

26 AUG 1930

Received at London Office

Date of writing Report 102 When handed in at Local Office 23rd 1930 Port of Newcastle-on-Tyne

No. in Reg. Book. 19154. Survey held at Scotwood Date First Survey 13 Nov 129 Last Survey 18 Aug 1930
on the M.V. "Kim." (Number of Visits 11) Gross 6074 Tons Net 3575

Master Built at Walker By whom built Sir W.G. Armstrong Whitworth & Co. Ltd. Yard No. 1062. When built 1930.
Engines made at Scotwood By whom made Messrs. Sir W.G. Armstrong Whitworth & Co. Ltd. Engine No. 89. When made 1930.
Boilers made at Annan By whom made Messrs. Sir W.G. Armstrong Whitworth & Co. Ltd. Boiler No. 89. When made 1930.
Nominal Horse Power 583. Owners Sveene Sterling Port belonging to Bergen.

MULTITUBULAR BOILERS ~~MAIN~~ AUXILIARY OR DONKEY.

Manufacturers of Steel David Colville & Sons Glasgow (Plate) J. Thomson Wolverhampton (Furnaces) (Letter for Record S.)

Total Heating Surface of Boilers 2070 sq. ft. Is forced draught fitted No. Coal or Oil fired oil.

No. and Description of Boilers one. S.E. Multitubular Working Pressure 180 lb/sq. in.

Tested by hydraulic pressure to 320 lb/sq. in. Date of test 30.5.30 No. of Certificate 467. Can each boiler be worked separately ✓

Area of Firegrate in each Boiler ✓ No. and Description of safety valves to each boiler 2 Spring loaded.

Area of each set of valves per boiler { per Rule 15.9 sq. in. as fitted 16.28 sq. in. Pressure to which they are adjusted 180 lb/sq. in. 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 ✓ Is oil fuel carried in the double bottom under boilers ✓

Smallest distance between shell of boiler and tank top plating ✓ Is the bottom of the boiler insulated Yes.

Largest internal dia. of boilers 15'-0 1/2" Length 10'-6" Shell plates: Material Steel Tensile strength 28-32 tons

Thickness 1 1/4" Are the shell plates welded or flanged No. Description of riveting: circ. seams { end D.R. lap inter. ✓

long. seams T.R. Double Butt Straps Diameter of rivet holes in { circ. seams 1 9/16" long. seams 1 5/8" Pitch of rivets { 3.85" 9 1/8"

Percentage of strength of circ. end seams { plate 65.7% rivets 46.0% Percentage of strength of circ. intermediate seam { plate 85.6% rivets 91.0% ✓

Percentage of strength of longitudinal joint { rivets 91.0% combined 89.0% Working pressure of shell by Rules 183 lb/sq. in. ✓

Thickness of butt straps { outer 1 5/16" inner 1 1/8" No. and Description of Furnaces in each Boiler 3. Thomson Section Type.

Material Steel Tensile strength 26-30 tons Smallest outside diameter 3'-6 1/2"

Length of plain part { top ✓ bottom ✓ Thickness of plates { crown 1 7/32" bottom 1 3/32" Description of longitudinal joint Welded.

Dimensions of stiffening rings on furnace or c.c. bottom none Working pressure of furnace by Rules 180 lb/sq. in.

End plates in steam space: Material Steel Tensile strength 26-30 tons Thickness 1 1/4" Pitch of stays 2 1/4" x 18 1/2"

How are stays secured Nuts & washers inside & outside. Working pressure by Rules 183 lb/sq. in.

Tube plates: Material { front Steel back Steel Tensile strength { 26-30 tons. 26-30 tons. Thickness { 1 1/16" 2 5/32"

Mean pitch of stay tubes in nests 11" Pitch across wide water spaces 14 1/2" Working pressure { front 186 lb/sq. in. back 180 lb/sq. in.

