

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 Blydebank

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 Blydebank

By whom built John Brown & Co. Ltd

Yard No. 544

When built 1936

made at Blydebank

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 Cotwells & Co

(Letter for Record S.)

Heating Surface of Boilers 2011 sq ft

Is forced draught fitted Yes

Coal or Oil fired Oil

Kind Description of Boilers 1 - Multitubular.

Working Pressure 200

Tested by hydraulic pressure to 350

Date of test 16-12-35

No. of Certificate 19654

Can each boiler be worked separately

Improved

Number of Firegrate in each Boiler

No. and Description of safety valves to each boiler 1 - J.H.I.D.S.

Up lift Donkey Gun

Pressure 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

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

Least distance between boilers or uptakes and bunkers or woodwork deck 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

Least 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 J.R.

Material of 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"

Percentage of strength of circ. end seams

plate 61

rivets 51.2

Percentage of strength of circ. intermediate seam

plate None

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 17/64"

No. and Description of Furnaces in each Boiler 3 - Morrison

Material of furnace 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

Material of plates in steam space 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

Material of plates

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

Material of girders to combustion chamber tops S

Tensile strength 29.33

Depth and thickness of girder

Length of girder 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 combustion chamber 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"

Are stays fitted with nuts or riveted over

Sides 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 others riveted.

Working pressure by Rules 201

Front plate at bottom: Material S

Tensile strength 26-30

Thickness 27/32"

Lower back plate: Material S

Tensile strength 26-30

Thickness 13/16"

Are stays at wide water space 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 stay

At body of stay 3 1/8"

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 stay

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 Over threads} 1 1/8" ✓
 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 ^{S.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 ^{Tubes} The Talbot Steel Tube Co _{Steel castings}
 Number of elements 2 Material of tubes S Internal diameter and thickness of tubes 1 1/4" / 0 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,
 _____ Manufacturer
 _____ Chief Clerk Secretary

Dates of Survey ^{During progress of work in shops - -} _____ Are the approved plans of boiler and superheater forwarded herewith yes _(If not state date of approval)
 while building ^{During erection on board vessel - - -} _____
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.

J. 29/2/36

Survey Fee ... £ 13.8.0 When applied for, 2-MAR 1936 19
 Travelling Expenses (if any) £ See Rpt 4b When received, ✓ 19

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

Committee's Minute GLASGOW 3-MAR 1936
 Assigned SEE ACCOMPANYING MACHINERY REPORT.

