

REPORT ON BOILERS.

No. 1398

Received at London Office.

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of writing Report... 2.11.48... When handed in at Local Office... 19... Port of... Karachi

Survey held at... Manora - East Wharf... Date, First Survey... 16.1.48... Last Survey... 1.11.48 19

on the... steel screw steamer FIRISHTA (R.H.M.S. POONA) (Number of Visits...)

Tons { Gross... 467
Net... 239

Built at... Calcutta... By whom built... Hooghly Dock & Eng. Yard No... When built... 1941

Lines made at... Hepburn-on-Tyne... By whom made... White's Marine Engineering Co. Engine No... 886... When made... 1942

Boilers made at... Paisley... By whom made... Craig & Co. Boiler No... When made... 1942

Indicated Horse Power... 155 MN... Owners... East & West Steamship Co... Port belonging to... Karachi

BOILER TITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Test... Manufacturers of Steel... No Records... (Letter for Record... No Records)

Heating Surface of Boilers... 2606 sq. ft... Is forced draught fitted... Yes... Coal or Oil fired... Oil

Description of Boilers... one Marine Multitubular... Working Pressure... 200 lb/sq. in

Tested by hydraulic pressure to... 350 lb/sq. in... Date of test... No. of Certificate... Can each boiler be worked separately... Yes

Area of Firegrate in each Boiler... No. and Description of safety valves to each boiler... Two 3 1/2 inch diam spring loaded

Pressure to which they are adjusted... 200 lb/sq. in... Are they fitted with easing gear... Yes

Use of donkey boilers, state whether steam from main boilers can enter the donkey boiler... Yes

Least distance between boilers or uptakes and bunkers or woodwork... Is oil fuel carried in the double bottom under boilers... No

Least distance between shell of boiler and tank top plating... Is the bottom of the boiler insulated... No

Least internal dia. of boilers... 17 7/8 inch... Length... 11' - 4 1/4" Shell plates: Material... Steel... Tensile strength... 29.6-33 tons

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

Diameter of rivet holes in { circ. seams... 1 3/8"
long. seams... 1 3/8" Pitch of rivets { 9 7/8"
4"

Percentage of strength of circ. end seams { plate... 65.6%
rivets... 53.6% Percentage of strength of circ. intermediate seam { plate...
rivets... 85.52%
88.54% Working pressure of shell by Rules... 203.3 lb/sq. in

Percentage of strength of longitudinal joint { plate...
rivets... 88.77% combined... 88.77%

Thickness of butt straps { outer... 1"
inner... 1 1/2" No. and Description of Furnaces in each Boiler... 3 Deighton Type

Material... Steel... Tensile strength... No Records... Smallest outside diameter... 3' - 6 7/16 ins

Thickness of plates { crown... 1 1/2"
bottom... 1 1/2" Description of longitudinal joint... Welded

Working pressure of furnace by Rules... 203 lb/sq. in

Plates in steam space: Material... Steel... Tensile strength... 29.6-33 tons Thickness... 1 1/2" Pitch of stays... 1' - 8 1/2"

Are stays secured... Double Nuts... Working pressure by Rules... 225 lb/sq. in

Plates: Material { front... Steel
back... Steel Tensile strength { 29.6-33 tons
29.6-33 tons Thickness { 1 1/2"
2 1/2"

Pitch of stay tubes in nests... 7 3/4" Pitch across wide water spaces... 1' - 1 7/8" Working pressure { front... 226 lb/sq. in
back... 200 lb/sq. in

Boilers to combustion chamber tops: Material... Steel... Tensile strength... 28.6-32 tons Depth and thickness of girder

Length as per Rule... 31" Distance apart... 10 3/4" No. and pitch of stays

Working pressure by Rules... 213 lb/sq. in Combustion chamber plates: Material... Steel

Thickness: Sides... 2 5/32" Back... 3/4" Top... 2 5/32" Bottom... 2 5/32"

Are stays fitted with nuts or riveted over... fitted with nuts

Working pressure by Rules... 203.3 lb/sq. in Front plate at bottom: Material... Steel Tensile strength... 29.6-33 tons

Thickness... 7/8" Lower back plate: Material... Steel Tensile strength... 29.6-33 tons Thickness... 7/8"

Are stays fitted with nuts or riveted over... fitted with nuts

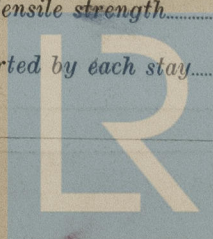
Working pressure... 203.3 lb/sq. in Main stays: Material... Steel Tensile strength... 28.6-32 tons

At body of stay... 3 1/2" No. of threads per inch... 6 Area supported by each stay... 410 sq. in

Over threads... 3 1/2" Screw stays: Material... Steel Tensile strength... 26.6-30 tons

Working pressure by Rules... 208 lb/sq. in No. of threads per inch... 9 Area supported by each stay... 93.8 sq. in

At turned off part... 1 7/8" Over threads... 1 7/8"



Lloyd's Register
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Foundation

Working pressure by Rules. 213 lb/sq. in Are the stays drilled at the outer ends Yes Margin stays: Diameter { At turned off part 2" or Over threads 2" ✓
No. of threads per inch 9 ✓ Area supported by each stay 10.66 sq. in Working pressure by Rules 200 lb/sq. in ✓
Tubes: Material Seamless Steel External diameter { Plain 2 3/4" ✓ Stay 2 3/4" ✓ Thickness { 5/16" ✓ S.W. 9 ✓ No. of threads per inch 9 ✓
Pitch of tubes 3 7/8" Working pressure by Rules 275 lb/sq. in Manhole compensation: Size of opening 18 1/2" x 14 1/2" Section of compensating ring 1 15/16" No. of rivets and diameter of rivet holes 32 x 1 13/32" ✓
Outer row rivet pitch at ends 10 1/8" Depth of flange if manhole flanged 3 1/4" 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 of rivets in outer row in dome connection to shell ✓

Type of Superheater _____ Manufacturers of { Tubes _____ Steel forgings _____ Steel castings _____ Internal diameter and thickness of tubes _____
Number of elements _____ Material of tubes _____ Tensile strength _____ Thickness _____ Can the superheater be shut off from the boiler _____
Material of headers _____ 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 _____ Rules _____ Pressure to which the safety valves are adjusted _____ Hydraulic test pressure _____ tubes _____ forgings and castings _____ and after assembly in place _____ Are drain 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, _____

Dates of Survey while building { During progress of work in shops - - - Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) _____
During erection on board vessel - - - Total No. of visits _____

Is this Boiler a duplicate of a previous case yes If so, state Vessel's name and Report No. FATIMA. K-r-k

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

The Boiler was supplied to the Admiralty and stated to have been built to Lloyd's requirements.
The Boiler was tested to 350 lb/sq. in hydraulic pressure & found satisfactory.
The Boiler is eligible in my opinion to be classed.

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

John H. ...
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute FRI. 13 MAY 1949

Assigned _____