

# REPORT ON BOILERS.

Received at London Office

Date of writing Report 19 \_\_\_\_\_ When handed in at Local Office 19 \_\_\_\_\_ Port of BOMBAY.

No. in Survey held at BOMBAY. Date, First Survey 2nd December 1946 Date, Last Survey 10th MARCH 1947

Reg. Book 87756 on the S.S. "KILWA" Ex "KIUNGCHOW" (Number of Visits 5) } Gross 2653  
Tons } Net 1545

Built at Greenock By whom built Scott's Shipbuilding & Engr. Co Yard No. - When built 1921

Engines made at Greenock By whom made Scott's Shipbuilding & Engr. Co Engine No. - When made 1921

Boilers made at - By whom made - Boiler No. - When made -

Owners British India Steam Navigation Co. Port belonging to London.

## VERTICAL DONKEY BOILER.

Made at Annan By whom made Cockran & Co. Boiler No. 8634 When made 1921 Where fixed Stokehold

Manufacturers of Steel -

Total Heating Surface of Boiler 750 Sq. Ft. Is forced draught fitted Yes Coal or Oil fired Oil

No. and Description of Boilers One Cockran Patent Vertical Multitubular Boiler Working pressure 100 lb

Tested by hydraulic pressure to 200 Id. Date of test 2nd DECEMBER 1946 No. of Certificate -

Area of Firegrate in each Boiler 31.5 Sq. ft. No. and Description of safety valves to each boiler 2 spring loaded

Area of each set of valves per boiler } per rule 9.8 sq. ins. Pressure to which they are adjusted 100 Are they fitted with easing gear yes  
as fitted 10.3 sq. ins.

State whether steam from main boilers can enter the donkey boiler No Smallest distance between boiler or uptake and bunkers or woodwork -

Is oil fuel carried in the double bottom under boiler yes Smallest distance between base of boiler and tank top plating 24"

Is the base of the boiler insulated Yes Largest internal dia. of boiler 7'-6" Height 16'-3"

Shell plates: Material Steel Tensile strength - Thickness 21/32"

Are the shell plates welded or flanged - Description of riveting: circ. seams { end Double long. seams Double  
inter. Double

Dia. of rivet holes in { circ. seams 2.9/32 Pitch of rivets { 2.91" Percentage of strength of circ. seams { plate 65% of Longitudinal joint { plate -  
long. seams 2.9/32 rivets 69% rivets -  
combined -

Working pressure of shell by rules 103 Thickness of butt straps { outer - inner -

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

Tensile strength - Thickness 29/32 Radius 3'-9" Working pressure by rules 103 lb

Description of Furnace: Plain, spherical, or dished crown Spherical Material Steel Tensile strength -

Thickness 9/16" External diameter { top 6'-8 1/2" Length as per rule - Working pressure by rules -  
bottom -

Pitch of support stays circumferentially - and vertically - Are stays fitted with nuts or riveted over -

Diameter of stays over thread - Radius of spherical or dished furnace crown 3'-3" mean Working pressure by rule 112

Thickness of Ogee Ring 29/32" Diameter as per rule { D 7'-6" Working pressure by rule 110  
d 6'-8"

Combustion Chamber: Material Steel Tensile strength - Thickness of top plate 13/16

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 Steel Tensile strength { - Thickness { 15/16" Mean pitch of stay tubes in nests 8"  
back Steel

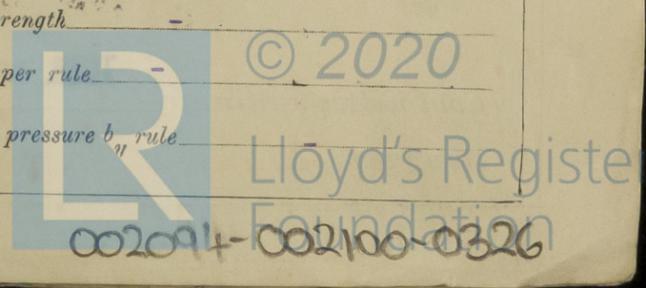
If comprising shell, Dia. as per rule { front - Pitch in outer vertical rows { - Dia. of tube holes FRONT { stay 2.5/8" BACK { stay 2 1/8"  
back - plain 2.9/16" plain 2 1/8"

Is each alternate tube in outer vertical rows a stay tube Yes Working pressure by rules { front 103 lb  
back 104 lb

Girders to combustion chamber tops: Material Steel Tensile strength -

Depth and thickness of girder at centre 15" x 20.1/8 x 13 Length as per rule -

Distance apart 19" No. and pitch of stays in each - Working pressure by rule -



**Crown stays:** Material - Tensile strength - Diameter - at body of stay, or over threads  
 No. of threads per inch - Area supported by each stay - Working pressure by rules -  
**Screw stays:** Material - Tensile strength - Diameter - at turned off part, or over threads No. of threads per inch -  
 Area supported by each stay - Working pressure by rules - Are the stays drilled at the outer ends -  
**Tubes:** Material Steel External diameter plain  $2\frac{1}{2}'' \times 2.9/16''$  Thickness 11 gauge  
stay  $2\frac{1}{2}'' \times 2.5/8''$   $5/16''$   
 No. of threads per inch 18 threads Pitch of tubes 4'' x 3  $\frac{9}{16}$ '' Working pressure by rules -  
**Manhole Compensation:** Size of opening in shell plate 16'' x 12'' Section of compensating ring 2'-4'' Dx 29/32'' No. of rivets and diameter  
 of rivet holes 36, 29/32'' Outer row rivet pitch at ends - Depth of flange if manhole flanged -  
**Uptake:** External diameter - Thickness of uptake plate -  
**Cross Tubes:** No. - External diameters - Thickness of plates -  
 Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Yes

The foregoing is a correct description,

Manufacturer.

Dates of Survey During progress of work in shops - - Is the approved plan of boiler forwarded herewith Yes  
while building Survey (If not state date of approval.)  
~~During erection~~ 2nd, 28th Dec. 1946, 20th, 23rd Jan. and Total No. of visits Five  
~~at work~~ March 10th

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 above boiler was examined throughout and found in good condition. The scantlings were verified as above.

The safety valves were adjusted under steam to 100 lb per square inch and an accumulation test carried out in accordance with the Rules.

The safety valve easing gear was tried and found efficient.

The oil fuel installation for this boiler was fitted at this time and is in accordance with the Rules. The oil fuel installation was examined under working conditions and found efficient and the fire fighting arrangements tested and found in order. The oil fuel has a flash point above 150° F.

This boiler is in good condition and is in my opinion fit to be classed with record of L.M.C. 3.47 subject to the solid drawn copper oil pressure pipes of the oil fuel installation being replaced by solid drawn steel pipes at the first convenient opportunity.

Survey Fee ... .. £ : : ) When applied for, ..... 10  
 Travelling Expenses (if any) £ : : ) When received, ..... 19

Combined fee for Classification of Machinery & Boilers charged. See Rpt. 9

T.H. Noel  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUES. 13 JAN 1948

Assigned

See Bore 8476



Lloyd's Register Foundation