

REPORT ON BOILERS.

No. 53467

Received at London Office 16 MAY 1946

Date of writing Report

19

When handed in at Local Office

19

Port of Hull

No. in Survey held at Hull

Date, First Survey 21. 9. 45.

Last Survey 26. 3. 19 46.

on the Str. Trans BORELLA

(Number of Visits 24)

Gross 524
Net 186

Built at Bury

By whom built Bork, William Gemmell Ltd.

Yard No. 762 When built 1946

Engines made at Hull

By whom made Amos Smith Ltd.

Engine No. 779 When made

Boilers made at Hull

By whom made Amos Smith Ltd.

Boiler No. 779 When made

Nominal Horse Power

Owners (Messrs) J. M. & Son Ltd.

Port belonging to Hull

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Apply Frodingham

(Letter for Record S)

Total Heating Surface of Boilers

2350 FT² } 3225 FT²

Is forced draught fitted YES

Coal or Oil fired COAL

No. and Description of Boilers

ONE SINGLE END CYLINDRICAL MULTITUBULAR

Working Pressure 220 lb

Tested by hydraulic pressure to 380 lb

Date of test 30. 1. 46

No. of Certificate 4261

Can each boiler be worked separately

Area of Firegrate in each Boiler

67.5 FT²

No. and Description of safety valves to each boiler

3 1/4 D.S. ORDS

1 donkey 3 1/4 dia

Area of each set of valves per boiler

per Rule 16.25

12.5 L.R. Rules for ordinary

Double

Pressure to which they are adjusted 225 lb

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

12"

Is oil fuel carried in the double bottom under boilers NONE

Smallest distance between shell of boiler and tank top plating

NONE

Is the bottom of the boiler insulated NO

Largest internal dia. of boilers

15' 6"

Length 11' 0 1/32"

Shell plates: Material STL

Tensile strength 30-34 TON IN²

Thickness

1 29/64"

Are the shell plates welded or flanged NO

Description of riveting: circ. seams

end D.R. LAP

long. seams

T.R. D.B.S.

Diameter of rivet holes in

circ. seams 1 1/2"

long. seams 1 1/2"

Pitch of rivets

4 3/8"

10"

Percentage of strength of circ. end seams

plate 65.7

rivets 42.6

Percentage of strength of circ. intermediate seam

plate 85

rivets 87.3

Percentage of strength of longitudinal joint

plate 85

rivets 87.3

Thickness of butt straps

outer 1 3/32"

inner 1 7/32"

No. and Description of Furnaces in each Boiler

THREE DEIGHTON TYPE CORRUGATION

Material

STL

Tensile strength

26-30 TON IN²

Smallest outside diameter

3'-8 3/32"

3'-11 1/32"

Length of plain part

top

bottom

Thickness of plates

crown 47/64"

bottom 47/64"

Description of longitudinal joint

WELDED

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

NONE

End plates in steam space: Material

STL

Tensile strength 26-30 TON IN²

Thickness

1 1/4"

Pitch of stays 18" x 14 1/2"

How are stays secured

DOUBLE NUTS & WASHERS

Tube plates: Material

front STL

back "

Tensile strength

26-30 TONS IN²

Thickness

31/32"

7/8"

Mean pitch of stay tubes in nests

9 1/2" x 9 1/2"

Pitch across wide water spaces

14 1/4"

Girders to combustion chamber tops: Material

STL

Tensile strength

29-33 TONS IN²

Depth and thickness of girder

at centre 10", Two 7/8"

Length as per Rule

2'-9"

Distance apart 11" centre

No. and pitch of stays

in each 3 AT 8" CENTRES.

Combustion chamber plates: Material

STL

Tensile strength

26-30 TONS IN²

Thickness: Sides

3/4"

Back

1/16"

Top

11/16"

13/16"

Bottom

7/8"

Pitch of stays to ditto: Sides

9 x 8 1/2"

Back

9 1/4 x 8"

Top

9 x 8"

Are stays fitted with nuts or riveted over

NUTS

Front plate at bottom: Material

STL

Tensile strength

26-30 TONS IN²

Thickness

31/32"

Lower back plate: Material

STL

Tensile strength

26-30 TONS IN²

Thickness

7/8"

Pitch of stays at wide water space

14 1/4" x 8 1/2"

Are stays fitted with nuts or riveted over

NUTS

Main stays: Material

STL

Tensile strength

26-30 TONS IN²

Diameter

At body of stay,

or Over threads

3" x 3 1/4"

No. of threads per inch

6

Screw stays: Material

STL

Tensile strength

26-30 TONS IN²

Diameter

At turned off part,

or Over threads

1 3/4"

No. of threads per inch

9

BORRELLA

Are the stays drilled at the outer ends ☒ No ☐ Yes Margin stays: Diameter { At turned off part, ☒ 1 1/8" or ☒ 2" Over threads ☐ 1 1/8" & 2" ☐ 2"

No. of threads per inch 9 ☒

Tubes: Material STEEL External diameter { Plain } 3 1/2" Stay } Thickness { 7 W.G. } 5/16" No. of threads per inch 9

Pitch of tubes 4 3/4" x 4 3/4" Manhole compensation: Size of opening in shell plate 16" x 12" Section of compensating ring 4' 11 1/4" dia x 1 1/4" tk. No. of rivets and diameter of rivet holes 108 - 1 1/2"

Outer row rivet pitch at ends 4' 6 3/4" RCD Depth of flange if manhole flanged Top 3 1/4" Bot - 3 3/8" Steam Dome: Material STEEL

Tensile strength 26-30 TONS IN² Thickness of shell 3/4" Description of longitudinal joint S. R. LAP

Diameter of rivet holes 1 1/32" Pitch of rivets 2 1/4" Percentage of strength of joint { Plate 54 Rivets 43.8

Internal diameter 2' 9" Thickness of crown 1 5/16" No. and diameter of stays Two 2 3/8"

Inner radius of crown FLAT

How connected to shell DOUBLE ROW RIVETS Size of doubling plate under dome 4' 11 1/4" dia x 1 1/4" tk. Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell 1 1/2" (4) 3 1/8" Same manhole Rpt.

Type of Superheater ME-LE. SCO R.B. Manufacturers of { Tubes Steel forgings Steel castings

Number of elements 60 Material of tubes Solid cold drawn M.S. Internal diameter and thickness of tubes

Material of headers forged steel Tensile strength Thickness 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

Area of each safety valve 2" dia. Are the safety valves fitted with easing gear YES

Pressure to which the safety valves are adjusted 225 lb. Hydraulic test pressure: tubes 660 lb. forgings and castings 660 lb. and after assembly in place 660 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

Total Superheater H.S. 875 #

For AMOS & SMITH LTD.
The foregoing is a correct description,
W. E. Brown Manufacturer.

Dates of Survey { During progress of work in shops - - 1945. Sept. 21, Oct 5.15-21, Nov. 21, Dec. 4, 15, 1946. Jan. 3, 9, 21, 25, Feb. 4, 12. while building { During erection on board vessel - - - } See machinery report

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) 1.6.45

Total No. of visits 24

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 and installed under special survey in accordance with the Secretary's letter, the approved plans and the Rules. The workmanship and materials are good. Boiler tested by 380 lb hydraulic pressure, safety valves adjusted and accumulation test held, trials under working conditions and found satisfactory on completion of all tests.

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

W. E. Shields
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 14 JUN 1946

Assigned See F.E. machy. rpt.



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