

REPORT ON BOILERS.

No. 78173

Received at London Office

Date of writing Report 1924 When handed in at Local Office 5/8/1924 Port of NEWCASTLE-ON-TYNE

No. in Reg. Book. 87747 on the Steel Co. ALGOL Date, First Survey 12th May 1924 Last Survey 5th August 1924

(Number of Visits 19) Tons { Gross 1564 Net 940

Master Built at Newcastle By whom built W. Dobson & Co. Yard No. 223 When built 1924
Engines made at Newcastle By whom made North Eastern Marine Eng. Co. Ltd. Engine No. 2588 When made 1924
Boilers made at Newcastle By whom made North Eastern Marine Eng. Co. Ltd. Boiler No. 2588. When made 1924
Nominal Horse Power 176 Owners R.H. Penney & Sons Port belonging to Sharnham

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Steel Company of Scotland Ltd. D. Colville & Son Ltd. (Letter for Record 5. ✓)

Total Heating Surface of Boilers 3150 sq ft Is forced draught fitted No. Coal or Oil fired Coal. ✓

No. and Description of Boilers Two single-ended cylindrical 25B. Working Pressure 180 lbs. ✓

Tested by hydraulic pressure to 320 lbs. Date of test 21. 7. 24 No. of Certificate 9838 Can each boiler be worked separately Yes ✓

Area of Firegrate in each Boiler 40 sq ft No. and Description of safety valves to each boiler Two Spring-loaded. ✓

Area of each set of valves per boiler { per Rule 10.09 sq in as fitted 11.87 sq in Pressure to which they are adjusted 185 lbs. Are they fitted with easing gear No. ✓

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 33 1/2" Is oil fuel carried in the double bottom under boilers No. ✓

Smallest distance between shell of boiler and tank top plating 24" Is the bottom of the boiler insulated No. ✓

Largest internal dia. of boilers 153 3/8" Length 10' 6" Shell plates: Material Steel Tensile strength 28-32 Tons ✓

Thickness 1 1/16" Are the shell plates welded or flanged No. Description of riveting: circ. seams { end Double ✓ inter. ✓

long. seams Treble. 25B. Diameter of rivet holes in { circ. seams 1 1/8" long. seams 1 1/8" Pitch of rivets { 3 3/8" 8" ✓

Percentage of strength of circ. end seams { plate 45 rivets 59.2 Percentage of strength of circ. intermediate seam { plate rivets ✓

Percentage of strength of longitudinal joint { plate 85.93 rivets 90.5 combined 89.9 Working pressure of shell by Rules 182 lbs. ✓

Thickness of butt straps { outer 2" inner 1 5/16" No. and Description of Furnaces in each Boiler Two. Deighton 2 CF. ✓

Material Steel Tensile strength 26-30 Tons Smallest outside diameter 44 3/8" ✓

Length of plain part { top bottom Thickness of plates { crown 9 1/16" bottom 9 1/16" Description of longitudinal joint welded. ✓

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 184 lbs. ✓

End plates in steam space: Material Steel Tensile strength 26-30 Tons Thickness 1 3/8" Pitch of stays 18" x 28" ✓

How are stays secured Double Nuts + washers (3 1/2 D.) Working pressure by Rules 181 lbs. ✓

Tube plates: Material { front Steel back Steel Tensile strength { 26-30 Tons Thickness { 1 5/16" 3/4" ✓

Mean pitch of stay tubes in nests 8 3/8" Pitch across wide water spaces 14 1/2" Working pressure { front 185 lbs back 210 lbs. ✓

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

at centre 8 1/2" - 1 1/2" Length as per Rule 30" Distance apart 10 3/4" No. and pitch of stays ✓

in each Two - 9" Working pressure by Rules 190 lbs. Combustion chamber plates: Material Steel ✓

Tensile strength 26-30 Tons Thickness: Sides 23/32" Back 23/32" Top 23/32" Bottom 7/8" ✓

