

## REPORT ON BOILERS

No. 67646  
SAT. JUN. 19. 1915

Received at London Office

Date of writing Report 14<sup>th</sup> Nov 1914 When handed in at Local Office

191 Port of NEWCASTLE-ON-TYNE

No. in Survey held at Newcastle  
Reg. Book.

Date, First Survey July 6. 1914 Last Survey Nov. 13. 1914

on the

SS "MATA HARI"

(Number of Visits 25) Gross 1019  
Tons Net 510

Master W. J. Carver Built at South Shields By whom built Penfoldson &amp; Co. When built 1915

Engines made at N. Shields By whom made Shields Eng. &amp; S. L. Co. 280 When made 1915.

Boilers made at Newcastle By whom made Palmers &amp; Co. No. 782/3 When made 1914

Registered Horse Power Owners British India Steam Nav. Co. Ltd. Port belonging to South Shields

## MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel J. Spencer &amp; Sons, Palmers

(Letter for record S) Total Heating Surface of Boilers 3082 sq. ft. Is forced draft fitted No. No. and Description of

Boilers Two, single-ended Working Pressure 170 lbs Tested by hydraulic pressure to 340 lbs Date of test 13-11-14

No. of Certificate 8723 Can each boiler be worked separately yes Area of fire grate in each boiler 44.5 sq. ft. No. and Description of

safety valves to each boiler 2 Spring loaded Area of each valve 7.07 sq. ft. Pressure to which they are adjusted 172 lbs

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 2'-6" Mean dia. of boilers 12'-6" Length 11'-0"

Material of shell plates Steel Thickness 1 1/16" Range of tensile strength 28 1/2 - 32 Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams S. Lap long. seams S. Rivet Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 7 1/16"

Lap of plates or width of butt straps 15 5/8" Per centages of strength of longitudinal joint rivets 87.5- plate 84.9 Working pressure of shell by

rules 190 lbs Size of manhole in shell 16" x 12" Size of compensating ring McNeil No. and Description of Furnaces in each

boiler 3-Morrison's Material Steel Outside diameter 37" Length of plain part top Thickness of plates crown 1 1/2" bottom 1 1/4"

Description of longitudinal joint Welded No. of strengthening rings Working pressure of furnace by the rules 210 lbs Combustion chamber

plates: Material Steel Thickness: Sides 2 1/32" Back 2 1/32" Top 2 1/32" Bottom 7/8" Pitch of stays to ditto: Sides 9 1/4" x 9" Back 9" x 9"

Top 8 1/4" x 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 178 lbs Material of stays Steel Diameter at

smallest part 2.03" Area supported by each stay 83.25 sq. in Working pressure by rules 218 lbs End plates in steam space: Material Steel Thickness 1 3/32"

Pitch of stays 9 1/4" x 17" How are stays secured Nuts &amp; W. Working pressure by rules 174 lbs Material of stays Steel Diameter at smallest part 6.1"

Area supported by each stay 323 sq. in Working pressure by rules 196 lbs Material of Front plates at bottom Steel Thickness 1" Material of

Lower back plate Steel Thickness 7/8" Greatest pitch of stays 14 1/2" Working pressure of plate by rules 163 lbs Diameter of tubes 2 3/4"

Pitch of tubes 4 1/2" x 4" Material of tube plates Steel Thickness: Front 1" Back 3/4" Mean pitch of stays 10" Pitch across wide

water spaces 14 1/16" Working pressures by rules 160 lbs Girders to Chamber tops: Material Steel Depth and thickness of

girder at centre 9 1/2" x 1 3/4" Length as per rule 34" Distance apart 8" Number and pitch of Stays in each 2-8 1/4"

Working pressure by rules 230 lbs Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked

separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet

holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed

Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

The foregoing is a correct description,

Manufacturer.

Dates of Survey During progress of work in shops - - - July 6, 13, 14, 16, 24 Aug 13, 17, 25, 28 Sept 3, 7, 10, 16, 24 Is the approved plan of boiler forwarded herewith yes

while building During erection on board vessel - - - (see machinery report) Total No. of visits 25 +

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

These main boilers have been constructed under special survey & the materials & workmanship are found to be good. They have been efficiently fitted on board, tried under steam & found satisfactory. An oil burning installation on the Myers system has been fitted and complying with all the requirements of section 49 of the rules, & is eligible to have notation. Fitted for oil fuel 6.15 HP above 150°F

Survey Fee ... When applied for, 191

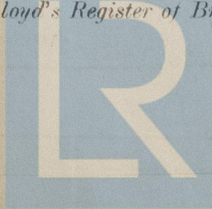
Travelling Expenses (if any) ... When received, 191

Thomas Field & Reginald Bain  
Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

FRI. JUL. 2-1915

Assigned

Lloyd's Register  
Foundation

W1530-0168