

REPORT ON BOILERS.

Received at London Office _____

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

No. in Reg. Book. 87756 Survey held at BOMBAY. Date, First Survey 2/12/1946 Last Survey 10/4/1947

on the S.S. "KILWA" (EX KIUNGCHOW) (Number of Visits 5) Tons { Gross 2653 Net 1545

Master _____ 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 1921

Nominal Horse Power _____ Owners British India Steam Nav. Co. Ltd. Port belonging to London.

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

Manufacturers of Steel _____ (Letter for Record _____)

Total Heating Surface of Boilers 4250 Sq. ft. Is forced draught fitted Yes Coal or Oil fired Oil

No. and Description of Boilers One Multitubular Working Pressure 200 lb

Tested by hydraulic pressure to 300 Date of test _____ No. of Certificate _____ Can each boiler be worked separately _____

Area of Firegrate in each Boiler 123 Sq. ft. No. and Description of safety valves to each boiler 3 spring loaded

Area of each set of valves per boiler { per Rule _____ as fitted 12.57 x 3 = 37.71 sq. ins. Pressure to which they are adjusted 200 lb. 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 8'-0" Is oil fuel carried in the double bottom under boilers Yes

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

Largest internal dia. of boilers 17'-9" Length 12'-9" Shell plates: Material Steel Tensile strength _____

Thickness 1.17/32" Are the shell plates welded or flanged _____ Description of riveting: circ. seams { end Double inter. _____

long. seams Tribble Diameter of rivet holes in { circ. seams 1.19/32" Pitch of rivets { 4'-6" 2'-10.17" long. seams 1.17/32"

Percentage of strength of circ. end seams { plate _____ rivets _____ Percentage of strength of circ. intermediate seam { plate _____ rivets _____

Percentage of strength of longitudinal joint { plate 84.9 rivets 84.9 combined 86.8 Working pressure of shell by Rules 220

Thickness of butt straps { outer 1.5/16" inner 1.3/16" No. and Description of Furnaces in each Boiler 4 Corrugated (Morrison)

Material steel Tensile strength _____ Smallest outside diameter 4'-0" 3'-9"

Length of plain part { top 10" bottom 10" Thickness of plates { crown 5/8" bottom 5/8" Description of longitudinal joint Welded

Dimensions of stiffening rings on furnace or c.c. bottom _____ Working pressure of furnace by Rules 202.6

End plates in steam space: Material steel Tensile strength _____ Thickness 1.3/16" Pitch of stays 16 1/2" x 2 1/2"

How are stays secured Nuts and Washers Working pressure by Rules 206

Tube plates: Material { front Steel back Steel Tensile strength { _____ Thickness { 1.3/16" 1 15/16" 1.3/16" 1 13/16"

Mean pitch of stay tubes in nests 8 1/4" Pitch across wide water spaces 14 1/2" Working pressure { front _____ back _____

Girders to combustion chamber tops: Material Steel Tensile strength _____ Depth and thickness of girder

at centre 10 1/2" x 3/4" Length as per Rule _____ Distance apart 1.5/8" No. and pitch of stays

in each 3'-8" 3 @ 8" Working pressure by Rules _____ Combustion chamber plates: Material steel

Tensile strength _____ Thickness: Sides 11/16" Back 21/32" Top 11/16" Bottom 7/8"

Pitch of stays to ditto: Sides 8" x 9" Back 8" x 8" Top 8" x 9" Are stays fitted with nuts or riveted over Nuts fire side riveted at shell

Working pressure by Rules 206 Front plate at bottom: Material Steel Tensile strength _____

Thickness 15/16" Lower back plate: Material Steel Tensile strength _____ Thickness 15/16"

Pitch of stays at wide water space 1'-1 1/2" Are stays fitted with nuts or riveted over Nuts on Fire side riveted at end plate

Working Pressure 205 Main stays: Material Steel Tensile strength _____

Diameter { At body of stay, 17 @ 3.1/8" 4 @ 2 3/4" No. of threads per inch 7 Area supported by each stay 350.6 Sq. ins.

Working pressure by Rules 210 Screw stays: Material Steel Tensile strength _____

Diameter { At turned off part, _____ No. of threads per inch 9 Area supported by each stay 64 sq. ins.

Working pressure by Rules 206 Are the stays drilled at the outer ends No ✓ Margin stays: Diameter { At turned off part, - ✓
 or Over threads 1 3/4" and 1.7/8"
 No. of threads per inch 9 ✓ Area supported by each stay 58 Working pressure by Rules 210
 Tubes: Material - External diameter { Plain 3" ✓ Thickness { 8 L.S.G. ✓ No. of threads per inch 9
 Stay 3" ✓ { 5/16" 3/8" 7/16"
 Pitch of tubes 4.1/8" ✓ Working pressure by Rules 210 Manhole compensation: Size of opening in
 shell plate 16" x 12" ✓ Section of compensating ring 3'-2" x 2'-6" x No. of rivets and diameter of rivet holes 30 - 1.17/32"
 Outer row rivet pitch at ends (5") 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 Schmidt Manufacturers of { Tubes North Eastern Marine Co.
 Steel castings North Eastern Marine Co.
 Number of elements 108 Material of tubes Solid drawn steel Internal diameter and thickness of tubes 15 m.m. 2 1/2 m.m.
 Material of headers Mild steel Tensile strength - Thickness 1 1/2" Can the superheater be shut off and
 the boiler be worked separately Yes ✓ 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 2.76 sq. ins. Are the safety valves fitted with easing gear yes ✓ Working pressure as per
 Rules - Pressure to which the safety valves are adjusted 205 lb. Hydraulic test pressure:
 tubes -, castings - and after assembly in place 300 Are drain cocks or valves fitted
 to free the superheater from water where necessary yes ✓
 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 - - 2, 28-12-46, 20, 23-1-47 & 47
 while building { During ~~construction~~ 10-10-47 - - -
 Survey
 Are the approved plans of boiler and superheater forwarded herewith YES
 (If not state date of approval.)
 Total No. of visits Five

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.) This boiler was examined throughout and
Found in good condition. The scantlings as noted above were checked. The boiler and superheater
were hydraulically tested to 300 lb. per square inch and found satisfactory.
The safety valves of the Boiler were adjusted under steam to 200 lb per square inch and
safety valve of the superheater range adjusted to 205 lb. per square inch under steam. The easing
gear for these safety valves were tried and found in order. The oil fuel installation was
examined throughout and subsequently under working conditions and found efficient.
This boiler is in good condition and is in my opinion, fit to be classed with notation 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 £ 100 : : When applied for, 31-3- 19 47
 Travelling Expenses (if any) £ 10 : : When received, 19

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

 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 13 JAN 1948
 Assigned See Bm 8476

