

REPORT ON BOILERS.

No. 104852

Received at London Office

4 - NOV 1947

Date of writing Report

19

When handed in at Local Office

11 - NOV 1947

Port of

NEWCASTLE-ON-TYNE

No. in Survey held at WallSEND

Date, First Survey 1st JUNE, 1947Last Survey 27th OCTOBER 1947

No. 38688 on the Motor Tanker LABIOSA.

(Number of Visits 16)

Gross 6473.36
Net 3604.00

Built at Hebburn

By whom built R & W. Hawthorn, Leslie & Co.

Yard No. 692 When built 1948

Engines made at Newcastle (St Peter's)

By whom made Ditto.

Engine No. 4047 When made 1948

Boiler made at WallSEND

By whom made N. E. MAR. ENG. CO. (1938) LTD.

Boiler No. 3161 When made 1947

Nominal Horse Power 230.

Owners THE ANGLO-SAXON PETROLEUM CO. LTD.

Port belonging to LONDON.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Colvilles Ltd., Glasgow (Letter for Record S.)
Total Heating Surface of Boilers 3,453 sq. ft. 3480 Is forced draught fitted Yes. Coal or Oil fired oil fired
No. and Description of Boilers One Single Ended Working Pressure 180 lbs/sq. in.
Tested by hydraulic pressure to 320 lb Date of test 16-9-47 No. of Certificate No. 1268 Can each boiler be worked separately Yes
Area of Firegrate in each Boiler No. and Description of safety valves to each boiler Two of 3" cockhorn Imp. High Lift.
Area of each set of valves per boiler per Rule 11.13 sq. in. Pressure to which they are adjusted 180 lbs/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
Largest internal dia. of boilers 16'-0 3/8" Length 12'-6" (mean) Shell plates: Material Stl Tensile strength 28 to 32 tons
Thickness 1 5/16" Are the shell plates welded or flanged No Description of riveting: circ. seams end D.R.
long. seams T.R. Stl butt straps Diameter of rivet holes in circ. seams 1 3/8" Pitch of rivets 4" 9 1/2"
Percentage of strength of circ. end seams plate 65.6 rivets 46.4 Percentage of strength of circ. intermediate seam plate rivets
Percentage of strength of longitudinal joint plate 85.52 rivets 91.7 Working pressure of shell by Rules 180.8 lb.
combined 89.34
Thickness of butt straps outer 1 1/8" inner 1 1/8" No. and Description of Furnaces in each Boiler 3 C.f. (morison type)
Material Stl Tensile strength 26 to 30 tons Smallest outside diameter 3'-11 7/16"
Length of plain part top Thickness of plates crown 19/32" Description of longitudinal joint fire weld
bottom Dimensions of stiffening rings on furnace or c.c. bottom Nil Working pressure of furnace by Rules 181 lb.
End plates in steam space: Material Stl Tensile strength 26 to 30 tons Thickness 1 1/2" Pitch of stays 23' x 20"
How are stays secured Nutted inside + outside Working pressure by Rules 182 lb.
Tube plates: Material front Stl Tensile strength 26 to 30 tons Thickness 29/32 front
back 25/32 back
Mean pitch of stay tubes in nests 9 1/8" Pitch across wide water spaces 13 3/4" x 7 3/4" Working pressure front 225 lb.
back 223 lb.
Girders to combustion chamber tops: Material Stl Tensile strength 28 to 32 tons Depth and thickness of girder
at centre 11" x 7 7/8" dbb Length as per Rule 40" Distance apart 10 1/2" No. and pitch of stays
in each 3 at 9 1/2" Working pressure by Rules 196 lb.
Tensile strength 26 to 30 tons Thickness: Sides 3/4" Back 3/4" Top 3/4" Bottom 3/4"
Pitch of stays to ditto: Sides 9 1/2" x 7 1/4" Back 9" x 7 1/4" Top 10 1/2" x 9 1/2" Are stays fitted with nuts or riveted over CC back marginal + corner are NUTTED. Remainder - RIVETED.
Working pressure by Rules 185 lb. (min) Front plate at bottom: Material Stl Tensile strength 26 to 30 tons
Thickness 29/32" Lower back plate: Material Stl Tensile strength 26 to 30 tons Thickness 7/8"
Pitch of stays at wide water space 14 5/8" x 9" Are stays fitted with nuts or riveted over marginal + corner - NUTTED. Remainder - RIVETED.
Working pressure 212 lb. Main stays: Material Stl Tensile strength 28 to 32 tons
Diameter At body of stay 3 1/4" No. of threads per inch 6 Area supported by each stay 460 sq. in.
Over threads 3 1/2" Working pressure by Rules 200 lb. Screw stays: Material Stl Tensile strength 26 to 30 tons
Diameter At turned off part 2 1/4" 1 1/2" No. of threads per inch 9 Area supported by each stay CC top 99.75 sq. in.
Over threads 2 1/4" 1 1/2" CC back 69.5 sq. in.
CC side 68.9 sq. in.

Conts over.

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Working pressure by Rules 182 (min) Are the stays drilled at the outer ends No ✓ Margin stays: Diameter { At turned off part, 1 3/4" + 2" Over threads, 180 lb. }
No. of threads per inch 9. Area supported by each stay 100.6 sq in Working pressure by Rules 180 lb.
Tubes: Material S.D. Stl. External diameter { Plain 2 3/4" Thickness { 9/32", 5/16" No. of threads per inch 9. }
Pitch of tubes 3 7/8" x 4" Working pressure by Rules 210 lbs min Manhole compensation: Size of opening in
shell plate 20 1/2" x 16 1/2" Section of compensating ring 17" x 1 3/8" No. of rivets and diameter of rivet holes 34 of 1 1/2 dia
Outer row rivet pitch at ends 10 1/2" Depth of flange if manhole flanged 4" Steam Dome: NIL.
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..... Inner radius of crown..... Working pressure by Rules.....
How connected to shell..... 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 NIL. Manufacturers of { Tubes..... Steel forgings..... 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..... Is a safety valve fitted to every part of the superheater which can be shut off from the boiler.....
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..... forgings and 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 22 inclusive for boilers been complied with Yes.

THE NORTH EASTERN MARINE ENGINEERING CO. (1939) LTD.
The foregoing is a correct description of the boiler.
J. A. Oak
DIRECTOR

Dates of Survey { During progress of work in shops - - - 11/1947 JUNE 2, 6, 24/30 JULY 4, 11, 18 AUG 7, 12, 15, 21, SEPT. 8, 16, OCT. 9, 27 } Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) 30-9-46
while building { During erection on board vessel - - - } Total No. of visits 16

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

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

This Donkey Boiler has been constructed under special survey in accordance with the approved plan & the Society's Rules, and the material & workmanship are good.

The Boiler will be sent to Hebburn to be fitted on board the ship.

SURVEY OF MACHINERY

FIRST SURVEY 12 NOVEMBER, 1946 LAST SURVEY 13TH MAR, 1948

NEWCASTLE-ON-TYNE

No. OF VISITS 96

The boiler has been efficiently installed on board, examined under steam and the safety valves adjusted to the approved pressure.

J. A. Oak Newcastle-on-Tyne.

**SURVEYOR TO LLOYD'S REGISTER.
NEWCASTLE-ON-TYNE.**

Survey Fee ... £ 34 : 10 : 0.

When applied for, **3 NOV 1947**

Travelling Expenses (if any) £ : : }

When received 19.....

MLD

A. Watt.

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 4 JUN 1948

Assigned

See F.E. ncky. xpt.



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Foundation