

# REPORT ON BOILERS.

No. 61042  
TUE. SEP. 19. 1911

Received at London Office

Date of writing Report 26<sup>th</sup> Aug 1911 When handed in at Local Office 30<sup>th</sup> Aug 1911 Port of NEWCASTLE - ON - TYNE  
 No. in Survey held at South Shields Date, First Survey 30<sup>th</sup> April 1911 Last Survey 29<sup>th</sup> Aug 1911  
 Reg. Book. S/S "Irevalgan" (Number of Visits) Gross 4185 Net 2675  
 Sup. 19 on the S/S "Irevalgan"  
 Master Built at South Shields By whom built John Readhead & Sons When built 1911  
 Engines made at South Shields By whom made John Readhead & Sons when made 1911  
 Boilers made at South Shields By whom made John Readhead & Sons when made 1911  
 Registered Horse Power Owners E. Hain & Sons Port belonging to St. Ives

## MULTITUBULAR BOILERS MAIN, AUXILIARY OR DONKEY. Manufacturers of Steel John Spencer & Sons

(Letter for record 8) Total Heating Surface of Boilers 899 sq ft Is forced draft fitted No No. and Description of Boilers One single ended Multi- Working Pressure 90 lbs Tested by hydraulic pressure to 180 lbs Date of test 17-7-11

No. of Certificate 8165 Can each boiler be worked separately Yes Area of fire grate in each boiler 30 sq ft No. and Description of safety valves to each boiler Two - spring loaded Area of each valve 7.56 sq in Pressure to which they are adjusted 90 lbs

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 On deck Mean dia. of boilers 10'-0" Length 10'-0"

Material of shell plates Steel Thickness 7/8" Range of tensile strength 29/32 tons Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams D.R. Lap long. seams D.R. Lap Diameter of rivet holes in long. seams 1 3/16" Pitch of rivets 4 1/2"

Lap of plates or width of butt straps 5 1/2" Per centages of strength of longitudinal joint rivets 70.8% plate 72% Working pressure of shell by rules 97 lbs Size of manhole in shell 12" x 16" Size of compensating ring 8" x 5/8" No. and Description of Furnaces in each boiler Two - plain Material Steel Outside diameter 36" Length of plain part top 6'-0" bottom 8'-9" Thickness of plates crown 1/2" bottom 5/8"

Description of longitudinal joint S.R. Lap No. of strengthening rings Yes Working pressure of furnace by the rules 90 lbs Combustion chamber plates: Material Steel Thickness: Sides 3/4" Back 9/16" Top 3/4" Bottom 5/8" Pitch of stays to ditto: Sides 10" x 11" Back 11" x 11"

Top 10" x 10" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 90 lbs Material of stays Iron Area at smallest part 1.99 sq in Area supported by each stay 121 sq in Working pressure by rules 123 lbs End plates in steam space: Material Steel Thickness 3/4"

Pitch of stays 18" x 19" How are stays secured D.N. + doubling Working pressure by rules 93 lbs Material of stays Steel Area at smallest part 4.11 sq in

Area supported by each stay 342 sq in Working pressure by rules 125 lbs Material of Front plates at bottom Steel Thickness 1/16" Material of Lower back plate Steel Thickness 1/16" Greatest pitch of stays 15" x 8 1/2" Working pressure of plate by rules 118 lbs Diameter of tubes 3 1/4"

Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates Steel Thickness: Front 1/16" Back 1/16" Mean pitch of stays 13 1/2" Pitch across wide water spaces 13 3/4" Working pressures by rules 90 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 6 3/4" x 1 1/2" Length as per rule 26" Distance apart 10" Number and pitch of Stays in each 2 - 10"

Working pressure by rules 114 lbs Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked separately Yes Diameter Yes Length Yes Thickness of shell plates Yes Material Yes Description of longitudinal joint Yes Diam. of rivet holes Yes Pitch of rivets Yes Working pressure of shell by rules Yes Diameter of flue Yes Material of flue plates Yes Thickness Yes

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

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

For JOHN READHEAD & SONS, LIMITED.  
The foregoing is a correct description,  
John Readhead Manufacturer.

Dates of Survey } During progress of work in shops - - } See machy report  
while building } During erection on board vessel - - }  
As the approved plan of boiler forwarded herewith Yes  
Total No. of visits

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been constructed under special survey, the materials & workmanship being sound & good. It was tested by hydraulic pressure to 180 lbs per sq in, & the safety valves afterwards adjusted under steam to their working pressure of 90 lbs per sq in.

Survey Fee ... £ see machy report When applied for, 19...  
Travelling Expenses (if any) £ see machy report When received, 19...

John Houston  
Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute FRI. SEP. 22. 1911

Assigned  
Lloyd's Register Foundation  
W398-0153