Girders to combustion chamber tops: Material Steel Tensile strength 28-32 tons Depth and thickness of girder

at centre 8" x 1 1/2" Length as per Rule 2'-4 1/2" Distance apart 9 1/2" No. and pitch of stays

in each 2 @ 9" Working pressure by Rules 215 lb/sq. in. Combustion chamber plates: Material Steel

Tensile strength 26-30 tons Thickness: Sides 1 1/16" Back 1 1/16" Top 1 1/16" Bottom 7/8"

Pitch of stays to ditto: Sides 9 x 9 1/2" Back 9 3/4" x 8 3/4" Top 9 1/2" x 9" Are stays fitted with nuts or riveted over Nuts.

Working pressure by Rules 229 lb/sq. in. Front plate at bottom: Material Steel Tensile strength 26-30 tons

Thickness 1 1/16" Lower back plate: Material Steel Tensile strength 26-30 tons Thickness 2 5/32"

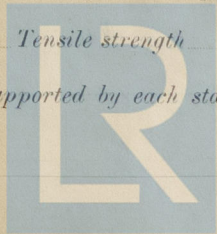
Pitch of stays at wide water space 14 3/4" x 8 3/4" Are stays fitted with nuts or riveted over Nuts.

Working Pressure 229 lb/sq. in. Main stays: Material Steel Tensile strength 28-32 tons

Diameter { At body of stay, 3 1/4" No. of threads per inch 6. Area supported by each stay 387 sq. ins.

Working pressure by Rules 207 lb/sq. in. Screw stays: Material Steel Tensile strength 26-30 tons

Diameter { At turned off part, 1 3/4" No. of threads per inch 9. Area supported by each stay 85.5 sq. ins.



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Working pressure by Rules 211 1/2 lb Are the stays drilled at the outer ends No Margin stays: Diameter 1 7/8" x 2 1/8"
 No. of threads per inch 9 Area supported by each stay 10/9 in x 137 sq in Working pressure by Rules 199 1/2 lb + 204 1/2 lb
 Tubes: Material Steel External diameter 3 1/2" Thickness 8 wtg. No. of threads per inch 9
 Pitch of tubes 4 3/4" Working pressure by Rules Plain 215 1/2 lb Stay 182 1/2 lb Manhole compensation: Size of opening in
 shell plate 21" x 17" Section of compensating ring 21.25 sq in No. of rivets and diameter of rivet holes 36 @ 1 5/8"
 Outer row rivet pitch at ends 4" x 9 1/8" Depth of flange if manhole flanged 3 3/8" Steam Dome: Material None
 Tensile strength 58000 Thickness of shell 3/8" Description of longitudinal joint None
 Diameter of rivet holes 1/8" Pitch of rivets 1 1/2" Percentage of strength of joint 100%
 Internal diameter 21" Working pressure by Rules 215 1/2 lb Thickness of crown 3/8" No. and diameter of
 stays 10 Inner radius of crown 10" Working pressure by Rules 182 1/2 lb
 How connected to shell None Size of doubting plate under dome None Diameter of rivet holes and pitch
 of rivets in outer row in dome connection to shell None

Type of Superheater None Manufacturers of None Tubes None
 Number of elements None Material of tubes None Steel castings None
 Internal diameter and thickness of tubes None
 Material of headers None Tensile strength None Thickness None Can the superheater be shut off and
 the boiler be worked separately Yes Is a safety valve fitted to every part of the superheater which can be shut off from the boiler
 Area of each safety valve None Are the safety valves fitted with easing gear Yes Working pressure as per
 Rules 215 1/2 lb Pressure to which the safety valves are adjusted 215 1/2 lb Hydraulic test pressure:
 tubes 215 1/2 lb and after assembly in place 215 1/2 lb Are drain cocks or valves fitted
 to free the superheater from water where necessary Yes
 Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Yes

FOR The foregoing is a correct description,
 SIR W. G. ARMSTRONG WHITWORTH & COMPANY (ENGINEERS) LIMITED.
 Manufacturer.

Dates of Survey During progress of work in shops - - See Survey Report
 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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The boiler has been built under Special Survey & in accordance with the Societys Rules & approved plan. The materials & workmanship are sound and good. The boiler was hydraulically tested as per Rules & found satisfactory. The safety valves were adjusted under steam to the approved working pressure.

For Fee
 Survey Fee See Survey Report When applied for, 192
 Travelling Expenses (if any) See Survey Report When received, 192

L. J. Skelton
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 2 SEP 1930

Assigned See F. E. Rep.