Pitch of stays to ditto: Sides 10 1/2" x 9" Back 9 7/8" x 9 3/8" Top 10 3/4" x 9" Are stays fitted with nuts or riveted over nuts ✓

Working pressure by Rules 184 lbs. Front plate at bottom: Material Steel Tensile strength 26-30 Tons. ✓

Thickness 1 5/16" Lower back plate: Material Steel Tensile strength 26-30 Tons. Thickness 1 5/16" ✓

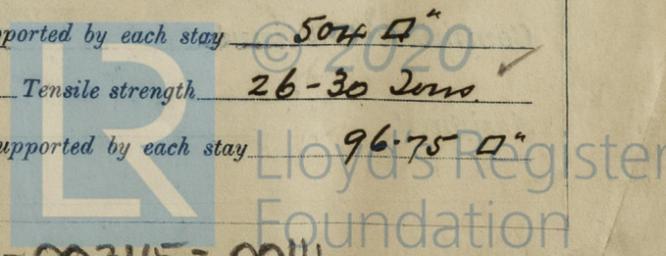
Pitch of stays at wide water space 14 1/2" Are stays fitted with nuts or riveted over nuts ✓

Working Pressure 242 lbs. Main stays: Material Steel Tensile strength 28-32 Tons ✓

Diameter { At body of stay, 3 1/4" No. of threads per inch nine Area supported by each stay 504 sq in ✓

Working pressure by Rules 183 lbs. Screw stays: Material Steel Tensile strength 26-30 Tons. ✓

Diameter { At turned off part, 1 3/4" No. of threads per inch nine Area supported by each stay 96.75 sq in ✓



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Working pressure by Rules 188 lbs Are the stays drilled at the outer ends no Margin stays: Diameter ^{At turned off part,} 1 7/8" or ^{Over threads} 1 7/8"

No. of threads per inch nine Area supported by each stay 114.84375" Working pressure by Rules 186 lbs

Tubes: Material Iron External diameter ^{Plain} 3 1/4" ^{Stay} 3 1/4" Thickness ^{No. 8. W.G.} 5/16" - 1/4" No. of threads per inch nine

Pitch of tubes 4 1/2" x 4 3/8" Working pressure by Rules plain 230 lbs Stay 205 lbs Manhole compensation: Size of opening in shell plate 16" x 12" Section of compensating ring No. of rivets and diameter of rivet holes

Outer row rivet pitch at ends Depth of flange if manhole flanged 4 1/4" Steam Dome: Material none

Tensile strength _____ Thickness of shell _____ Description of longitudinal joint _____

Diameter of rivet holes _____ Pitch of rivets _____ Percentage of strength of joint ^{Plate} _____ ^{Rivets} _____

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 _____

Size of doubling plate under dome _____ Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell _____

Type of Superheater none Manufacturers of ^{Tubes} _____ ^{Steel castings} _____

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 _____ Are the safety valves fitted with easing gear _____ Working pressure as per Rules _____ Pressure to which the safety valves are adjusted _____ Hydraulic test pressure _____

tubes _____, castings _____ and after assembly in place _____ Are drain cocks or valves fitted to free the superheater from water where necessary _____

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with Yes

The foregoing is a correct description,
THE NORTH EASTERN MARINE ENGINEERING Co., LTD.
Manufactured by J. J. Harrison

Dates of Survey ^{During progress of work in shops - -} See Machinery Report Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)

^{while building} ^{During erection on board vessel - - -} _____ Total No. of visits _____

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

These Boilers have been constructed under special survey. The workmanship and materials are sound and good. They have satisfactorily withstood the hydraulic pressure test, have been efficiently installed on board the vessel, and have had their safety valves adjusted under steam. In my opinion the vessel is eligible for notation 'I' - L.M.C.S. 2.

Survey Fee £ See Machinery Report : When applied for, _____ 192

Travelling Expenses (if any) £ See Machinery Report : When received, _____ 192

R. Lee Amess
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute TUES. 19 AUG 1924

Assigned _____

