

Rpt. 5a.

REPORT ON BOILERS.

No. L 8411

Date of writing Report

192

When handed in at Local Office

21.9.1928

Port of

Glasgow

No. in
Reg. Book

Survey held at

Glasgow

Date, First Survey

8.2.28

Last Survey

20.9.1928

on the

S/S "KERMA".

(Number of Visits 46)

Gross 4333

Tons

Net

Master Built at Glasgow By whom built W & W Henderson & Co Ltd Yard No. 831 When built 1928
Engines made at Glasgow By whom made W & W Henderson & Co Ltd Engine No. 831 When made 1928
Boilers made at Glasgow By whom made W & W Henderson & Co Ltd Boiler No. 831 When made 1928
Nominal Horse Power 346 Owners J C Strick & Co Ltd Port belonging to London

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel David Beville & Sons Ltd (Letter for Record (S))

Total Heating Surface of Boilers 4601 sq ft Is forced draught fitted yes Coal or Oil fired coal

No. and Description of Boilers Two single ended 25 B. Working Pressure 180

Tested by hydraulic pressure to 320 Date of test 14-8-28 No. of Certificate 18004 Can each boiler be worked separately yes

Area of Firegrate in each Boiler 57.75 sq ft No. and Description of safety valves to each boiler two Improved High Lift

Area of each set of valves per boiler (per Rule 8.845 as fitted 9.82 Pressure to which they are adjusted 185 Are they fitted with easing gear yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler yes

Smallest distance between boilers or uptakes and bunkers or woodwork 2'6" Is oil fuel carried in the double bottom under boilers no

Smallest distance between shell of boiler and tank top plating 2'0" Is the bottom of the boiler insulated no

Largest internal dia. of boilers 14'6" Length 11'9" Shell plates: Material steel Tensile strength 28-32 tons

Thickness 1 3/16" Are the shell plates welded or flanged no Description of riveting: circ. seams end DR

long. seams DBS.T.R. Diameter of rivet holes in (circ. seams 1 1/4" (long. seams 1 1/4" Pitch of rivets 3.9"

Percentage of strength of circ. end seams (plate 67.98 rivets 43.48 Percentage of strength of circ. intermediate seam (plate 85.71 rivets 90.95

Percentage of strength of longitudinal joint (plate 85.71 rivets 90.95 combined 89.61 Working pressure of shell by Rules 180

Thickness of butt straps (outer 1" inner 1 1/8" No. and Description of Furnaces in each Boiler Three Deighton B.C.

Material steel Tensile strength 26-30 tons Smallest outside diameter 43.1875"

Length of plain part (top bottom Thickness of plates (crown 1 1/2" bottom 1 3/32" Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 200

End plates in steam space: Material steel Tensile strength 26-30 tons Thickness 1 5/32" Pitch of stays 15 1/2" x 19 1/4"

How are stays secured D.N. Working pressure by Rules 185

Tube plates: Material (front steel back " Tensile strength 26-30 tons Thickness 1 5/16" 3/4"

Mean pitch of stay tubes in nests 9.875" Pitch across wide water spaces 13 1/2" Working pressure (front 183 back 181

Girders to combustion chamber tops: Material steel Tensile strength 28-32 tons Depth and thickness of girder

at centre 2 @ 9 1/4" x 1 1/2" Length as per Rule 34.75" Distance apart 9 3/4" No. and pitch of stays

in each 3 @ 8 3/8" Working pressure by Rules 188 Combustion chamber plates: Material steel

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

Pitch of stays to ditto: Sides 8 3/8" x 9 1/4" Back 9" x 8 1/8" Top 8 3/8" x 9 3/4" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 181 Front plate at bottom: Material steel Tensile strength 26-30 tons

Thickness 1 5/16" Lower back plate: Material steel Tensile strength 26-30 tons Thickness 1 3/16"

Pitch of stays at wide water space 14" Are stays fitted with nuts or riveted over nuts

Working Pressure 195 Main stays: Material steel Tensile strength 28-32 tons

Diameter (At body of stay, 2 7/8" No. of threads per inch 6 Area supported by each stay 290 sq in

Working pressure by Rules 210 Screw stays: Material steel Tensile strength 26-30 tons

Diameter (At turned off part, 1 5/8" No. of threads per inch 9 Area supported by each stay 81 sq in

Diameter (Over threads 1 5/8"

Diameter (Over threads 1 5/8"

Diameter (Over threads 1 5/8"

Diameter (Over threads 1 5/8"

Diameter (Over threads 1 5/8"

Diameter (Over threads 1 5/8"

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Working pressure by Rules 187 Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 2" or Over threads 2"
No. of threads per inch 9 Area supported by each stay 102 sq" Working pressure by Rules 242
Tubes: Material Iron External diameter { Plain 2 1/2" Stay 2 1/2" Thickness { 5/16" 3/8" 7/16" No. of threads per inch 9
Pitch of tubes 3 3/4" x 3 3/4" Working pressure by Rules 300 Manhole compensation: Size of opening in shell plate 20" x 16" Section of compensating ring 9 3/4" x 1 3/4" No. of rivets and diameter of rivet holes 40 @ 1 1/4"
Outer row rivet pitch at ends 8 3/4" Depth of flange if manhole flanged 3 1/4" Steam Dome: Material none
Tensile strength 168 Thickness of shell 1/2" Description of longitudinal joint
Diameter of rivet holes 1 1/8" Pitch of rivets 1 1/2" Percentage of strength of joint { Plate 100 Rivets 100
Internal diameter 18 1/2" Working pressure by Rules 300 Thickness of crown 1/2" No. and diameter of stays 168 Inner radius of crown 18 1/2" Working pressure by Rules 300
How connected to shell none Size of doubling plate under dome none Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell none

Type of Superheater none Manufacturers of { Tubes none Steel castings none
Number of elements none Material of tubes none Internal diameter and thickness of tubes none
Material of headers none Tensile strength 168 Thickness 1/2" 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 10 sq in Are the safety valves fitted with easing gear yes Working pressure as per Rules 187 Pressure to which the safety valves are adjusted 187 Hydraulic test pressure: tubes 248.8 castings 187 and after assembly in place 187 Are drain cocks or valves fitted to free the superheater from water where necessary yes
Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with yes

The foregoing is a correct description,
For DAVID & WILLIAM HENDERSON & CO., LTD.

Manufacturer.

Dates of Survey { During progress of work in shops - See accompanying machinery report
while building { During erection on board vessel - See accompanying machinery report

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

Total No. of visits 46

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

The materials and workmanship are good.
The boilers have been constructed under special survey in accordance with the Rules. Satisfactorily fitted in the vessel and their safety valves adjusted under steam.

Survey Fee ... £ see Machinery Rpt When applied for, 192
Travelling Expenses (if any) £ see Machinery Rpt When received, 192

L. C. Davis

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 26 SEP 1928

Assigned See accompanying Machinery Report



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