

REPORT ON BOILERS.

No. 56643

Received at London Office

-4 MAR 1936

Writing Report

10

When handed in at Local Office

29. 2. 1936

Port of

Glasgow

Survey held at

Glydebank

Date, First Survey

24. 6. 35

Last Survey

2. 3. 1936

on the

M. V. "Comanche"

(Number of Visits)

Gross 6837

Net 3967

Built at

Glydebank

By whom built

John Brown & Co. Ltd.

Yard No. 544

When built 1936

made at

Glydebank

By whom made

John Brown & Co. Ltd.

Engine No. 544

When made 1936

made at

"

By whom made

"

"

"

Boiler No. 544

When made 1936

Horse Power

Owners

Anglo American Oil Co. Ltd.

Port belonging to

Glasgow

TITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Cottrills & Co.

(Letter for Record S. ✓)

Heating Surface of Boilers

2011 sq

Is forced draught fitted

yes ✓

Coal or Oil fired

Oil ✓

Description of Boilers

1 - Multitubular.

Working Pressure 200 ✓

by hydraulic pressure to

350 ✓

Date of test

16-12-35

No. of Certificate

19654

Can each boiler be worked separately

yes ✓

Firegrate in each Boiler

✓

No. and Description of safety valves to each boiler

1 - J. H. I. D. S. ✓

of each set of valves per boiler

per Rule

5.845 sq

as fitted

6.282 sq

Pressure to which they are adjusted

205 ✓

Are they fitted with easing gear

yes ✓

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

✓

Least distance between boilers or uptakes and bunkers or woodwork

12" ✓

Is oil fuel carried in the double bottom under boilers

no ✓

Least distance between shell of boiler and tank top plating

Well clear ✓

Is the bottom of the boiler insulated

yes ✓

Internal dia. of boilers

13'-6" ✓

Length

11'-6" ✓

Shell plates: Material

S ✓

Tensile strength

29.33

Thickness of shell plates

1 3/16" ✓

Are the shell plates welded or flanged

no ✓

Description of riveting: circ. seams

end J. R. ✓

inter. none ✓

Seams

T. R. I. B. S. ✓

Diameter of rivet holes in

circ. seams

1 1/4" ✓

long. seams

1 1/4" ✓

Pitch of rivets

3.204" ✓

8 3/4" ✓

Percentage of strength of circ. end seams

plate

61

rivets

51.2

Percentage of strength of circ. intermediate seam

plate

none

rivets

Percentage of strength of longitudinal joint

plate

85.7

rivets

87.7

combined

89.1

Working pressure of shell by Rules

200.8

Thickness of butt straps

outer

57/64" ✓

inner

1 1/64" ✓

No. and Description of Furnaces in each Boiler

3 - Morrison ✓

Material

S ✓

Tensile strength

26-30

Smallest outside diameter

3'-3 1/4" ✓

Thickness of plain part

top

✓

bottom

✓

Thickness of plates

crown

9/16" ✓

bottom

✓

Description of longitudinal joint

weld ✓

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

none ✓

Working pressure of furnace by Rules

208

Plates in steam space: Material

S ✓

Tensile strength

26-30

Thickness

1 5/16" ✓

Pitch of stays

21" x 19" ✓

Are stays secured

YIN. ✓

Working pressure by Rules

206.2

Plates: Material

front

S ✓

back

S ✓

Tensile strength

26-30

Thickness

13/16" ✓

Pitch of stay tubes in nests

9 3/8" ✓

Pitch across wide water spaces

11" ✓

13 1/2"

Working pressure

front

295'

back

273

Plates to combustion chamber tops: Material

S ✓

Tensile strength

29-33

Depth and thickness of girder

Thickness of plates

8 3/4" x 1 1/2" ✓

Length as per Rule

2'-9" ✓

Distance apart

8 1/2" ✓

No. and pitch of stays

Thickness of plates

3 - 8" x 8 1/2" ✓

Working pressure by Rules

201

Combustion chamber plates: Material

S ✓

Tensile strength

26-30

Thickness: Sides

2 1/32" ✓

Back

3/4" ✓

Top

2 1/32" ✓

Bottom

2 1/32" ✓

Thickness of plates

8" x 8 1/2" ✓

Back

8" x 8" ✓

Top

8" x 8 1/2" ✓

Are stays fitted with nuts or riveted over

marginal. Yes ✓

Working pressure by Rules

201

Front plate at bottom: Material

S ✓

Tensile strength

26-30

Thickness of plates

27/32" ✓

Lower back plate: Material

S ✓

Tensile strength

26-30

Thickness

13/16" ✓

Thickness of plates

14" x 8 1/4" ✓

Are stays fitted with nuts or riveted over

nuts ✓

Working Pressure

203.6

Main stays: Material

S ✓

Tensile strength

28-32

Thickness of plates

At body of stay

3 1/8" ✓

Over threads

✓

No. of threads per inch

6 ✓

Area supported by each stay

399 sq

Working pressure by Rules

214.4

Screw stays: Material

S ✓

Tensile strength

26-30

Thickness of plates

At turned off part

1 9/16" ✓

Over threads

1 5/8" ✓

No. of threads per inch

9 ✓

Area supported by each stay

66 sq

68 sq

Working pressure by Rules 210 Are the stays drilled at the outer ends no Margin stays: Diameter ^{At turned off part,} 7/8" ^{or} 1 7/8" ☒
No. of threads per inch 9 Area supported by each stay 115.5" Working pressure by Rules 207
Tubes: Material S External diameter ^{Plain} 2 1/2" ^{Stay} 2 1/2" Thickness 8 W.G. 3/8" - 5/16" - 1/4" No. of threads per inch 9 ☒
Pitch of tubes 3 3/4" x 3 3/4" Working pressure by Rules 300 Manhole compensation: Size of opening in
shell plate 20 1/2" x 16 1/2" Section of compensating ring 36" x 30" x 1 1/4" No. of rivets and diameter of rivet holes 44 - 1 1/4" ☒
Outer row rivet pitch at ends 8 3/4" Depth of flange if manhole flanged ☒ Steam Dome: Material 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 Sugden Manufacturers of The Talbot Steel Tube Co
Number of elements 2 Material of tubes S Internal diameter and thickness of tubes 1 1/4" O.D. x 10 W.G.
Material of headers S Tensile strength 28.3 Thickness 3/4" Can the superheater be shut off and
the boiler be worked separately yes Is a safety valve fitted to every part of the superheater which can be shut off from the boiler yes J.H. 2
Area of each safety valve 1.767" Are the safety valves fitted with easing gear yes Working pressure as per
Rules 700 lb" Pressure to which the safety valves are adjusted 205" Hydraulic test pressure:
tubes 1000 lb" , castings _____ and after assembly in place 400 lb" 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

John Brown & Company, Limited.
The foregoing is a correct description,

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

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

SEE ACCOMPANYING MACHINERY REPORT.

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.) This boiler has been built under special survey in accordance with the approved plan and the Society's Rules and requirements the materials and workmanship are good, it has been securely fitted on board and satisfactorily tried under steam.

29/2/36

Survey Fee ... £ 13.8.0 When applied for, 2-MAR 1936 19
Travelling Expenses (if any) £ See Rpt 46 When received, X 19

Jas Cairns
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 3-MAR 1936

Assigned SEE ACCOMPANYING MACHINERY REPORT.



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Foundation