

REPORT ON BOILERS.

No. 100783

Received at London Office 15 OCT 1942

Date of writing Report

19

When handed in at Local Office

19

Port of

NEWCASTLE-ON-TYNE

No. in Survey held at
Reg. Book.

Newcastle on Tyne

Date, First Survey 3rd April 1942 Last Survey 30th Sept. 1942

on the S/S "EMPIRE DACE."

(Number of Visits) Gross 716
Tons Net 268

Built at Newcastle By whom built Swan, Hunter & Wigham Richardson Ltd Yard No 1754 When built 1942-

Engines made at ditto By whom made ditto Engine No 1754 When made "

Boilers made at ditto By whom made ditto Boiler No 1754 When made "

Nominal Horse Power Owners Admiralty M/S Port belonging to Newcastle on Tyne

MULTITUBULAR BOILERS—MAIN, ~~AUXILIARY~~, OR DONKEY.

Manufacturers of Steel Appleby & Frodingham Steel Co. & The Steel Coy. of Scotland (Letter for Record S.)

Total Heating Surface of Boilers 2554 sq. ft. Is forced draught fitted Yes Coal or Oil fired Coal.

No. and Description of Boilers Two Single ended. Working Pressure 180 lbs./sq. in.

Tested by hydraulic pressure to 320th Date of test 13/8/42 No. of Certificate 995. Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 34.5 sq. ft. No. and Description of safety valves to each boiler Two 2" Lockburn's Imp. High Lift.

Area of each set of valves per boiler {per Rule 4.09 sq. in. as fitted 6.28 " Pressure to which they are adjusted 180th 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 3'-0" Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating open floors Is the bottom of the boiler insulated No

Largest internal dia. of boilers 11'-1 1/4" Length 11'-0" Shell plates: Material Steel Tensile strength 30 to 34 tons

Thickness 7/8" Are the shell plates welded or flanged No Description of riveting: circ. seams end DR. overlap

Long. seams TR. 8 lb. butt straps Diameter of rivet holes in {circ. seams 1 1/16" Pitch of rivets {3.24

Percentage of strength of circ. end seams {plate 69.13 rivets 42.47 Percentage of strength of circ. intermediate seam {plate None

Percentage of strength of longitudinal joint {plate 85.84 rivets 85.55 combined 88.80

Thickness of butt straps {outer 21/32 inner 25/32 No. and Description of Furnaces in each Boiler Two "Deighton" Corrugated

Material Stl. Tensile strength 26 to 30 tons Smallest outside diameter 3'-0 15/16"

Length of plain part {top bottom Thickness of plates {crown 15/32 Description of longitudinal joint Fire welded.

Dimensions of stiffening rings on furnace or c.e. bottom none

End plates in steam space: Material Stl. Tensile strength 26 to 30 tons Thickness 29/32" Pitch of stays 13 3/4 x 14 7/8 max.

How are stays secured Nuts inside & outside.

Tube plates: Material {front Stl. Tensile strength 26 to 30 tons Thickness 29/32" 3/4"

Mean pitch of stay tubes in nests 9 3/8" Pitch across wide water spaces 13 1/2"

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

at centre 8 3/8 x 5/8 x two Length as per Rule 30 9/16" Distance apart 9" No. and pitch of stays

in each Two @ 9 3/4" Combustion chamber plates: Material Stl.

Tensile strength 26 to 30 tons Thickness: Sides 11/16" Back 11/16" Top 11/16" Bottom 11/16"

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

Front plate at bottom: Material Stl. Tensile strength 26 to 30 tons

Thickness 29/32" Lower back plate: Material Stl. Tensile strength 26 to 30 tons Thickness 29/32"

Pitch of stays at wide water space 13 1/2 x 9 3/4 (max 14 7/8 x 9 3/4) Are stays fitted with nuts or riveted over with nuts

Main stays: Material Stl. Tensile strength 28 to 32 tons

Diameter {At body of stay, 2 3/8" No. of threads per inch 6.

Screw stays: Material Stl. Tensile strength 26 to 30 tons

Diameter {At turned off part, 1 3/4" No. of threads per inch 9.

© 2020

Lloyd's Register

Foundation

W1195-0198

Are the stays drilled at the outer ends No ✓

Margin stays: Diameter { At turned off part $1\frac{3}{4}" + 1\frac{2}{8}"$ ✓
Over threads

No. of threads per inch 9 ✓

Tubes: Material Steel ✓ External diameter { Plain 2½" ✓
Stay

Thickness { 9 W.G. ✓
¼" + 5/16" ✓ No. of threads per inch 9 ✓

Pitch of tubes 3¾" x 3¾" ✓

Manhole compensation: Size of opening in shell plate 16" x 20" ✓

Section of compensating ring 19½" x 7/8" ✓

No. of rivets and diameter of rivet holes 32 @ 1½" ✓

Outer row rivet pitch at ends 9½" ✓

Depth of flange if manhole flanged 2½" ✓

Steam Dome: None ✓

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 _____ Thickness of crown _____ No. and diameter of stays _____

Inner radius of crown _____

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 None ✓

Manufacturers of { Tubes _____
Steel forgings _____
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 _____

Pressure to which the safety valves are adjusted _____ Hydraulic test pressure: _____

tubes _____ forgings and 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,
G. J. Tweedy Manufacturer.

Dates of Survey { During progress of work in shops - - -
while building { During erection on board vessel - - -

See Machinery Report.

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) 11/2/42

Total No. of visits _____

Is this Boiler a duplicate of a previous case Yes ✓

If so, state Vessel's name and Report No. TUZLA. Nav Rpt. 100,766.
SHTRA yard no 1752.

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

The Boilers of this Vessel have been built under special survey in accordance with the approved plans and the Society's Rules, and the materials and workmanship are good.

The Boilers have been efficiently fitted on board and tested under steam under working conditions.

See also Machinery Rpt 4.

Survey Fee ... £ See Machinery Rpt. When applied for, 19

Travelling Expenses (if any) £ : : When received, 19

A. Ulatt.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 27 OCT 1942

Assigned See fe. machy rpt.