

REPORT ON BOILERS.

No. 14011

22 MAR 1930

Received at London Office

Date of writing Report 20.3.30 When handed in at Local Office 20.3.30 Port of MIDDLESBROUGH.

No. in Survey held at STOCKTON.

Date, First Survey 14 Janry. Last Survey 19.3.1930.

Reg. Book.

(Number of Visits 10)

Gross 386.

on the steamer 'Daily Mail'

Tons Net 165

Master Built at South Bank By whom built Smiths Dock Co. Ltd Yard No. 915. When built 1930.

Engines made at South Bank. By whom made Smiths Dock Co. Ltd. Engine No. 382. When made 1930.

Boilers made at Stockton By whom made Blair & Co (1926) Ltd. Boiler No. C.825 When made 1930.

Nominal Horse Power Owners Boston Deep Sea Fishing & Ice Co Ltd Port belonging to Fleetwood

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

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

Total Heating Surface of Boilers 2076 sq. ft. Is forced draught fitted no. Coal or Oil fired coal.

No. and Description of Boilers 1 S.B. Working Pressure 200 lbs.

Tested by hydraulic pressure to 350 lbs. Date of test 19.3.30 No. of Certificate 6772. Can each boiler be worked separately

Area of Firegrate in each Boiler 50.7 sq. ft. No. and Description of safety valves to each boiler Paris Cornburns J. H. Life

Area of each set of valves per boiler (per Rule 6.03 as fitted 6.28) Pressure to which they are adjusted 205 lbs. Are they fitted with easing gear Ye

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

Smallest distance between boilers and bunkers 11" Is oil fuel carried in the double bottom under boilers no.

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

Largest internal dia. of boilers 14'-3 7/16" Length 10'-9" Shell plates: Material steel Tensile strength 29/32.

Thickness 1 9/32" Are the shell plates welded or flanged no. Description of riveting: circ. seams end D.R. inter.

long. seams T.R.D.B.S. (5 rivets) Diameter of rivet holes in (circ. seams 1 5/16" long. seams 1 5/16" Pitch of rivets 3 7/8" 9 1/8"

Percentage of strength of circ. end seams (plate 66.1 rivets 43.1) Percentage of strength of circ. intermediate seam (plate 66.1 rivets 43.1)

Percentage of strength of longitudinal joint (plate 85.6 rivets 85.8 combined 88.3) Working pressure of shell by Rules 205 lbs.

Thickness of butt straps (outer 3 1/2" inner 1 3/2") No. and Description of Furnaces in each Boiler 3 P.F. Tensile strength 26/30.

Material steel Smallest outside diameter 3'-6" Length of plain part (top 6'-6" bottom 6'-1" Thickness of plates (crown 13" bottom 16" Description of longitudinal joint weld.

Dimensions of stiffening rings on furnace or c.e. bottom Working pressure of furnace by Rules 211 lbs.

End plates in steam space: Material steel Tensile strength 26/30 Thickness 1 3/16" Pitch of stays 18" x 19 1/2"

How are stays secured D.N. & W. Working pressure by Rules 207 lbs.

Tube plates: Material (front steel back steel) Tensile strength 26/30 Thickness 25/32

Mean pitch of stay tubes in nests 9" Pitch across wide water spaces 14" x 9" Working pressure (front 218 lbs. back 270)

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

at centre 9' x 15/16" (double) Length as per Rule 3'-0 1/2" Distance apart 8 1/2" No. and pitch of stays

in each 3'-8 1/2" Working pressure by Rules 207 lbs. Combustion chamber plates: Material steel Tensile strength 26/30.

Thickness: Sides 21/32 Back 21/32 Top 21/32 Bottom 1" Pitch of stays to ditto: Sides 8 1/4" x 8 1/2" Back 9" x 7 3/4" Top 8 1/2" x 8 1/2" Are stays fitted with nuts or riveted over nuts.

Working pressure by Rules 212 lbs. Front plate at bottom: Material steel Tensile strength 26/30 Thickness 1 5/16" Lower back plate: Material steel Tensile strength 26/30 Thickness 29/32

Pitch of stays at wide water space 14" x 7 3/4" Are stays fitted with nuts or riveted over nuts.

Working Pressure 263 lbs. Main stays: Material steel Tensile strength 28/32

Diameter (At body of stay or over threads) 3 1/8" No. of threads per inch 6 Area supported by each stay 344 sq. in.

Working pressure by Rules 214 lbs. Screw stays: Material steel Tensile strength 26/30

Diameter (At turned off part or over threads) 1 7/8" No. of threads per inch 8 Area supported by each stay 67.7 sq. in.



Working pressure by Rules **223 lbs** Are the stays drilled at the outer ends **no**. Margin stays: Diameter ^{At turned off part.} **1 1/4"**
 No. of threads per inch **8**. Area supported by each stay **86.7**^{sq} Working pressure by Rules **209 lbs**.
 Tubes: Material **iron** External diameter ^{Plain} **3 1/4" to 3 9/16"** Thickness ^{Stay} **3/16" to 3 1/2"** No. of threads per inch **9**.
 Pitch of tubes **4 1/2" x 4 1/2"** Working pressure by Rules **p. 230 lbs. s. 254 lbs** Manhole compensation: Size of opening in
 shell plate **16" x 12"** Section of compensating ring **8" x 1 9/32"** No. of rivets and diameter of rivet holes **28 - 1 1/8"**
 Outer row rivet pitch at ends **9 1/2"** 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} _____
 Number of elements _____ Material of tubes _____ ^{Steel castings} _____
 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 22 inclusive for boilers been complied with **Yls.**

The foregoing is a correct description,
for BLAIR & CO. (1926) LIMITED.

W. J. Hamilton Manufacturer.
SECRETARY,

Dates of Survey ^{During progress of work in shops - -} **1930 Jan 14, 21, 27 Feb 4, 18, 27 Mar 3, 7, 17, 19** Are the approved plans of boiler and superheater forwarded herewith **Yls.**
 while building ^{During erection on board vessel - - -} _____
 Total No. of visits **10**

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

The materials and workmanship are good.
 This boiler has been built under special survey in accordance with the Rules and approved Plan. It will be installed in this district

This boiler has been securely fitted aboard and its safety valves adjusted and tested under steam with satisfactory results.

P. J. Mac
5.6.30

Survey Fee £ **13-16-0**
 Travelling Expenses (if any) £ : : :

When applied for, **21-3-1930**
 When received, **25-3-1930**

P. J. Mac
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **TUE. 24 JUN 1930**

Assigned

See F.E. Rpt.



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