

REPORT ON BOILERS.

No. 14341

14369

-7 FEB 1931

Received at London Office

Date of writing Report 30. 1. 1931 When handed in at Local Office 30. 1. 1931 Port of MIDDLESBROUGH.

No. in Survey held at STOCKTON. Date, First Survey 9 Dec/30 Last Survey 30. 1. 1931.

on the steamer "NOTRE DAME DE FRANCE" (Number of Visits 8) Gross 450. Net 224.

Master Built at Stockton By whom built Smiths Dock Co Ltd Yard No. 950. When built 1931.

Engines made at South Bawc. By whom made Smiths Dock Co Ltd Engine No. 405 When made 1931

Boiler made at Stockton By whom made Blair & Co. (1926) Ltd Boiler No. D. 407 When made 1931.

Nominal Horse Power 126.5. Owners Gournay Bros. Port belonging to Boulogne.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel David Colville & Sons and James Duhlop & Co. (Letter for Record S.)

Total Heating Surface of Boilers 2370 sq ft. Is forced draught fitted no. Coal or Oil fired coal.

No. and Description of Boilers 1 SB. Working Pressure 225 lbs.

Tested by hydraulic pressure to 388 lbs. Date of test 30. 1. 31. No. of Certificate 6842. Can each boiler be worked separately 237.5

Area of Firegrate in each Boiler 57.7 sq ft. No. and Description of safety valves to each boiler Pair Corcorans Improved High Lift

Area of each set of valves per boiler per Rule 6.17 as fitted 6.28 Pressure to which they are adjusted 230 lbs. 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 9" Is oil fuel carried in the double bottom under boilers no.

Smallest distance between shell of boiler and tank top plating no. Is the bottom of the boiler insulated no.

Largest internal dia. of boilers 15'-6" Length 10'-9" Shell plates: Material steel Tensile strength 33.

Thickness 1 17/32" 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 7/16" Pitch of rivets 3 1/2" inter. 10 3/8"

Percentage of strength of circ. end seams plate 62.3. rivets 44.0. Percentage of strength of circ. intermediate seam plate rivets

Percentage of strength of longitudinal joint plate 84.9. rivets 93.0. combined 88.4. Working pressure of shell by Rules 225 lbs.

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

Material steel Tensile strength 26/30. Smallest outside diameter 3'-9 1/2"

Length of plain part top bottom Thickness of plates crown 23" bottom 32" Description of longitudinal joint weld.

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 253 lbs.

End plates in steam space: Material steel Tensile strength 26/30. Thickness 1 5/16" Pitch of stays 18" x 2 1/2"

How are stays secured D.N.O.W. Working pressure by Rules 228 lbs.

Tube plates: Material front back steel Tensile strength 26/30. Thickness 7/8" wing; 1 1/16" centre.

Mean pitch of stay tubes in nests 10" Pitch across wide water spaces 14 1/4" x 9 1/4" Working pressure front 240 lbs. back 225 "

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

at centre 9' x 13" (double) Length as per Rule 2'-8 1/2" Distance apart 8 1/4" No. and pitch of stays

in each 3'-7 1/4" Working pressure by Rules 235 lbs. Combustion chamber plates: Material steel

Tensile strength 26/30. Thickness: Sides 2 1/2" Back 3 1/2" Top 2 1/2" Bottom 1 1/8"

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

Working pressure by Rules 230 lbs. Front plate at bottom: Material steel Tensile strength 26/30.

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

Pitch of stays at wide water space 14 1/4" x 8 1/2" Are stays fitted with nuts or riveted over nuts.

Working Pressure 307 lbs. Main stays: Material steel Tensile strength 28/32.

Diameter At body of stay, or Over threads 3 3/8" No. of threads per inch 6. Area supported by each stay 378 sq

Working pressure by Rules 231 lbs. Screw stays: Material steel Tensile strength 26/30.

Diameter At turned off part, or Over threads 1 5/8" No. of threads per inch 9. Area supported by each stay 63 sq

Working pressure by Rules **241 lbs.** Are the stays drilled at the outer ends **no.** Margin stays: Diameter **1 7/8** At turned off part.
 No. of threads per inch **9.** Area supported by each stay **86.6** Working pressure by Rules **246 lbs.**
 Tubes: Material **iron** External diameter **3 7/8** Plain **3 7/8** Stay **3 7/8** Thickness **5/16** No. of threads per inch **9.**
 Pitch of tubes **4 1/2" x 4 1/2" WINGS.** Working pressure by Rules **230 lbs. s. 225 lbs.** Manhole compensation: Size of opening in shell plate **16" x 12"** Section of compensating ring **5-2 3/4 dia x 1 1/2"** No. of rivets and diameter of rivet holes **1 9/16 dia x 10 5/8 p.**
 Outer row rivet pitch at ends **10 5/8** Depth of flange if manhole flanged Steam Dome: Material **steel**
 Tensile strength **26/30.** Thickness of shell **1"** Description of longitudinal joint **D.R. Lap.**
 Diameter of rivet holes **1 1/16** Pitch of rivets **3 3/8** Percentage of strength of joint: Plate **68.3** Rivets **46.6**
 Internal diameter **3'-3"** Working pressure by Rules **321 lbs.** Thickness of crown **16** No. and diameter of stays Inner radius of crown **3'-3"** Working pressure by Rules **250 lbs.**
 How connected to shell **riveted** Size of doubling plate under dome **5-2 3/4 dia x 1 1/2"** Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell **1 9/16 x 10 5/8 p.**

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 22 inclusive for boilers been complied with **Yes**

The foregoing is a correct description,
 For **BLAIR & CO. (1928) LIMITED.** Manufacturer.
H. J. Hambro

Dates of Survey: During progress of work in shops -- **1930 Dec. 9, 17, 22 1931 Jan. 6, 11, 19** Are the approved plans of boiler and superheater forwarded herewith **Yes**
 while building: During erection on board vessel --- **26, 30** (If not state date of approval.)
 Total No. of visits

Is this Boiler a duplicate of a previous case **no** If so, state Vessel's name and Report No.

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. Man
3. 3. 31.
2

Survey Fee £ **15-16-0** When applied for, **6 Feb 1931**
 Travelling Expenses (if any) £ : : When received, **9. 2. 1931**

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

Committee's Minute **FRI. 20 MAR 1931**

Assigned **See F. E. Rpt.**

