

REPORT ON BOILERS.

No. 84584

Received at London Office 14 AUG 1929

Date of writing Report 102 When handed in at Local Office 6-8-1929 Port of Newcastle-on-Tyne.

No. in Reg. Book. 41129 Survey held at Wallsend Date, First Survey March 13th Last Survey Aug. 6th 1929

on the New Steel S.S. Langleetarn (Number of Visits 4) Gross Tons 4908 Net Tons 2986.

Master Built at Jarrow By whom built Palmers & Co. Ltd. Yard No. 992 When built 1929

Engines made at Wallsend By whom made North Eastern Marine & Dry Dock Engine No. 2699 When made 1929

Boilers made at Wallsend By whom made North Eastern Marine & Dry Dock Boiler No. 2699 When made 1929.

Nominal Horse Power 481. Owners Messrs. McDougal & Co. Ltd. Port belonging to Newcastle.

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Appleby Iron Coy & Nottingham L & S Wks. (Letter for Record S.)

Total Heating Surface of Boilers 6558 sq ft Is forced draught fitted Yes. Coal or Oil fired Coal

No. and Description of Boilers Three single ended 3 S.B. Working Pressure 225 lbs.

Tested by hydraulic pressure to 388 lbs Date of test 6-6-29 No. of Certificate 354 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 44.33 sq ft No. and Description of safety valves to each boiler 2 Sup spring loaded.

Area of each set of valves per boiler (per Rule 11.4 sq ft as fitted 14.12 sq ft) Pressure to which they are adjusted 230 lbs Are they fitted with easing gear Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 2'-6" Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 2'-6" Is the bottom of the boiler insulated No

Largest internal dia. of boilers 13'-9 1/4" Length 11'-6" Shell plates: Material Steel Tensile strength 29 to 33 tons

Thickness 1 3/8" Are the shell plates welded or flanged No Description of riveting: circ. seams D.R. long. seams T.R.D.B.S.

Diameter of rivet holes in circ. seams 1 1/16" Pitch of rivets 4" 9 3/4"

Percentage of strength of circ. end seams (plate 64.1 rivets 85.25) Percentage of strength of circ. intermediate seam (plate 90 rivets 88.5)

Percentage of strength of longitudinal joint (plate 90 rivets 88.5) Working pressure of shell by Rules 228 lbs.

Thickness of butt straps (outer 1 1/16" inner 1 3/16") No. and Description of Furnaces in each Boiler Three Corrugated (Dighton) 3.c.f.

Material Steel Tensile strength 26 to 30 tons Smallest outside diameter 2'-11 1/4"

Length of plain part (top bottom) Thickness of plates (crown 9/16" bottom 9/16") Description of longitudinal joint Welded

Dimensions of stiffening rings on furnace or c.c. bottom None Working pressure of furnace by Rules 231 lbs.

End plates in steam space: Material Steel Tensile strength 26 to 30 tons Thickness 1 1/2" Pitch of stays 1-6 1/2 x 2-0 3/8

How are stays secured D. Nuts Working pressure by Rules 226.5 lbs.

Tube plates: Material (front back) Steel Tensile strength 26 to 30 tons Thickness 3/4"

Mean pitch of stay tubes in nests 9 3/8" Pitch across wide water spaces 14" x 4 1/2" Working pressure (front 240 lbs back 228.5 lbs)

Girders to combustion chamber tops: Material Steel Tensile strength 29 to 33 tons Depth and thickness of girder

at centre 2 @ 9" x 7/8" Length as per Rule 2'-9" Distance apart 9 1/16" No. and pitch of stays

in each 2 @ 9 1/8" Working pressure by Rules 238 lbs. Combustion chamber plates: Material Steel

Tensile strength 26 to 30 tons Thickness: Sides 25/32" Back 25/32" Top 25/32" Bottom 1"

Pitch of stays to ditto: Sides 9 1/8 x 9 1/16" Back 10" x 9 1/16" Top 9 1/8 x 9 1/16" Are stays fitted with nuts or riveted over Nuts

Working pressure by Rules 224 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 3/16"

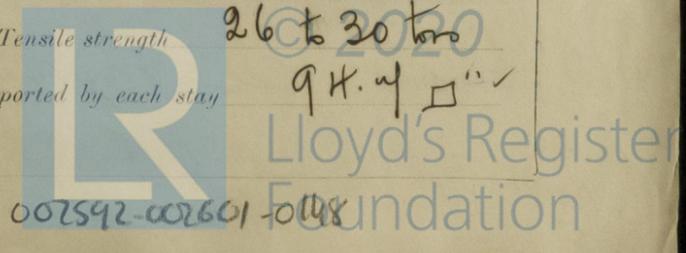
Pitch of stays at wide water space 14 1/2" x 10" Are stays fitted with nuts or riveted over Nuts

Working Pressure 231.5 lbs. Main stays: Material Steel Tensile strength 28 to 32 tons

Diameter (At body of stay, or Over threads) 3 1/2" No. of threads per inch 6 Area supported by each stay 4510"

Working pressure by Rules 240 lbs. Screw stays: Material Steel Tensile strength 26 to 30 tons

Diameter (At turned off part, or Over threads) 1 1/8" No. of threads per inch 9 Area supported by each stay 94.4 sq"



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Working pressure by Rules 226 lbs Are the stays drilled at the outer ends to Margin stays: Diameter ^(At turned off part, or Over threads) 1/2"

No. of threads per inch 9 Area supported by each stay 120 lbs. sq" Working pressure by Rules 237.5 lbs.

Tubes: Material S.P. Steel External diameter ^{Plain} 7 1/2" Thickness ^{S.L.S.G.} 5/16" & 3/8" No. of threads per inch 9

Pitch of tubes 3 3/4" x 3 3/4" Working pressure by Rules W.W.S. 260 lbs. Manhole compensation: Size of opening in shell plate 16" x 12" Section of compensating ring none No. of rivets and diameter of rivet holes none

Outer row rivet pitch at ends Depth of flange if manhole flanged 4 3/8" Steam Dome: Material none

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

Diameter of rivet holes pple Pitch of rivets opp Percentage of strength of joint ^{Plate} opp ^{Rivet} opp

Internal diameter pppe Working pressure by Rules opp Thickness of crown opp No. and diameter of stays opp Inner radius of crown opp Working pressure by Rules opp

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

Type of Superheater none. Manufacturers of ^{Tubes} opp ^{Steel castings} opp

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

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

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

Area of each safety valve opp Are the safety valves fitted with easing gear opp Working pressure as per Rules opp Pressure to which the safety valves are adjusted opp Hydraulic test pressure: tubes opp and after assembly in place opp Are drain cocks or valves fitted to free the superheater from water where necessary opp

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

THE NORTH EASTERN MARINE ENGINEERING CO., LTD.
The foregoing is a correct description,
Blunthorpe SECRETARY, Manufacturer.

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

while building ^(During erection on board vessel - -) opp Total No. of visits opp

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

These Boilers have been built under Special Survey. Materials and Workmanship good. Hydraulic tests satisfactory. They have been efficiently installed & fired in the vessel examined under steam & safety valves adjusted.

Survey Fee ... £ : : leth When applied for, 192

Travelling Expenses (if any) £ : : leth When received, 192

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

Committee's Minute Fri. 16 AUG 1929

Assigned See Minute on pwc Rps
84587 attached