

# REPORT ON BOILERS.

No. 99860

Received at London Office 22 OCT 1941

Port of NEWCASTLE-ON-TYNE

of writing Report

When handed in at Local Office

18/10/1941

Port of

o. in Book.

Survey held at

Newcastle on Tyne

Date, First Survey

6 June 1940

Last Survey

2 Oct 1941

on the

M.V. "DIPLONDON."

(Number of Visits)

Gross 8149  
Net 4770

ster

Built at

Hebburn, Newcastle

By whom built

R.W. Hawthorn, Leslie & Co.

Yard No. 632

When built 1941-10

ines made at

Newcastle

By whom made

ditto

Engine No. 3969

When made 1941-10

lers made at

ditto

By whom made

ditto

Boiler No. 3969

When made 1941-10

inal Horse Power

233.

Owners

Port belonging to

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Colville's Ld. Glasgow.

(Letter for Record S.)

al Heating Surface of Boilers

3500 sq. ft.

Is forced draught fitted Yes

Coal or Oil fired Oil fired

and Description of Boilers

One Single ended multitubular

Working Pressure 180 lbs/sq. in.

sted by hydraulic pressure to

320 lbs.

Date of test

15/5/41

No. of Certificate

893

Can each boiler be worked separately

ea of Firegrate in each Boiler

✓

No. and Description of safety valves to each boiler

Two of 4" dia. Spring loaded.

ea of each set of valves per boiler

per Rule 22.44 sq. ins.

as fitted 25.12 " Pressure to which they are adjusted

180 lbs. Are they fitted with easing gear

Yes

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

No main Boiler

allest distance between boilers or uptakes and bunkers or woodwork

Is oil fuel carried in the double bottom under boilers

under Boiler

allest distance between shell of boiler and

deck plating

3' 4 1/2"

about 17' 6" above tank top

Is the bottom of the boiler insulated

Yes

rgest internal dia. of boilers

16' 0 3/8"

Length 12' 6" mean

Shell plates: Material Steel

Tensile strength 28 to 30 tons

ickness

1 5/16"

Are the shell plates welded or flanged

No.

Description of riveting: circ. seams

end D.R. lap.

g. seams

T.R. 50 lb. butt straps

Diameter of rivet holes in

circ. seams 1 3/8"

Pitch of rivets

3.95

Percentage of strength of circ. end seams

plate 65.2

rivets 47.1

Percentage of strength of circ. intermediate seam

plate ✓

rivets ✓

Percentage of strength of longitudinal joint

plate 85.3

rivets 93.0

combined 89.3

Working pressure of shell by Rules

180.6 lbs/sq. in.

ickness of butt straps

outer 1 1/8"

inner 1 1/8"

No. and Description of Furnaces in each Boiler

3 Morrison Corrugated.

aterial

Steel

Tensile strength 26 to 30 tons

Smallest outside diameter 4' 0 1/2"

ngth of plain part

top 8"

bottom ✓

Thickness of plates

crown 5/8"

bottom 5/8"

Description of longitudinal joint Fire welded

Dimensions of stiffening rings on furnace or c.c. bottom

none

Working pressure of furnace by Rules

189 lbs.

nd plates in steam space: Material

Steel

Tensile strength 26-30 tons

Thickness 1 1/2"

Pitch of stays 22" x 20 3/4" max.

ow are stays secured

into inside & outside

Working pressure by Rules

185 lbs.

be plates: Material

front S.

back S.

Tensile strength 26-30 tons

Thickness

1"

ean pitch of stay tubes in nests

9 7/8"

Pitch across wide water spaces 13 3/4" x 7 3/4"

Working pressure

front 200 lbs.

back 243 lbs.

orders to combustion chamber tops: Material

S.

Tensile strength 28-32 tons

Depth and thickness of girder

centre

10 3/4" x 3 3/4" x two

Length as per Rule

37 3/2" - 6 1/4"

Distance apart

10 1/2"

No. and pitch of stays

each

3 @ 8 3/4"

Working pressure by Rules

182.5 lbs.

Combustion chamber plates: Material

S.

ensile strength

26-30 tons

Thickness: Sides

4 5/64"

Back 4 5/64"

Top 4 5/64"

Bottom 1"

itch of stays to ditto: Sides

8 3/4" x 7"

Back 8 1/2" x 7 1/16"

Top 10 1/2" x 8 3/4"

Are stays fitted with nuts or riveted over

Top stays & back marginal stays - riveted.

Remainder - riveted over.

orking pressure by Rules

182 lbs. min.

Front plate at bottom: Material

S.

Tensile strength 26-30 tons

ickness

1"

Lower back plate: Material

S.

Tensile strength 26-30 tons

Thickness 27/32"

itch of stays at wide water space

15" x 8 1/4"

Are stays fitted with nuts or riveted over

with nuts.

orking Pressure

198 lbs.

Main stays: Material

S.

Tensile strength 28-32 tons

iameter

At body of stay

or

Over threads

3 1/4"

No. of threads per inch

6

Area supported by each stay

450 sq. ins. max

orking pressure by Rules

206 lbs.

Screw stays: Material

S.

Tensile strength 26-30 tons

iameter

At turned off part

or

Over threads

1 3/4" + 1 1/2"

No. of threads per inch

9

Area supported by each stay

92 sq. ins.

+ 63.5 sq. ins.

CONTD. OVER



Working pressure by Rules 197 lb Are the stays drilled at the outer ends No Margin stays: Diameter As turned off part Over threads 1 3/4  
No. of threads per inch 9 Area supported by each stay 93.5 sq in. Working pressure by Rules 194 lb min  
Tubes: Material Lap welded W.I. External diameter 2 3/4" Thickness 9 LSG. No. of threads per inch 9  
Pitch of tubes 4" x 3 1/8" Vert. Working pressure by Rules 214 lb. min Manhole compensation: Size of opening in  
shell plate 21" x 17" Section of compensating ring 25" x 1 5/16" No. of rivets and diameter of rivet holes 36 of 1 7/16" dia  
Outer row rivet pitch at ends 10" Depth of flange if manhole flanged 4 1/2" Steam Dome: 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 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

None

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 foregoing is a correct description,

Manufacturer.

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

See Machy Report

Are the approved plans of boiler and superheater forwarded herewith  
(If not state date of approval.)

Total No. of visits

Is this Boiler a duplicate of a previous case If so, state Vessel's name and Report No. Empire Bronze Ship No 627, Exp 3963  
Nwc. Rpt 98948.

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 plans and the Society's Rules, and the materials and workmanship are good.

The Boiler has been efficiently fitted on board and tested under steam.

See also Machy Rpt 46.

Survey Fee ... £ See Machy Rpt 46. When applied for, 19  
Travelling Expenses (if any) £ When received, 19

A. A. Watt

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 11 NOV 1941

Assigned

See Nwc. J.E. 99860



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Lloyd's Register  
Foundation

Rpt. 13.

Date of writing

No. in

Reg. B

36107

Built at

Owners

Electrical

Is vessel

Have plans

Heating

has the gov

trip switch

is not com

arranged to

test for ma

of the gene

near unpro

injury and

contact

are they in

and oil

material is

semi-insulat

Is the const

to pilot and

side of switc

and for each

Are compar

ammeters

equaliser co

Switches,

per Rule

protection d

did they op

Cables, are

state maxim

square inch