

Rpt. 5a.

REPORT ON BOILERS.

No. 53310.

Received at London Office

75 FEB 1946

5 FEB 1946

Date of writing Report

19

When handed in at Local Office

19

Port of

Hull

No. in
Reg. Book.

Survey held at

Hull

Date, First Survey

26. 7. 45

Last Survey

4. 1. 1946

1946

on the

Steam Trawler "NAYENA"

(Number of Visits

23)

Gross

361

Tons

Net

139

Built at

Beverley

By whom built

Cook, Welton & Gemmell, Ltd.

Yard No. 757

When built 1946

Engines made at

Hull

By whom made

Chas. D. Holmes & Co. Ltd.

Engine No. 1415

When made 1946

Boilers made at

Hull

By whom made

Chas. D. Holmes & Co. Ltd.

Boiler No. 1415

When made 1946

Nominal Horse Power

Owners

J. Mann Sons Ltd.

Port belonging to

Hutwood

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Appley Fordingham Steel Co. Ltd.

(Letter for Record

S

Total Heating Surface of Boilers

1410 sq

Is forced draught fitted

No

Coal or Oil fired

Coal

No. and Description of Boilers

One single end multitubular cylindrical boiler Working Pressure 210 lbs.

Tested by hydraulic pressure to

365 lb.

Date of test

19. 11. 45

No. of Certificate

4254

Can each boiler be worked separately

✓

Area of Firegrate in each Boiler

52 sq

No. and Description of safety valves to each boiler

One 2 1/2" D.S. ordinary

Area of each set of valves per boiler

per Rule

9.5

Pressure to which they are adjusted

216 lbs

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

16"

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

14' - 3 1/2"

Length

10' - 8"

Shell plates: Material

Steel

Tensile strength

31/35

Thickness

1 1/4"

Are the shell plates welded or flanged

No.

Description of riveting: circ. seams

DR LAP

long. seams

T.R. D.S.S.

Diameter of rivet holes in

circ. seams

1 5/16"

long. seams

1 1/32"

Pitch of rivets

3 3/4"

9 1/8"

Percentage of strength of circ. end seams

plate

65.3

rivets

45.2

Percentage of strength of circ. intermediate seam

plate

85.1

rivets

85.8

Percentage of strength of longitudinal joint

plate

85.1

rivets

85.8

combined

87.66

Thickness of butt straps

outer 3 1/32"

inner 1 3/32"

No. and Description of Furnaces in each Boiler

Three Deighton Corrugation

Material

Steel

Tensile strength

26/30

Smallest outside diameter

3' - 5 3/4"

Length of plain part

top

bottom

Thickness of plates

crown

5/8"

bottom

5/8"

Description of longitudinal joint

Welded.

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

None

End plates in steam space: Material

Steel

Tensile strength

26/30

Thickness

1 3/16"

Pitch of stays

1' - 7" x 1-6 1/2"

How are stays secured

Double nuts and washers.

Tube plates: Material

front

Steel

back

Tensile strength

26/30

Thickness

1 5/16"

7/8"

Mean pitch of stay tubes in nests

9 3/4" x 9 3/4"

Pitch across wide water spaces

14"

Girders to combustion chamber tops: Material

Steel

Tensile strength

29/32"

Depth and thickness of girder

at centre

10" Two 1/8"

Length as per Rule

2' - 8 29/32"

Distance apart

10 1/2"

No. and pitch of stays

in each

Three 8"

Combustion chamber plates: Material

Steel

Tensile strength

26/30

Thickness: Sides

2 3/32"

Back

2 3/32"

Top

2 3/32"

Bottom

2 5/32"

Pitch of stays to ditto:

Sides

9 3/4" x 8 1/2"

Back

9 1/8" x 8 3/4"

Top

10 1/2" x 8"

Are stays fitted with nuts or riveted over

Nuts

Front plate at bottom: Material

Steel

Tensile strength

26/30

Thickness

1 5/16"

Lower back plate: Material

Steel

Tensile strength

26/30

Thickness

1 1/2"

Pitch of stays at wide water space

1 1/4" x 9 5/8"

Are stays fitted with nuts or riveted over

Nuts

Main stays: Material

Steel

Tensile strength

28/32"

Diameter

At body of stay

3 3/8"

Over threads

"

No. of threads per inch

8

Screw stays: Material

Steel

Tensile strength

26/30

Diameter

At turned off part

1 3/4"

Over threads

"

No. of threads per inch

10



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NAVENA

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

No. of threads per inch 10

Tubes: Material Seamless steel External diameter { Plain 3 1/2"
Stay 3 1/2" Thickness { 8 WG
7/16", 3/8", 5/16" No. of threads per inch 9

Pitch of tubes 4 7/8" x 4 7/8" Manhole compensation: Size of opening in shell plate 16" x 12" Section of compensating ring 2'-11 5/8" x 1 1/4" No. of rivets and diameter of rivet holes 61 - 1 1/32"

Outer row rivet pitch at ends 10 5/16" Depth of flange if manhole flanged Bot 3 3/8", Top 3 1/4" Steam Dome: Material Steel

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

Diameter of rivet holes 1 1/32" Pitch of rivets 2 1/4" Percentage of strength of joint { Plate 54 %
Rivets 42.8 %

Internal diameter 2'-9" Thickness of crown 7/8" No. and diameter of stays 2-2 1/4" Inner radius of crown FLAT.

How connected to shell 2A Size of doubling plate under dome 4'-9 1/2" dia x 1 1/4" Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell 1 1/32" 3 3/4" pitch

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

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,

FOR CHARLES D. HOLMES & CO., LTD.

W.R. Evans

Manufacturer.

Manager

Dates of Survey { During progress of 1945 JUL 26 to DEC 6
work in shops -- }
while building { During erection on See report
board vessel -- }

Are the approved plans of boiler and superheater forwarded herewith 24.4.45.
(If not state date of approval.)

Total No. of visits 23

Is this Boiler a duplicate of a previous case yes If so, state Vessel's name and Report No. ABY

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 Society's Rules & Regulations and the Secretary's letters.

The workmanship and materials are good

Boiler tested by 365 lb hydraulic pressure, examined under steam, safety valves adjusted as overleaf, accumulation test held and boiler found satisfactory on completion of all tests.

Survey Fee ... £ : : When applied for, 19

Travelling Expenses (if any) £ : : When received, 19

W.S. Shields

Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 15 FEB 1946

Committee's Minute

Assigned

See F.E. machy rpt.



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