

REPORT ON BOILERS.

No. 104501

Received at London Office 30 MAY 1947

Date of writing Report 19... When handed in at Local Office 29 MAY 1947 Port of NEWCASTLE-ON-TYNE

No. in Survey held at Newcastle (Wallsend) Date, First Survey 24th MAY 1946 Last Survey 16th MAY 1947

Reg. Book. 1/2 "SUSSEX TRADER" (Number of Visits 94) Tons Gross Net

Master Built at SUNDERLAND By whom built Sir J. Laing & Co. Yard No. 777 When built 1947-5 mo

Engines made at Wallsend By whom made N.E. Marine Eng. Co. (1938) Ltd. Engine No. 3141 When made 1947

Boilers made at ditto By whom made ditto Boilers No. 3141 When made 1947

Nominal Horse Power See Rpt 4. Owners TRADERS NAVIGATION Co Port belonging to

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

Manufacturers of Steel Colvilles Ltd (Letter for Record S.)

Total Heating Surface of Boilers 5842 sq ft plus SPT SURF 1150 sq ft Is forced draught fitted YES. Coal or Oil fired Oil fired

No. and Description of Boilers 2 Single Ended Working Pressure 220 LBS/SQ IN

Tested by hydraulic pressure to 380 lb. Date of test 24-9-46 No. of Certificate N° 1219. Can each boiler be worked separately YES

Area of Firegrate in each Boiler 7.86 sq ft No. and Description of safety valves to each boiler Two 2 1/2" Cockburn's Imp'd High Lift

Area of each set of valves per boiler per Rule 9.80 sq ft Pressure to which they are adjusted 22.5 lb. 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 15" Is oil fuel carried in the double bottom under boilers YES

Smallest distance between shell of boiler and tank top plating 2'-0" Is the bottom of the boiler insulated YES

Largest internal dia. of boilers 15'-8 15/16" Length 12'-6" Shell plates: Material M. Steel Tensile strength 29.533 tons

Thickness 1 17/32" Are the shell plates welded or flanged NO Description of riveting: circ. seams end D.R. inter. YES

long. seams T.R. Double butt straps Diameter of rivet holes in circ. seams 1 9/16" Pitch of rivets 4 1/8" 10 1/4"

Percentage of strength of circ. end seams plate 62.1 rivets 48.2 Percentage of strength of circ. intermediate seam plate YES rivets YES

Percentage of strength of longitudinal joint plate 84.8 rivets 90.8 Working pressure of shell by Rules 222.5 lb/sq in

Thickness of butt straps outer 1 3/16" inner 1 5/16" No. and Description of Furnaces in each Boiler 3 Cf (Brighton type)

Material Stl Tensile strength 26 to 30 tons Smallest outside diameter 3'-11 1/16"

Length of plain part top 23 1/2" bottom 23 1/2" Thickness of plates crown 23 1/2" Description of longitudinal joint Fire weld

Dimensions of stiffening rings on furnace or c.c. bottom NIL Working pressure of furnace by Rules 221 lb.

End plates in steam space: Material Stl Tensile strength 26 to 30 tons Thickness 1 1/2" Pitch of stays 23" x 19 3/4"

How are stays secured NUTTED inside & outside Working pressure by Rules 230 lb.

Tube plates: Material front Stl Tensile strength 26 to 30 tons Thickness 1 5/16" 7/8"

Mean pitch of stay tubes in nests 8 1/8" Pitch across wide water spaces 14 1/2" x 7" Working pressure front 233 lb. back 222 lb.

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

at centre 12 1/4" x 1" dble Length as per Rule 4'-0 1/2" Distance apart 9 1/8" No. and pitch of stays

in each 3 at 11 5/8" Working pressure by Rules 227 lb. Combustion chamber plates: Material Stl

Tensile strength 26 to 30 tons Thickness: Sides 53/64" Back 23/32" Top 53/64" Bottom 29/32"

Pitch of stays to ditto: Sides 11 5/8" x 8 7/8" Back 9 x 8" Top 11 5/8" x 9 1/8" Are stays fitted with nuts or riveted over FITTED WITH NUTS.

