

Received at London Office

Date of writing Report 26th Aug 1911 When handed in at Local Office 30th Aug 1911 Port of NEWCASTLE - ON - TYNE

No. in Survey held at South Shields Date, First Survey 30th Apr. 1911 Last Survey 29th Aug 1911

Reg. Book. (Number of Visits) Gross 4185

Sup. 19 on the S/s "Irevalgan" Tons Net 2675

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~~ 1) Total Heating Surface of Boilers 899 \square Is forced draft fitted No

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 \square No. and Description of

safety valves to each boiler Two - spring loaded Area of each valve 7.56 \square 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 $\frac{7}{8}$ " 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 $1\frac{3}{16}$ " Pitch of rivets $4\frac{1}{2}$ "

Lap of plates or width of butt straps $5\frac{1}{2}$ " Per centages of strength of longitudinal joint rivets 70.8% Working pressure of shell by plate 72%

rules 97 lbs Size of manhole in shell 12" x 16" Size of compensating ring 8" x $\frac{7}{8}$ " No. and Description of Furnaces in each

boiler Two - plain Material Steel Outside diameter 36" Length of plain part top 6'-0" Thickness of plates crown $\frac{1}{2}$ " bottom 8'-9" bottom $\frac{5}{8}$ "

Description of longitudinal joint S.R. Lap No. of strengthening rings Working pressure of furnace by the rules 90 lbs Combustion chamber

plates: Material Steel Thickness: Sides $\frac{3}{4}$ " Back $\frac{9}{16}$ " Top $\frac{3}{4}$ " Bottom $\frac{5}{8}$ " 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 Diameter at

smallest part 1.99 \square Area supported by each stay 121 \square Working pressure by rules 123 lbs End plates in steam space: Material Steel Thickness $\frac{3}{4}$ "

Pitch of stays 18" x 19" How are stays secured D.N. & doubling Working pressure by rules 93 lbs Material of stays Steel Area Diameter at smallest part 4.11 \square

Area supported by each stay 342 \square Working pressure by rules 125 lbs Material of Front plates at bottom Steel Thickness $\frac{1}{16}$ " Material of

Lower back plate Steel Thickness $\frac{1}{16}$ " Greatest pitch of stays 15" x $8\frac{1}{2}$ " Working pressure of plate by rules 118 lbs Diameter of tubes $3\frac{1}{4}$ "

Pitch of tubes $4\frac{1}{2}$ " x $4\frac{1}{2}$ " Material of tube plates Steel Thickness: Front $\frac{1}{16}$ " Back $\frac{1}{16}$ " Mean pitch of stays 13 $\frac{1}{2}$ " Pitch across wide

water spaces 13 $\frac{3}{4}$ " Working pressures by rules 90 lbs Girders to Chamber tops: Material Steel Depth and thickness of

girder at centre $6\frac{3}{4}$ " x $1\frac{1}{2}$ " 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 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

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 \square , & the safety valves afterwards adjusted under steam to their working pressure of 90 lbs per \square .

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.