

REPORT ON BOILERS.

No. **96,205**

Received at London Office **10 APR 1931**

Writing Report **10 APR 1931** When handed in at Local Office **10 APR 1931** Port of **London (Spencer)**

Survey held at _____ Date, First Survey **29th January** Last Survey **17th March 1931**

on the **For Messrs Vickers-Armstrongs 663 " Strathnaver** (Number of Visits **4**) (Gross **22574** Tons) (Net **13620**)

at **Barrow** By whom built **Vickers-Armstrong** Yard No. **663** When built **1931**

made at **Rugby** By whom made **The British Thomson Houston Co^{ltd}** Engine No. ✓ When made **1931**

made at **Kings Lynn** By whom made **A. Dodman & Co. Ltd.** Boiler No. **141^F** When made **1931**

for **Peninsular & Oriental Steam Navigation Co.** Port belonging to **London.**

VERTICAL DONKEY BOILER.

at **Kings Lynn** By whom made **A. Dodman & Co. Ltd.** Boiler No. **141^F** When made **1931** Where fixed **Stokehold platform**

Manufacturers of Steel **Messrs. Guest, Keen & Nettletons.**

Heating Surface of Boiler **16 #** Is forced draught fitted ✓ Coal or Oil fired **oil.**

Description of Boilers **One vertical Cross tube.** Working pressure **100 lb. sq. in.**

Tested by hydraulic pressure to **200 lb. sq. in.** Date of test **17.2.31** No. of Certificate **292.**

No. and Description of safety valves to each boiler **2 - 1" dia. Spring load.**

Pressure to which they are adjusted **100 lb.** Are they fitted with easing gear ✓

Whether steam from main boilers can enter the donkey boiler ✓ **No** Smallest distance between boiler and bunkers **12' 7 1/2"**

Is oil fuel carried in the double bottom under boiler ✓ **No** Smallest distance between base of boiler and tank top plating **2'-6"**

In the base of the boiler insulated ✓ **No** Largest internal dia. of boiler **24"** Height **4'-0"**

Material **Steel** Tensile strength **28-32 tons.** Thickness **1/4"**

Whether the shell plates welded or flanged **No** Description of riveting: circ. seams **S.R. lap.** long. seams **A.R. lap.**

Pitch of rivets **4 1/2"** Percentage of strength of circ. seams **61** of Longitudinal joint **108**

Working pressure of shell by rules **168 lb.** Thickness of butt straps **outer ✓ inner ✓**

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat **flat** Material **Steel**

Tensile strength **26-30 tons** Thickness **3/8"** Radius **✓** Working pressure by rules **165 lb.**

Description of Furnace: Plain, spherical, or dished crown **Plain** Material **Steel** Tensile strength **26-30 tons**

Thickness **5/16"** External diameter **top 1'-8" bottom 1'-8"** Length as per rule **1'-10"** Working pressure by rules **115 lb.**

Whether stays fitted with nuts or riveted over ✓ **Yes**

Radius of spherical or dished furnace crown **Flat** Working pressure by rule **156 lb.**

Thickness of Ogee Ring **Solid ring 2" x 2"** Diameter as per rule **D ✓ d ✓** Working pressure by rule ✓

Combustion Chamber: Material **✓** Tensile strength **✓** Thickness of top plate **✓**

Radius if dished **✓** Working pressure by rule **✓** Thickness of back plate **✓** Diameter if circular **✓**

Length as per rule **✓** Pitch of stays **✓** Are stays fitted with nuts or riveted over **✓**

Diameter of stays over thread **✓** Working pressure of back plate by rules **✓**

Tube Plates: Material **front ✓ back ✓** Tensile strength **✓** Thickness **✓** Mean pitch of stay tubes in nests **✓**

Whether stays fitted with nuts or riveted over **✓** Dia. of tube holes FRONT **stay ✓ plain ✓** BACK **stay ✓ plain ✓**

Working pressure by rules **front ✓ back ✓**

Girders to combustion chamber tops: Material **✓** Tensile strength **✓**

Depth and thickness of girder at centre **✓** Length as per rule **✓**

Distance apart **✓** No. and pitch of stays in each **✓** Working pressure by rule **✓**



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Crown stays: Material Tensile strength
 No. of threads per inch Area supported by each stay Diameter at body of stay, or over threads.

Screw stays: Material Tensile strength Diameter at turned off part, or over threads. Working pressure by rules
 Area supported by each stay Working pressure by rules No. of threads per inch

Tubes: Material External diameter Are the stays drilled at the outer ends
 No. of threads per inch Pitch of tubes Working pressure by rules Thickness

Manhole Compensation: Size of opening in shell plate 7×10 Section of compensating ring $4 \times \frac{3}{8}$
 of rivet holes 16 rivets $\frac{11}{16}$ Outer row rivet pitch at ends $5 \frac{1}{4}$ No. of rivets and d.

Uptake: External diameter 6 dia. Depth of flange if manhole flanged
 Thickness of uptake plate $\frac{5}{16}$

Cross Tubes: No. Nil External diameter 6 Thickness of plates $\frac{3}{8}$

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Yes

The foregoing is a correct description.
 ALFREDDOLBY

Asky Greg

Dates of Survey while building: During progress of work in shops - 1931 - Jan. 29, Feb. 11-17, Mar. 17th
 During erection on board vessel - 16 June + 19th August 1931

Is the approved plan of boiler forwarded herewith (If not state date of approval.) Yes
 Total No. of visits 46

Is this Boiler a duplicate of a previous case 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 & approved plan. This boiler is to be used for lighting up the Auxiliary or main boiler in connection with the Outfit. Installation has been efficiently fitted on board and its safety valves adjusted under steam.
 Safety valve washer Port $4 \frac{1}{64}$ Std $2 \frac{5}{64}$

Survey Fee $\pounds 4.4.0$: When applied 18 APR 1931
 Travelling Expenses (if any) $\pounds 5.1.6$: When received 18 APR 1931

A. E. Farmer
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute See Rev. F.C. 2414
 Assigned

