per inch 9 ✓
 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 ✓
 Outer row rivet pitch at ends 10" ✓ 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} _____
 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 ^{Tubes} _____
 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. S. Manufacturer.
 MARINE DIRECTOR, C.M.E.W.

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

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

Survey Fee £ See Machinery Report When applied for, _____ 192 _____
 Travelling Expenses (if any) £ Report When received, _____ 192 _____

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

Committee's Minute TUES. 22 SEP 1925
 Assigned See other report