

REPORT ON BOILERS.

No. 13449

17 OCT 1928

Received at London Office

Date of writing Report 16.10.28 When handed in at Local Office 16.10.28 Port of MIDDLESBROUGH.

No. in Survey held at STOCKTON. Date, First Survey See Kelly report. Last Survey 18.10.1928.

558 Sup. on the sc. 'ISLEWORTH' (Number of Visits) Gross 4908 Tons Net 2966.

Master Built at Blyth By whom built Cowpen D.D.S.B. Co. Yard No. 235 When built 1928.

Engines made at STOCKTON By whom made Blair & Co (1926) Ltd Engine No. 1980 When made 1928

Boilers made at do. By whom made do. Boiler No. 1980 When made 1928.

Nominal Horse Power 506 Owners Dalquiesh S.S. Co Ltd. Port belonging to Newcastle

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

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

Total Heating Surface of Boilers 4413 sq ft. Is forced draught fitted Ys Coal or Oil fired Coal.

No. and Description of Boilers 3 S.B. Working Pressure 180 lbs.

Tested by hydraulic pressure to 320 lbs. Date of test 4.4.28 No. of Certificate 6628. Can each boiler be worked separately Ys.

Area of Firegrate in each Boiler 59.5 sq ft. No. and Description of safety valves to each boiler Pair Coxburns Improved High Lift
Area of each set of valves per boiler { per Rule 7.929 as fitted 7.959 Pressure to which they are adjusted 180 lbs. Are they fitted with easing gear Ys.

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

Smallest distance between ~~boiler~~ uptakes and bunkers 6'-6" Is oil fuel carried in the double bottom under boilers no.

Smallest distance between shell of boiler and tank top plating 1'-9" Is the bottom of the boiler insulated no.

Largest internal dia. of boilers 14'-9 9/16" Length 11'-6" Shell plates: Material Steel Tensile strength 28/32

Thickness 1 7/32" Are the shell plates welded or flanged no. Description of riveting: circ. seams { end DR. inter. Ys.

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

Percentage of strength of circ. end seams { plate 69.1 rivets 42.8 Percentage of strength of circ. intermediate seam { plate Ys. rivets Ys.

Percentage of strength of longitudinal joint { plate 85.5 rivets 90. combined 89. Working pressure of shell by Rules 181 lbs.

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

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

Length of plain part { top Ys. bottom Ys. Thickness of plates { crown 9/16" bottom 9/16" Description of longitudinal joint Weld.

Dimensions of stiffening rings on furnace or c.c. bottom Ys. Working pressure of furnace by Rules 187 lbs.

End plates in steam space: Material Steel Tensile strength 26/30. Thickness 1 3/16" Pitch of stays 19 1/2" x 19 1/2"

How are stays secured D.N & W. Working pressure by Rules 192 lbs.

Tube plates: Material { front Steel back Steel Tensile strength { 26/30. Thickness { 3 1/32" 1 3/16"

Mean pitch of stay tubes in nests 9 3/8" Pitch across wide water spaces 13 1/2" Working pressure { front 196 lbs. back 270 "

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

at centre 8" x 1 1/16" (double) Length as per Rule 2'-6 1/2" Distance apart 8 3/4" No. and pitch of stays

in each 2 - 9 3/4" Working pressure by Rules 188 lbs. Combustion chamber plates: Material Steel

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

Pitch of stays to ditto: Sides 9 3/4" x 8 1/4" Back 9 3/8" x 8 1/2" Top 9 3/4" x 8 3/4" Are stays fitted with nuts or riveted over nuts.

Working pressure by Rules 192 lbs. Front plate at bottom: Material Steel Tensile strength 26/30.

Thickness 3 1/32" Lower back plate: Material Steel Tensile strength 26/30 Thickness 29"

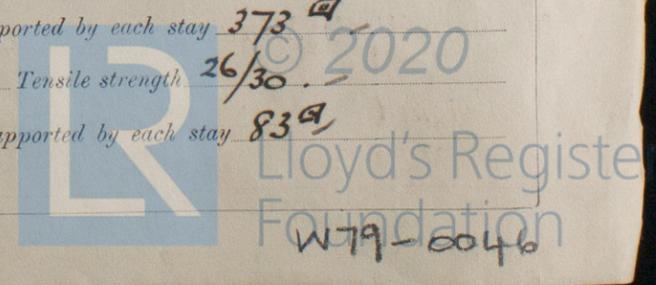
Pitch of stays at wide water space 14" x 9 3/8" Are stays fitted with nuts or riveted over nuts.

Working Pressure 241 lbs. 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 373 sq in.

Working pressure by Rules 197 lbs. Screw stays: Material Steel Tensile strength 26/30.

Diameter { At turned off part, 1 3/4" No. of threads per inch 8 Area supported by each stay 83 sq in.



Working pressure by Rules 218 lbs Are the stays drilled at the outer ends no Margin stays: Diameter ^{At turned off part} 1 7/8" ^{or} 1 7/8" ^{Over threads}

No. of threads per inch 8 Area supported by each stay 100 sq Working pressure by Rules 213 lbs

Tubes: Material iron External diameter ^{Plain} 2 1/2" to 2 7/8" Thickness ^{Stay} 9/16" No. of threads per inch 9

Pitch of tubes 3 3/4" x 3 3/4" Working pressure by Rules p. 230. s = 270 lbs Manhole compensation: Size of opening in shell plate 16" x 12" Section of compensating ring 7" x 1 7/32" No. of rivets and diameter of rivet holes 28 - 1 7/16"

Outer row rivet pitch at ends 9" 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 _____

How connected to shell _____ Inner radius of crown _____ Working pressure by Rules _____

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 _____ 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

The foregoing is a correct description,
For BLAIR & CO. (1926) LIMITED.
W. H. Mansfield Manufacturer.
SECRETARY.

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

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, securely fitted aboard and their safety valves have been adjusted and tested under steam with satisfactory results.

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

W. H. Mansfield
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 2 NOV 1928

Assigned See Minute on Indk Rpt 13449

