

# REPORT ON BOILERS.

No. 20151

27 MAY 1936

Received at London Office

Writing Report 20.3 10.36 When handed in at Local Office 19<sup>th</sup> MAY 10.36. Port of Greenock

Survey held at Greenock Date, First Survey 4<sup>th</sup> OCTOBER 1935 Last Survey 19<sup>th</sup> MAY 1936

on the S/S "Galaganga" (Number of Visits ) Tons { Gross 4980.99 Net 3079.61

Built at Greenock By whom built Lithgows & Co. Ltd. Yard No. 881 When built 1936

Engines made at Greenock By whom made John & Macdonald & Co. Ltd. Engine No. 676 When made 1936

Boilers made at Greenock By whom made John & Macdonald & Co. Ltd. Boiler No. 676 When made 1936

Owners Scudias & Co. Ltd. Port belonging to Bombay

## MULTITUBULAR BOILERS—MAIN,

Manufacturers of Steel Solville, Swarth, D. Steel, Thos. & Dalrymple Sons, Gargo Fleet Road (Letter for Record R)

Heating Surface of Boilers 4563 # Is forced draught fitted Yes Coal Oil fired Coal

Description of Boilers 3 Single Bundled Working Pressure 220

Tested by hydraulic pressure to 380 Date of test Pol 20/3/36 No. of Certificate Pol 2047 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 63.25 # No. and Description of safety valves to each boiler One Double Spring

Area of each set of valves per boiler 13.4 # Pressure to which they are adjusted 225 Are they fitted with easing gear Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No

Smallest distance between boilers or uptakes and bunkers or woodwork 1-9" Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 2-0" Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 14' 10 9/16" Length 11-6" Shell plates: Material S Tensile strength 29-33

Thickness 17/16" Are the shell plates welded or flanged Yes Description of riveting: circ. seams { end DE inter. DE

Number of seams TRDBS Diameter of rivet holes in { circ. seams 1 1/8" Pitch of rivets { 9.8/2

Percentage of strength of circ. end seams { plate 64-6 rivets 44.84 Percentage of strength of circ. intermediate seam { plate 86-3 rivets 85.9

Percentage of strength of longitudinal joint { plate 85.9 rivets 84.48 Working pressure of shell by Rules 221

Thickness of butt straps { outer 13/32" inner 17/32" No. and Description of Furnaces in each Boiler 3 Marbois

Material S Tensile strength 26-30 Smallest outside diameter 3-9 1/2"

Length of plain part { top 3/4" bottom 3/4" Description of longitudinal joint weld

Dimensions of stiffening rings on furnace or c.c. bottom Yes Working pressure of furnace by Rules 243

Stays in steam space: Material S Tensile strength 26-30 Thickness 1 1/32" Pitch of stays 21" 18 3/4"

How are stays secured DN + Washers Working pressure by Rules 222

Wide plates: Material { front Steel back Steel Tensile strength { 26-30 Thickness { 7/8"

Minimum pitch of stay tubes in nests 8-5" Pitch across wide water spaces 13 1/2" Working pressure { front 241 back 232

Orders to combustion chamber tops: Material S Tensile strength 29.33 Depth and thickness of girder

Centre 10' 3 1/4" (2) Length as per Rule 2-9 5/8" Distance apart 8 1/4" No. and pitch of stays

Each 3 at 8" Working pressure by Rules 230 Combustion chamber plates: Material S

Tensile strength 26-30 Thickness: Sides 1 1/16" Back 1 1/16" Top 1 1/16" Bottom 1 3/16"

Pitch of stays to ditto: Sides 8' 8 1/4" Back 8' 9" Top 8' 8 1/4" Are stays fitted with nuts or riveted over Nuts

Working pressure by Rules 229 Front plate at bottom: Material S Tensile strength 26-30

Thickness 7/8" Lower back plate: Material S Tensile strength 26-30 Thickness 7/8"

Pitch of stays at wide water space 14" Are stays fitted with nuts or riveted over Nuts

Working Pressure 226 Main stays: Material S Tensile strength 28-32

Diameter { At body of stay, or Over threads 3 1/4" No. of threads per inch 6 Area supported by each stay 293.45 sq"

Working pressure by Rules 236 Screw stays: Material Iron Tensile strength 21 1/2 sq"

Diameter { At turned off part, or Over threads 1 3/4" No. of threads per inch 9 Area supported by each stay 42 sq"

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Working pressure by Rules **248** Are the stays drilled at the outer ends **910** Margin stays: Diameter **17/8 + 2**  
 No. of threads per inch **9** Area supported by each stay **963 1/4"** Working pressure by Rules **221**  
 Tubes: Material **9100L** External diameter **2 1/2"** Thickness **9 WG 7/16 3/8 + 5/16"** No. of threads per inch **9**  
 Pitch of tubes **3 5/8 + 3 1/16"** Working pressure by Rules **241** Manhole compensation: Size of opening **1 1/2"**  
 shell plate **16 1/2" x 20 1/2"** Section of compensating ring **3-1" x 2-8 1/2" x 1 1/32"** No. of rivets and diameter of rivet holes **42 at 1 1/2"**  
 Outer row rivet pitch at ends **10"** Depth of flange if manhole flanged **3 1/2"** Steam Dome: Material  
 Tensile strength Thickness of shell Description of longitudinal joint  
 Diameter of rivet holes Pitch of rivets Percentage of strength of joint  
 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  
 of rivets in outer row in dome connection to shell Diameter of rivet holes and

**Type of Superheater**  
 Number of elements Material of tubes Manufacturers of Tubes  
 Material of headers Tensile strength Steel castings  
 Internal diameter and thickness of tubes  
 Thickness Can the superheater be shut off from the boiler?  
 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 castings and after assembly in place Are drain cocks or valves provided by manufacturer?  
 to free the superheater from water where necessary  
 Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with

The foregoing is a correct description,  
 For JOHN G. KINCAID & CO. LIMITED.  
 W. G. Carter Director

SEE MACHINERY REPORT  
 Dates of Survey { During progress of work in shops -- }  
 while building { During erection on board vessel - - - }  
 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) **Yes**  
 Total No. of visits **1**

Is this Boiler a duplicate of a previous case **No** If so, state Vessel's name and Report No.

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.) **These Boilers have been under Special Survey in accordance with the approved plans & the workmanship & material are of good quality. They have now been securely fitted on board.**

Survey Fee **charged on Maily Puff** When applied for, 19  
 Travelling Expenses (if any) **---** When received, 19

**W. Gordon-Muclier**  
 Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute **GLASGOW 26 MAY 1936**

Assigned **SEE ACCOMPANYING MACHINERY REPORT.** **MB**

