

REPORT ON BOILERS.

No. 95512

Received at London Office OCT 12 1937

Date of writing Report 11/10/37 When handed in at Local Office Port of NEWCASTLE-ON-TYNE

No. in Survey held at Wallsend Date, First Survey 9 Feb Last Survey 4 Oct 1937

on the SS "BECKENHAM" (Number of Visits 5) Tons { Gross Net

Master A. J. D. Built at Dundee By whom built Caledon, S B & Ing Co Yard No. 367 When built 1937

Engines made at Wallsend By whom made North Eastern Marine Eng Co. Ltd. Engine No. 2876 When made 1937

Boilers made at Wallsend By whom made North Eastern Marine Eng Co. Ltd. Boiler No. 2876 When made 1937

Nominal Horse Power 404 Owners Britann S.S. Co. Port belonging to London.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Steel Co of Scotland. (Letter for Record S)

Total Heating Surface of Boilers 4340 Is forced draught fitted Yes Coal or Oil fired Coal

No. and Description of Boilers Two single ended multitubular Working Pressure 220 lbs

Tested by hydraulic pressure to 380 lbs Date of test 27-7-37 No. of Certificate 727 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 46 No. and Description of safety valves to each boiler Two spring loaded

Area of each set of valves per boiler { per Rule 11.54 as fitted 11.88 Pressure to which they are adjusted 11.88 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 10'-3" Is oil fuel carried in the double bottom under boilers no

Smallest distance between shell of boiler and tank top plating 24" Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 14'-3 1/4" Length 11'-6" Shell plates: Material Steel Tensile strength 29-33 tons

Thickness 1 3/8" Are the shell plates welded or flanged no Description of riveting: circ. seams { end D.R. Lap inter. -

long. seams T.R. off straps Diameter of rivet holes in { circ. seams 1 7/16" long. seams 1 7/16" Pitch of rivets { 4" 9 7/8"

Percentage of strength of circ. end seams { plate 64 rivets 46.8 Percentage of strength of circ. intermediate seam { plate - rivets -

Percentage of strength of longitudinal joint { plate 85.4 rivets 88.8 combined 88.5 Working pressure of shell by Rules 221 lbs

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

Material Steel Tensile strength 26-30 tons Smallest outside diameter 41 9/16"

Length of plain part { top - bottom - Thickness of plates { crown 2 1/32" bottom 2 1/32" Description of longitudinal joint weld

Dimensions of stiffening rings on furnace or c.c. bottom none Working pressure of furnace by Rules 230 lbs

End plates in steam space: Material Steel Tensile strength 26-30 tons Thickness 1 3/8" Pitch of stays 21 x 19"

How are stays secured double nuts Working pressure by Rules 221 lbs

Tube plates: Material { front Steel back Steel Tensile strength { 26-30 tons Thickness { 31/32" 25/32"

Mean pitch of stay tubes in nests 9 1/2" Pitch across wide water spaces 14 3/4" Working pressure { front 226 lbs back 236 lbs

Girders to combustion chamber tops: Material Steel Tensile strength 29-33 tons Depth and thickness of girder

at centre 10 x 2 @ 25/32" Length as per Rule 34" Distance apart 9 1/2" No. and pitch of stays

in each 2 @ 10 3/16" Working pressure by Rules 250 lbs Combustion chamber plates: Material Steel

Tensile strength 26/30 tons Thickness: Sides 25/32" Back 23/32" Top 25/32" Bottom 25/32"

Pitch of stays to ditto: Sides 10 3/16 x 9 1/2" Back 9 x 9" Top 10 3/16 x 9 1/2" Are stays fitted with nuts or riveted over Nuts

Working pressure by Rules 223 lbs Front plate at bottom: Material Steel Tensile strength 26-30 tons

Thickness 31/32" Lower back plate: Material Steel Tensile strength 26-30 tons Thickness 15/16"

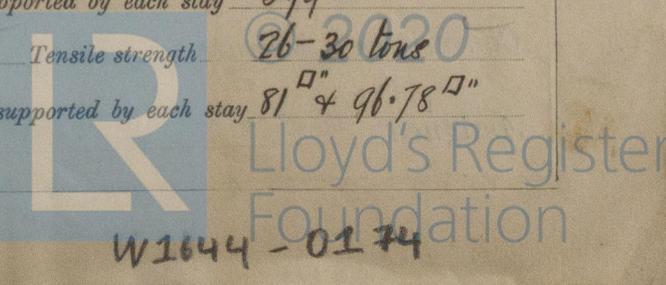
Pitch of stays at wide water space 15 1/2 x 9" Are stays fitted with nuts or riveted over Nuts

Working Pressure 225 lbs Main stays: Material Steel Tensile strength 28-32 tons

Diameter { At body of stay 3 1/4" or Over threads - No. of threads per inch 6 Area supported by each stay 399

Working pressure by Rules 232 lbs Screw stays: Material Steel Tensile strength 26-30 tons

Diameter { At turned off part 1 7/8 x 2" or Over threads - No. of threads per inch 9 Area supported by each stay 81 + 96.78



Working pressure by Rules 256 *lbs* Are the stays drilled at the outer ends *no* Margin stays: Diameter *2 1/8"* At turned off part. or Over threads
 No. of threads per inch *9* Area supported by each stay *110.25"* Working pressure by Rules *258 lbs*
 Tubes: Material *S.D. Steel* External diameter *3"* Plain Stay Thickness *3/8" 5/16"* No. of threads per inch *9*
 Pitch of tubes *4 1/4" x 4 1/8"* Working pressure by Rules *235 lbs* Manhole compensation: Size of opening in
END plate *16 x 12"* Section of compensating ring *—* No. of rivets and diameter of rivet holes *—*
 Outer row rivet pitch at ends *—* Depth of flange if manhole flanged *4"* 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 *N.E. Marine Smoke Tube* Manufacturers of *Tubes Ld. Birmingham Steel Co. Ltd.*
 Number of elements *98* Material of tubes *S.D. Steel* Internal diameter and thickness of tubes *15 1/4" x 2 1/2 1/4"*
 Material of headers *Steel* Tensile strength *26-30 tons* Thickness *1 1/8"* Can the superheater be shut off and
 the boiler be worked separately *no* 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 *3 1/4"* Are the safety valves fitted with easing gear *Yes* Working pressure as per
 Rules *220 lbs* Pressure to which the safety valves are adjusted *225 lbs* Hydraulic test pressure:
 tubes *1500 lbs* Headers *600 lbs* forgings and castings and after assembly in place *440 lbs* 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 *—*

The foregoing is a correct description,
John Newell Manufacturer.

Dates of Survey During progress of work in shops - - - *See Machinery Report* Are the approved plans of boiler and superheater forwarded herewith *Yes*
while building During erection on board vessel - - - *See Machinery Report* (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. *Blackheath Rpt No 93815*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *These boilers have been built under Special Survey, in accordance with the Rules and approved plan. The materials and workmanship are good, they have been fitted on board in an efficient manner, tried under working conditions and found satisfactory.*

Survey Fee ... *Charged on* When applied for, *19*
 Travelling Expenses (if any) *Machinery Rpt* When received, *19*

J. Sella
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *TUE 2 NOV 1987*

Assigned *See Sur 9007*

