

REPORT ON BOILERS.

No. 13,534

19 MAR 1934

Received at London Office

Date of writing Report 6-2-1934 When handed in at Local Office 6-2-1934 Port of Sydney, N.S.W.

No. in Survey held at Sydney, N.S.W. Date, First Survey 18-1-34 Last Survey 29-1-1934
Reg. Book.31571 on the S.S. "NALPA" (Number of Visits 4) Tons {Gross 685
Net 365

Master Built at DELFZIJL By whom built WORTELBOER & Co. Yard No. 10 When built 1918

Engines made at DELFZIJL By whom made WORTELBOER & Co. Engine No. When made 1918

Boilers made at DORDRECHT By whom made H. P. KOOPMAN Boiler No. When made 1918

Nominal Horse Power 108 Owners The Adelaide Steamship Co. Ltd. Port belonging to Port Adelaide

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel (Letter for Record S.)

Total Heating Surface of Boilers 2002 Is forced draught fitted No Coal or Oil fired Coal

No. and Description of Boilers Two - single ended Working Pressure 180 lb/sq. in.

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

Area of Firegrate in each Boiler 33 sq. ft. No. and Description of safety valves to each boiler 2 - high lift valves 2" dia. as per plan enclosed

Area of each set of valves per boiler {per Rule 6.28 Pressure to which they are adjusted 180 lb/sq. in. 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 4'-3" Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating Single bottom under boilers Is the bottom of the boiler insulated No

Largest internal dia. of boilers 10'-6" Length 9'-10" Shell plates: Material S.M. Steel Tensile strength Min. 28 Tons/sq. in.

Thickness 7/8" Are the shell plates welded or flanged No Description of riveting: circ. seams {end Double inter. Yes

long. seams Double riveted butt straps Diameter of rivet holes in {circ. seams 1 1/16" Pitch of rivets {3 9/16" long. seams 1" 7"

Percentage of strength of circ. end seams {plate 70.2 rivets 41.4 46.9 Percentage of strength of circ. intermediate seam {plate rivets

Percentage of strength of longitudinal joint {plate 85.7 rivets 86.8 99.25 Working pressure of shell by Rules 180 lb per sq. inch.

combined 88.8 91.35

Thickness of butt straps {outer 7/8" inner 3/4" No. and Description of Furnaces in each Boiler Two - corrugated

Material Siemens Martin Steel Tensile strength Minimum 26 Tons/sq. in. Smallest outside diameter 3'-1 5/8"

Length of plain part {top Thickness of plates {crown 1/2" Description of longitudinal joint 196.5

bottom Thickness of plates {bottom 1/2" Working pressure of furnace by Rules 191.4 lb/sq. in.

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 191.4 lb/sq. in.

End plates in steam space: Material S.M. Steel Tensile strength Min. 26 Tons/sq. in. Thickness 13/16" Pitch of stays 1-2 3/8" x 1-2 3/8"

How are stays secured Nuts in and out and riveted washers 10" dia x 3/16" thick Working pressure by Rules 206.7 lb/sq. in.

Tube plates: Material {front S.M. Steel Tensile strength {Minimum 26 Tons/sq. in. Thickness {13/16" Doubling in wide water space 5/8"

back S.M. Steel Tensile strength {Minimum 26 Tons/sq. in. Thickness {13/16" Working pressure {front 186.4 lb/sq. in.

Mean pitch of stay tubes in nests 10 5/8" Pitch across wide water spaces 1-2 3/4" Working pressure {back 210 lb/sq. in.

Girders to combustion chamber tops: Material S.M. Steel Tensile strength Min. 26 Tons/sq. in. Depth and thickness of girder

at centre 7 1/8" x 2-5/8" plates Length as per Rule 24 7/8" Distance apart 7 1/4" No. and pitch of stays

in each 2 at 7 1/2" pitch Working pressure by Rules 199.4 lb/sq. in. Combustion chamber plates: Material S.M. Steel

Tensile strength Minimum 26 Tons/sq. in. Thickness: Sides 5/8" Back 1/16" Top 5/8" Bottom 13/16"

Pitch of stays to ditto: Sides 7 1/2" x 7" Back 7 1/4" x 7 9/16" Top 7 1/2" x 7 1/4" Are stays fitted with nuts or riveted over Nuts

Working pressure by Rules 248.9 lb/sq. in. Front plate at bottom: Material S.M. Steel Tensile strength Min. 26 Tons/sq. in.

Thickness 13/16" Lower back plate: Material S.M. Steel Tensile strength Min. 26 Tons/sq. in. Thickness 13/16"

Pitch of stays at wide water space 15" x 7 9/16" Are stays fitted with nuts or riveted over Nuts

Working Pressure 299.5 lb/sq. in. Main stays: Material S.M. Steel Tensile strength Minimum 28 Tons/sq. in.

Diameter {At body of stay, 2 1/2" No. of threads per inch 8 Area supported by each stay 206.5 sq. inches.

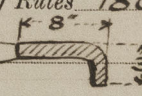
Over threads 260 Working pressure by Rules 288 lb/sq. in. Screw stays: Material S.M. Steel Tensile strength Min. 26 Tons/sq. in.

Diameter {At turned off part, 1 1/4" No. of threads per inch 8 Area supported by each stay 54.8 sq. inches.

Over threads

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Working pressure by Rules (235) Are the stays drilled at the outer ends ho Margin stays: Diameter 1 3/8"
No. of threads per inch 8 Area supported by each stay 84.1 sq. inches. Working pressure by Rules (185.5) 167.5
Tubes; Material S. M. Steel External diameter 3 1/4" Thickness 9 L.S.G. No. of threads per inch 10
Pitch of tubes 4 1/4" x 4 1/4" Working pressure by Rules 180 lbs/sq. in. Manhole compensation: Size of opening in
shell plate 18 1/2" x 15" Section of compensating ring  No. of rivets and diameter of rivet holes 32 - 1 1/8"
Outer row rivet pitch at ends 5 1/2" Depth of flange if manhole flanged 3" 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
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 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

The foregoing is a correct description,

Manufacturer.

Dates of Survey During progress of work in shops - - ✓ Are the approved plans of boiler and superheater forwarded herewith yes
which building During erection on board vessel - - 18th 19th 23rd & 29th January 1934 Total No. of visits 4
(If not state date of approval.)

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers were constructed
under the survey of Norske Veritas. They have now been examined internally and
externally with mountings, and scantlings found to be as shown on detail
plan now forwarded. The workmanship is found to be good and there is
no evidence of repairs having been carried out in these boilers.

The safety valves are of a high lift type and a detail plan is
enclosed. Under the required steaming test the safety valves have been found
efficient.

These boilers are now in good condition and in our opinion are
eligible for the Society's Class with a working pressure of 180 lbs per sq. inch.

Survey Fee Included in Indus fees When applied for, 192
Travelling Expenses (if any) £ : : When received, 192

Gas C. Erskine
Barton P. Fielden
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute PM. 3 AUG 1934

Assigned

See other Rpt

TUE. 6 NOV 1934
FRI. 15 FEB 1935
TUE. 12 MAR 1935



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