

REPORT ON BOILERS.

No. 105673

10 NOV 1948

Received at London Office.

Date of writing Report 30-10-48

When handed in at Local Office 9-NOV 1948

Port of NEWCASTLE-ON-TYNE

No. in Survey held at WallSEND

Date, First Survey 18TH JUNE 1947Last Survey 27TH OCTOBER 1948

on the M.V. ATHELKNIGHT.

(Number of Visits 111)

Tons } Gross
Net

Built at Sunderland By whom built Sir James Laing & Co. Yard No. 779 When built 1948.

Engines made at WallSEND By whom made N.E. Mar. Eng. Co. (1938) Ltd. Engine No. 3153 When made 1948

Boilers made at ditto By whom made ditto Boiler No. 3153 When made 1948.

Nominal Horse Power $\frac{4352}{12} = 363$ Owners Athel Line 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 4352 sq ft = 2 bls Is forced draught fitted Yes

Coal or Oil fired oil fired

No. and Description of Boilers 2 Single ended

Working Pressure 180 lb/sq in

Tested by hydraulic pressure to 320 lb Date of test 15-1-48 No. of Certificate N° 1275

Can each boiler be worked separately Yes

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

Area of each set of valves per boiler per Rule 6.95 sq in as fitted 7.08 Pressure to which they are adjusted 180 lb Are they fitted with easing gear Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No MAIN BOILER

Smallest distance between boilers or uptakes and bunkers or woodwork alleyway (steel) 15"

Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating deck flat 3'-6"

Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 13'-9 3/4" Length 11'-6"

Shell plates: Material M. Stl Tensile strength 29 to 33 tons

Thickness 1 1/8" Are the shell plates welded or flanged No Description of riveting: circ. seams end D Riv. overlap

Pitch of rivets 3 1/2" inter NIL

Percentage of strength of circ. end seams plate 66.1 rivets 44.7 Percentage of strength of circ. intermediate seam plate 85.8 rivets 87.3

Percentage of strength of longitudinal joint plate 85.8 rivets 87.3 combined 89.0 Working pressure of shell by Rules 185.6 lb/sq in

Thickness of butt straps outer 7/8" inner 1" No. and Description of Furnaces in each Boiler 3 c.f. (Deighton type)

Material M. Stl Tensile strength 26 to 30 tons Smallest outside diameter 38 1/4"

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

Dimensions of stiffening rings on furnace or c.c. bottom NIL Working pressure of furnace by Rules 188 lb.

Diagonal plates in steam space: Material M. Stl Tensile strength 26 to 30 tons Thickness 1 3/8" Pitch of stays 17 3/4" x 24 1/2"

How are stays secured Nuts inside & outside Working pressure by Rules 193.7 lb

Diagonal plates: Material front M. Stl Tensile strength 26 to 30 tons Thickness front 29/32" back 23/32"

Pitch of stay tubes in nests 10" Pitch across wide water spaces 14" Working pressure front 217 lb back 184 lb

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

Centre 8 1/2" x 3 1/4" double Length as per Rule 2'-9" Distance apart 9 5/8" No. and pitch of stays

Each 2 at 10 3/8" Working pressure by Rules 185.5 lb Combustion chamber plates: Material M. Stl

Tensile strength 26 to 30 tons Thickness: Sides 23/32" Back 1 1/16" Top 23/32" Bottom 23/32"

Pitch of stays to ditto: Sides 9 5/8" x 10 3/8" Back 9 5/8" x 8 3/4" Top 9 5/8" x 10 3/8" Are stays fitted with nuts or riveted over with nuts

Working pressure by Rules 181.2 (min) Front plate at bottom: Material M. Stl Tensile strength 26 to 30 tons

Thickness 29/32" Lower back plate: Material M. Stl Tensile strength 26 to 30 tons Thickness 7/8"

Pitch of stays at wide water space 14" x 9 5/8" Are stays fitted with nuts or riveted over with nuts

Working pressure 196 lb (min) Main stays: Material M. Stl Tensile strength 28 to 32 tons

At body of stay 3" No. of threads per inch 6 Area supported by each stay 17 3/4" x 24 1/2"

Over threads 3 1/4" Screw stays: Material M. Stl Tensile strength 26 to 30 tons

Working pressure by Rules 183 lb No. of threads per inch 9 Area supported by each stay 9 5/8" x 10 3/8" for 1 3/4" dia

At body of stay 1 7/8" x 1 3/4" Over threads 1 7/8" x 1 3/4" 9 5/8" x 8 3/4" for 1 5/8" dia

CONT'D OVER

Lloyd's Register
Foundation

Working pressure by Rules 182 1/2 (min) Are the stays drilled at the outer ends No ✓ Margin stays: Diameter { At turned off part 1 7/8" + 2" at corner or Over threads 1 7/8" ✓
No. of threads per inch 9 ✓ Area supported by each stay 11 3/8" x 9 5/8" Working pressure by Rules 195 lb
Tubes: Material S.D. STEEL External diameter { Plain 2 3/4" Thickness { 9 W.G. 5/16" 3/8" No. of threads per inch 9 ✓
Pitch of tubes H' x H' ✓ Working pressure by Rules 222 lb Manhole compensation: Size of opening in
shell plate NIL ✓ Section of compensating ring ✓ No. of rivets and diameter of rivet holes ✓
Outer row rivet pitch at ends ✓ Depth of flange if manhole flanged ✓ 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
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. (1938) LTD.
The foregoing is a correct description,

G. Schubert
DIRECTOR

Dates of Survey while building { During progress of work in shops - - - During erection on board vessel - - - }
Are the approved plans of boiler and superheater forwarded herewith 17-1-47 (If not state date of approval.)
PLEASE SEE REPORT 4B Total No. of visits III

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 two Donkey Boilers have been constructed and fitted on board under special survey in accordance with the approved plans and the Society's Rules. The materials and workmanship are good.

See also Machy Rpt H.B.

Survey Fee ... £ ✓ : : When applied for, 19.....
Travelling Expenses (if any) £ : : When received 19.....

A. Watt

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

FRI. 3 DEC 1948

Assigned

See F.E. Machy rpt



© 2021

Lloyd's Register Foundation