

REPORT ON BOILERS.

No. 84177.

Received at London Office 13 MAY 1929

Date of writing Report 1929 When handed in at Local Office 1929 Port of NEWCASTLE-ON-TYNE

No. in Reg. Book. *Walsend - on - Tyne.* Date, First Survey *1929* Last Survey *1929*
on the *New Steel S. S. Kingswood.* (Number of Visits *✓*) Gross Tons *5055.* Net Tons *3076.*

Master *Walsend.* Built at *Willington Quay.* By whom built *Northumberland SBC Ltd.* Yard No. *409.* When built *1929*
Engines made at *Walsend.* By whom made *North Eastern Iron & Co Ltd* Engine No. *2690* When made *1929*
Boilers made at *Walsend.* By whom made *North Eastern Iron & Co Ltd.* Boiler No. *2690* When made *1929.*
Nominal Horse Power *469* Owners *Joseph Constantine S. S. Line Ltd.* Port belonging to *Middlesbrough*

MULTITUBULAR BOILERS ~~MAIN~~, ~~AUXILIARY~~, ~~OR~~ ~~DONKEY~~.

Manufacturers of Steel *D. Ashille & Sons Ltd & Steel Coy of Scotland Ltd* (Letter for Record *S.*)
 Total Heating Surface of Boilers *1325 sq ft* Is forced draught fitted *no* Coal or Oil fired *coal*
 No. and Description of Boilers *one single ended.* Working Pressure *200 lbs*
 Tested by hydraulic pressure to *350 lbs* Date of test *4-4-29* No. of Certificate *342* Can each boiler be worked separately *yes*
 Area of Firegrate in each Boiler *35 sq ft* No. and Description of safety valves to each boiler *Two spring loaded.*
 Area of each set of valves per boiler *per Rule 4.6 sq ft* Pressure to which they are adjusted *205 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 *1'-6"* Is oil fuel carried in the double bottom under boilers *no*
 Smallest distance between shell of boiler and tank top plating *2'-3"* Is the bottom of the boiler insulated *yes.*
 Largest internal dia. of boilers *11'-9 1/8"* Length *10'-6"* Shell plates: Material *Steel* Tensile strength *29 to 33 tons*
 Thickness *1 1/2"* Are the shell plates welded or flanged *no* Description of riveting: circ. seams *end 3/4" inter. 8"*
 long. seams *T.R.D. B.S.* Diameter of rivet holes in circ. seams *1 1/8"* Pitch of rivets *8"*
 Percentage of strength of circ. end seams *plate 65.5 lbs rivets 45.6 lbs* Percentage of strength of circ. intermediate seam *plate 86 lbs rivets 84 lbs combined 89.3*
 Percentage of strength of longitudinal joint *86 lbs* Working pressure of shell by Rules *204.5 lbs.*
 Thickness of butt straps *outer 13/16" inner 15/16"* No. and Description of Furnaces in each Boiler *Two corrugated (Deighton)*
 Material *Steel* Tensile strength *26 to 30 tons* Smallest outside diameter *3'-5 1/4"*
 Length of plain part *top bottom ✓* Thickness of plates *crowns 1 1/8" bottoms 1 1/8"* Description of longitudinal joint *weld.*
 Dimensions of stiffening rings on furnace or c.c. bottom *✓* Working pressure of furnace by Rules *209.5 lbs.*
 End plates in steam space: Material *Steel* Tensile strength *26 to 30 tons* Thickness *1 1/4"* Pitch of stays *22 x 15"*
 How are stays secured *D. nuts.* Working pressure by Rules *206 lbs.*
 Tube plates: Material *Steel* Tensile strength *26 to 30 tons* Thickness *1" 3/4"*
 Lean pitch of stay tubes in nests *8 1/8"* Pitch across wide water spaces *14 1/2" x 8 3/4"* Working pressure *front 210.5 lbs back 255 lbs*
 Girders to combustion chamber tops: Material *Steel* Tensile strength *29 to 33 tons* Depth and thickness of girder *10"*
 centre *2 @ 4 1/8" x 3/4"* Length as per Rule *2'-3"* Distance apart *10"* No. and pitch of stays *2 @ 8"*
 Working pressure by Rules *209 lbs.* Combustion chamber plates: Material *Steel*
 Tensile strength *26 to 30 tons* Thickness: Sides *1/16"* Back *23/32"* Top *1/16"* Bottom *1/8"*
 Pitch of stays to ditto: Sides *8 x 10"* Back *9 3/4 x 9 1/4"* Top *8 x 10"* Are stays fitted with nuts or riveted over *nuts*
 Working pressure by Rules *201 lbs.* Front plate at bottom: Material *Steel* Tensile strength *26 to 30 tons*
 Thickness *1"* Lower back plate: Material *Steel* Tensile strength *26 to 30 tons* Thickness *1/8"*
 Pitch of stays at wide water space *14 1/2" x 9 3/4"* Are stays fitted with nuts or riveted over *nuts*
 Working Pressure *206 lbs.* Main stays: Material *Steel* Tensile strength *29 to 33 tons*
 Diameter *At body of stay 2 3/4" Over threads 3"* No. of threads per inch *6* Area supported by each stay *330 sq"*
 Working pressure by Rules *205 lbs.* Screw stays: Material *Steel* Tensile strength *26 to 30 tons*
 Diameter *At turned off part 1 3/4" Over threads 1 3/4"* No. of threads per inch *9* Area supported by each stay *90 sq"*



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Working pressure by Rules 201 lbs. Are the stays drilled at the outer ends no Margin stays: Diameter 2" (At turned off part. or Over threads)

No. of threads per inch 9 Area supported by each stay 116" Working pressure by Rules 214 lbs.

Tubes: Material S.D. Steel External diameter 3 1/4" Thickness 3 L.S.G. 1/2" x 5/16" No. of threads per inch 9

Pitch of tubes 1 1/2" x 1 3/8" Working pressure by Rules W.W.S. 208.5 lbs Manhole compensation: Size of opening in shell plate 16" x 20"

Outer row rivet pitch at ends 10" Section of compensating ring 11 3/8" x 1 1/2" No. of rivets and diameter of rivet holes 32 @ 1 3/8"

Tensile strength ... Thickness of shell ... Description of longitudinal joint ... Steam Dome: Material none

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 ...

How connected to shell ... Inner radius of crown ... Working pressure by Rules ... Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell ...

Size of doubling plate under dome ...

Type of Superheater

Type of Superheater none. Manufacturers of ... Tubes ...

Number of elements ... Material of tubes ... Internal diameter and thickness of tubes ...

Material of headers ... Tensile strength ... Thickness ... Can the superheater be shut off and the boiler be worked separately ...

Area of each safety valve ... Is a safety valve fitted to every part of the superheater which can be shut off from the boiler ...

Rules ... Are the safety valves fitted with casing gear ... Working pressure as per ...

tubes ... Pressure to which the safety valves are adjusted ... Hydraulic test pressure ...

to free the superheater from water where necessary ... and after assembly in place ... Are drain cocks or valves fitted ...

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with ...

THE NORTH EASTERN MARINE ENGINEERING CO. LTD.
 The foregoing is a correct description,
G. Stephenson Manufacture

Dates of Survey ... Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) ...

while building ... Total No. of visits ...

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

This Boiler has been built under Special Survey. Materials + Workmanship good. Hydraulic tests satisfactory. It has been securely fixed in the vessel, examined under steam & safety valves adjusted.

Survey Fee ... When applied for, 192

Travelling Expenses (if any) ... When received, 192

William R. P. Bates
 Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute FRI. 17 MAY 1929

Assigned See Det. app. attached