Working pressure by Rules 222 lb. Front plate at bottom: Material Stl Tensile strength 26 to 30 tons

Thickness 1 5/16" Lower back plate: Material Stl Tensile strength 26 to 30 tons Thickness 1 5/16"

Pitch of stays at wide water space 15" x 8" Are stays fitted with nuts or riveted over NO STAYS ARE E-WELDED in B.E. PLATE & C.C. PLATES.

Working pressure 250 lb. Main stays: Material STL Tensile strength 28 to 32 tons

Diameter At body of stay 3 1/2" Over threads 3 3/4" No. of threads per inch 6 Area supported by each stay 454 sq in

Working pressure by Rules 238 lb. Screw stays: Material STL Tensile strength 26 to 30 tons

Diameter 1 5/8" DR. PLAIN WHERE E-WELDED. 9 THRODS FOR STAYS THRO SHELL & C.C. TOPS. Area supported by each stay 72 sq in

Over threads 1 5/8" WHERE THREADED. REMAINDER ARE E-WELDED IN BOTH PLATES.

SEE NOTE X

Working pressure by Rules 238 lbs Are the stays drilled at the outer ends No ✓ Margin stays: Diameter PLAIN BAR 1 7/8" 2"
 No. of threads per inch Black Bay Area supported by each stay 96 sq ins Working pressure by Rules 258 lbs
 Tubes: Material Seamless STL External diameter 2 1/4" Thickness 9 W.G. 5/16" No. of threads per inch 9
 Pitch of tubes 3 1/2" x 3 1/2" Working pressure by Rules 221 lbs Manhole compensation: Size of opening in shell plate NIL Section of compensating ring 257 lbs No. of rivets and diameter of rivet holes 5/16" thick
 Outer row rivet pitch at ends NIL Depth of flange if manhole flanged NIL Steam Dome: Material NIL
 Tensile strength NIL Thickness of shell NIL Description of longitudinal joint NIL
 Diameter of rivet holes NIL Pitch of rivets NIL Percentage of strength of joint NIL
 Internal diameter NIL Working pressure by Rules NIL Thickness of crown NIL No. and diameter of stays NIL
 How connected to shell NIL Inner radius of crown NIL Working pressure by Rules NIL
 of rivets in outer row in dome connection to shell NIL Size of doubling plate under dome NIL Diameter of rivet holes and pitch NIL
 Type of Superheater "NEMENCO" Combination Chr Type Manufacturers of Meas Tubes Ltd
NEM. N° S.H. N° 1005. Tot. SURF. For 2 BLRS. = 1650 SQ. FT. S.D. STEEL HEADERS
 Number of elements 24 Material of tubes S.D. Steel Internal diameter and thickness of tubes 1.273" x 7 W.G.
 Material of headers S.D. STEEL TUBE Tensile strength 26 & 28 tons Thickness 1" Can the superheater be shut off and the boiler be worked separately No BUT ELEMENTS CAN BE BLANKED AT
 Is a safety valve fitted to every part of the superheater which can be shut off from the boiler yes
 Area of each safety valve 3.1416 sq ins. (one 7 1/2" dia) Are the safety valves fitted with easing gear yes Working pressure as per Rules 220 lbs
 Pressure to which the safety valves are adjusted 225 lbs Hydraulic test pressure: tubes 1500 lbs forgings and castings 660 lbs and after assembly in place 440 lbs 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

THE NORTH EASTERN MARINE ENGINEERING CO. (1938) LTD.
 The foregoing is a correct description,
glushko Manufacturer
 DIRECTOR

Dates of Survey while building { During progress of work in shops - - }
 { During erection on board vessel - - }

PLEASE SEE MACHINERY REPORT

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) 29-4-46
16-8-46

Total No. of visits 1

Is this Boiler a duplicate of a previous case No If so, state Vessel's name and Report No. ✓

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

These 2 main Boilers have been constructed and fitted on board, in accordance with the approved plans and the Society's Rules, and the materials & workmanship are good

See also Machy Rpt. 4.

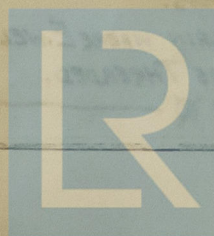
Survey Fee ... £ See Machy Rpt 4 When applied for, ... 19...
 Travelling Expenses (if any) £ ... When received, ... 19...

A. Webb

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned See F.E. Machy rpt.



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