

REPORT ON BOILERS.

No. 14385

Received at London Office - 4 APR 1931

Date of writing Report 27.3.31 When handed in at Local Office 27.3.31 Port of MIDDLESBROUGH.

No. in Reg. Book. Survey held at STOCKTON. Date, First Survey 4 June/30 Last Survey 26.3.1931

on the S.S. "DULWICH" (Number of Visits) Gross 4040. Tons Net 2443.

Master Built at Stockton By whom built Smiths Dock Co. Ltd Yard No. 923 When built 1931

Engines made at Stockton By whom made Blair & Co. (1926) Ltd Engine No. 1988 When made 1931

Boilers made at do. By whom made do. Boiler No. 1988 When made 1931.

Nominal Horse Power 368.2. Owners Britain S.S. Co Ltd Port belonging to London.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel James Dunlop & Co Ltd. (Letter for Record (S))

Total Heating Surface of Boilers 6173 sq. ft. Is forced draught fitted no. Coal or Oil fired coal.

No. and Description of Boilers 3 S.B. Working Pressure 185 lbs.

Tested by hydraulic pressure to 328 lbs. Date of test 22.10.30 No. of Certificate 6827 Can each boiler be worked separately Y.

Area of Firegrate in each Boiler 52.8 sq. ft. No. and Description of safety valves to each boiler Pair Cockburns J.K.L.

Area of each set of valves per boiler {per Rule 6.47 sq. ft. as fitted 7.96 sq. ft. Pressure to which they are adjusted 190 lbs. Are they fitted with easing gear Y.

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

Smallest distance between boilers or uptakes and bunkers or woodwork 3'-0" 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 Y.

Largest internal dia. of boilers 14'-9 9/16" Length 11'-0" Shell plates: Material steel Tensile strength 29/32.

Thickness 1 1/32" Are the shell plates welded or flanged no. Description of riveting: circ. seams {end D.R. inter. Y.

long. seams T.R.D.B.S. (5 rivets) Diameter of rivet holes in {circ. seams 1 5/16" long. seams 1 1/4" Pitch of rivets {4 1/16" 8 3/4" Y.

Percentage of strength of circ. end seams {plate 67.6% rivets 43.3% Percentage of strength of circ. intermediate seam {plate 85.7% rivets 85.8% combined 88.5% Working pressure of shell by Rules 188 lbs.

Percentage of strength of longitudinal joint {plate 85.7% rivets 85.8% combined 88.5% Working pressure of shell by Rules 188 lbs.

Thickness of butt straps {outer 1 5/16" inner 1 1/16" No. and Description of Furnaces in each Boiler 3 c.f. Y.

Material steel Tensile strength 26/30. Smallest outside diameter 3'-6 7/8" Y.

Length of plain part {top Y bottom Y Thickness of plates {crown 9 7/16" bottom 9 7/16" Description of longitudinal joint weld. Y.

Dimensions of stiffening rings on furnace or c.c. bottom Y Working pressure of furnace by Rules 191 lbs. Y.

End plates in steam space: Material steel Tensile strength 26/30. Thickness 1 3/32" Pitch of stays 21" x 19" Y.

How are stays secured D.N.s Working pressure by Rules 191 lbs. Y.

Tube plates: Material {front steel back steel Tensile strength 26/30. Thickness {13/16" CENTRE, 7/8" WINGS front 198 lbs. back 231 lbs. Y.

Mean pitch of stay tubes in nests 10 5/16" WINGS Pitch across wide water spaces 14 1/2" x 9 3/4" Working pressure {front 198 lbs. back 231 lbs. Y.

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

at centre 8 1/4" x 13/16" (double) Length as per Rule 2'-5 1/2" Distance apart 10 1/2" No. and pitch of stays Y.

in each 2'-9" Working pressure by Rules 206 lbs. Combustion chamber plates: Material steel Y.

Tensile strength 26/30. Thickness: Sides 3/32" Back 11/16" Top 23/32" Bottom 7/8" Y.

Pitch of stays to ditto: Sides 9 1/2" x 9 1/2" Back 9 1/2" x 9" Top 9" x 10 1/2" Are stays fitted with nuts or riveted over nuts Y.

Working pressure by Rules 189 lbs. Front plate at bottom: Material steel Tensile strength 26/30 Thickness 1 5/16" Y.

Lower back plate: Material steel Tensile strength 26/30 Thickness 1 5/16" Y.

Pitch of stays at wide water space 14 1/4" x 9" Are stays fitted with nuts or riveted over nuts Y.

Working Pressure 254 lbs. Main stays: Material steel Tensile strength 28/32 Y.

Diameter {At body of stay, 3 1/4" No. of threads per inch 6 Area supported by each stay 390.7 sq. in. Y.

Working pressure by Rules 205 lbs. Screw stays: Material steel Tensile strength 26/30 Y.

Diameter {At turned off part, 1 3/4" No. of threads per inch 8 Area supported by each stay 92.1 sq. in. Y.

Working pressure by Rules 194 Us. Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, or Over threads } 1 7/8"
No. of threads per inch 8 Area supported by each stay 104 Working pressure by Rules 199 Us.
Tubes: Material iron External diameter { Plain 3 1/2" 16 3 3/8" Thickness 8 WS No. of threads per inch 9.
Pitch of tubes 4 1/4" x 4 1/4" CENTRE Working pressure by Rules p. 215 Us. 3 201 Us. Manhole compensation: Size of opening in
shell plate none 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 -
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 - 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 Steel castings }
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 - 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 22 inclusive for boilers been complied with Yes

The foregoing is a correct description,
For BLAIR & CO. (1928) LIMITED.

W. J. Hancock Manufacturer.
SECRETARY.

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

Are the approved plans of boiler and superheater forwarded herewith 8.4.30
(If not state date of approval.)

Total No. of visits -

Is this Boiler a duplicate of a previous case Yes

If so, state Vessel's name and Report No. DEPTFORD Sub. 14312.

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

The materials and workmanship are good.
These boilers have been built under special survey in accordance
with the Rules and approved Plan. They have been securely fitted
aboard and their safety valves have been adjusted and tested under steam.

Survey Fee £

Travelling Expenses (if any) £

When applied for, 19

When received, 19

W. J. Hancock
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 17 APR 1931

Assigned

See F. C. Rpt.



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Foundation