Form No. 5a.

REPORT ON BOILERS.

No. 89384

Received at London Office 21 OCT 1925

Date of writing Report Oct 20th 1925 When handed in at Local Office 21 OCT 1925 Port of London

No. in Book. Survey held at Stitchin Date, First Survey 11th Sep. 1925 Last Survey Oct 12th 1925

on the Spencer Bonecourt, Water Heat Boiler for M.S. "Vlaardreeht" (Number of Visits 4) Tons { Gross / Net

Master Built at By whom built Yard No. When built

Engines made at By whom made Engine No. When made

Boilers made at Stitchin By whom made Spencer Bonecourt Ltd. Boiler No. 3938 When made 1925

Nominal Horse Power Owners Port belonging to

Vertical Waste heat

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel The Leeds Forge Co. (Letter for Record 5)

Total Heating Surface of Boilers 923 ft Is forced draught fitted Coal or Oil fired

Name and Description of Boilers No. Spencer Bonecourt, Kirkstall Patent Working Pressure 145

Tested by hydraulic pressure to 268 Date of test 12.10.25 No. of Certificate 1289 Can each boiler be worked separately

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler 2 Spring loaded, Kitchen.

Area of each set of valves per boiler { per Rule 60 sq in / as fitted 60 sq in } Pressure to which they are adjusted Are they fitted with easing gear Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No

Least distance between boilers or uptakes and bunkers or woodwork Is oil fuel carried in the double bottom under boilers

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

Mean internal dia. of boilers 5ft. Length 12 ft. **Shell plates:** Material Steel Tensile strength 26-30

Thickness 1/2" Are the shell plates welded or flanged no Description of riveting: circ. seams { end Single / inter. Double

Seams D.R. Kile butt straps Diameter of rivet holes in { circ. seams 7/8 & 13/16 / long. seams 13/16 } Pitch of rivets { 2 1/4 & 2.74 / 3 1/32 }

Percentage of strength of circ. end seams { plate 61 / rivets 43.6 } Percentage of strength of circ. intermediate seam { plate 70.4 / rivets 61.75 }

Percentage of strength of longitudinal joint { plate 72.9 / rivets 106.2 / combined } Working pressure of shell by Rules 160

Thickness of butt straps { outer 1/2 / inner 1/2 } **No. and Description of Furnaces in each Boiler**

Material Tensile strength Smallest outside diameter

Area of plain part { top / bottom } Thickness of plates { crown / bottom } Description of longitudinal joint

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

Stays in steam space: Material Tensile strength Thickness Pitch of stays

Where stays secured Working pressure by Rules

Stay plates: Material { front Steel / back Steel } Tensile strength { 26-30 } Thickness { 3/4 / 3/4 }

Pitch of stay tubes in nests Pitch across wide water spaces Working pressure { front / back 150 }

Stays to combustion chamber tops: Material Tensile strength Depth and thickness of girder

Size Length as per Rule Distance apart No. and pitch of stays

Area Working pressure by Rules **Combustion chamber plates:** Material

Tensile strength Thickness: Sides Back Top Bottom

Area of stays to ditto: Sides Back Top Are stays fitted with nuts or riveted over

Working pressure by Rules **Front plate at bottom:** Material Tensile strength

Area **Lower back plate:** Material Tensile strength Thickness

Pitch of stays at wide water space Are stays fitted with nuts or riveted over

Working Pressure **Main stays:** Material Steel Tensile strength 28-35

Diameter { At body of stay, or Over threads 1 3/4 / 1 7/8 } No. of threads per inch 9 Area supported by each stay 143 sq in

Working pressure by Rules 150 **Screw stays:** Material Tensile strength

Diameter { At turned off part, or Over threads } No. of threads per inch Area supported by each stay

K137-0187

Working pressure by Rules ______ Are the stays drilled at the outer ends ______ Margin stays: Diameter { At turned off part, or Over threads ______

No. of threads per inch ______ Area supported by each stay ______ Working pressure by Rules ______

Tubes; Material Steel ✓ External diameter { Plain 1 3/4 ✓ Stay solid stays } Thickness { 10 L.W.G. ✓ 1 3/8 dia. } No. of threads per inch 9 ✓

Pitch of tubes 2 5/8 × 2 5/8 ✓ Working pressure by Rules ______ **Manhole compensation:** Size of opening in shell plate 16 × 12 Section of compensating ring 2" 2" × 9/16 ✓ No. of rivets and diameter of rivet holes 32 - 13/16 ✓

Outer row rivet pitch at ends 3" ✓ 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 ______ 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 ______.

The foregoing is a correct description,

SPENCER-BONECOURT LTD. Manufacturer.

H. S. Jackson

Dates of Survey while building		
During progress of work in shops	1925 Sep 11. 25. 28 Oct 12	Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) Yes ✓
During erection on board vessel	4	Total No. of visits ______

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

This boiler has been built under Special Survey in accordance with the plan and the Society's Rules.

The workmanship is good.

Upon completion the boiler was tested by hydraulic pressure to 268 lbs per □" and showed no signs of weakness or defect.

The safety valves, the feed check valve & the blow down cock are being made in Rotterdam & will be fitted to the boiler on arrival there.

Survey Fee ... ... £ 4 : 4 : 0 } When applied for, 21 OCT 1925

Travelling Expenses (if any) £ 2 : 16 : 0 } When received, 23-10-1925 [initials]

H. S. Cornish

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute ______

Assigned ______