

REPORT ON BOILERS.

No. 14895



Received at London Office 2 DEC 1949

Boiler Report

10

When handed in at Local Office

30/11/49

Port of

Beefest

To. in Survey held at

Beefest

Date, First Survey June 20th 1949 Last Survey 3rd Nov. 1949

(Number of Visits 24)

Gross 8655

on the

H. I. British Commander

Tons

Net

ster

Built at

Govan, Glasgow

By whom built

Harland & Wolff Ltd.

Yard No. 13989

When built 1950

gines made at

Glasgow

By whom made

Harland & Wolff Ltd.

Engine No. 13989

When made 1950

ilers made at

Beefest

By whom made

Harland & Wolff Ltd.

Boiler No. 13986

When made

iminal Horse Power

Owners

Port belonging to

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Colvilles

(Letter for Record S.)

Total Heating Surface of Boilers 2047 x 2

Is forced draught fitted Yes

Coal or Oil fired Oil & k. faser.

No. and Description of Boilers 2 Cylindrical smoke tube type

Working Pressure 150 lb

Tested by hydraulic pressure to 275 lb. Date of test 2. 11. 49. No. of Certificate 1435.

Can each boiler be worked separately Yes

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler 2 2 1/4 dia improved high lift double safety valve.

Area of each set of valves per boiler

per Rule 17.75

Pressure to which they are adjusted 150 lb

Are they fitted with easing gear Yes

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

None

Smallest distance between boilers or uptakes and bunkers or woodwork

Is oil fuel carried in the double bottom under boilers

Smallest distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated

Largest internal dia. of boilers 12' - 10 3/8"

Length 11' - 6"

Shell plates: Material Steel

Tensile strength 29.33 tons

Thickness

29/32"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end inter.

Long. seams T.R.D.B.S.

Diameter of rivet holes in

circ. seams 1 3/32"

long. seams 1 1/32"

Pitch of rivets

3.08"

Percentage of strength of circ. end seams

plate 64.5.

rivets 53.0.

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate 84.3.

rivets 104.

Working pressure of shell by Rules 155 lb

Thickness of butt straps

outer 23/32"

inner 27/32"

No. and Description of Furnaces in each Boiler 2 Seaflon.

Material

Steel

Tensile strength 26-30 tons

Smallest outside diameter 3'-8"

Length of plain part

top

bottom

Thickness of plates

crown 1/2"

bottom 1/2"

Description of longitudinal joint

Forge Weld

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

Working pressure of furnace by Rules

163 lb

End plates in steam space: Material

Steel

Tensile strength

26-30 tons

Thickness

5/16"

Pitch of stays 16" x 15"

How are stays secured

Nuts in & out.

Working pressure by Rules

As approved.

End plates: Material

front Steel

back Steel

Tensile strength

26-30 tons

Thickness

3/4" As approved.

Lean pitch of stay tubes in nests

8 5/16"

Pitch across wide water spaces

15 1/4"

Working pressure

front As approved.

back

Orders to combustion chamber tops: Material

Steel

Tensile strength

28-32 tons

Depth and thickness of girder

Centre 9 1/2" x 1 1/32"

Length as per Rule

32 1/2"

Distance apart

9 3/8"

No. and pitch of stays

each Welded.

Working pressure by Rules

As approved

Combustion chamber plates: Material

Steel

Tensile strength

26-30 tons

Thickness: Sides

3/4"

Back

3/4"

Top

3/4"

Bottom

3/4"

Pitch of stays to ditto: Sides

8 1/2" x 8 1/2" x 9"

Back

8 1/4" x 9 1/2"

Top

9"

Are stays fitted with nuts or riveted over At shell others Welded.

Working pressure by Rules

As approved

Front plate at bottom: Material

Steel

Tensile strength

26-30 tons

Thickness

7/8"

Lower back plate: Material

Steel

Tensile strength

26-30 tons

Thickness

5/16"

Pitch of stays at wide water space

16 1/4" x 9 1/2"

Are stays fitted with nuts or riveted over

Welded.

Working Pressure As approved.

Main stays: Material

Steel

Tensile strength

28-32 tons

Diameter

At body of stay,

2 3/4"

No. of threads per inch

6

Area supported by each stay Various.

Over threads.

Working pressure by Rules

As approved.

Screw stays: Material

Steel

Tensile strength

26-30 tons

Diameter

At turned off part,

1 1/2"

No. of threads per inch

9

Area supported by each stay 9 1/2" x 8 1/4"

Over threads.

Welded at shell only.

Welded in Combustion Chamber.

Working pressure by Rules *As approved* the stays drilled at the outer ends ✓ Margin stays: Diameter { At turned off part, $1\frac{3}{4} \times 2$ " or Over threads
No. of threads per inch *Welded*. ✓ Area supported by each stay Working pressure by Rules
Tubes: Material *H.D.S.* External diameter { Plain $2\frac{1}{2}$ " ✓ Stay $2\frac{1}{2}$ " ✓ Thickness { 10 L.S.G. ✓ $1\frac{1}{4}$ " $5\frac{1}{8}$ " $1\frac{1}{32}$ " No. of threads per inch *9*. ✓
Pitch of tubes $3\frac{3}{4} \times 3\frac{5}{8}$ " ✓ Working pressure by Rules *As approved*. Manhole compensation: Size of opening in shell plate $13\frac{3}{4}$ " ✓ Section of compensating ring $2'-8" \times 2'-4" \times \frac{3}{8}"$ No. of rivets and diameter of rivet holes *Welded to shell*
Outer row rivet pitch at ends Depth of flange if manhole flanged Steam Dome: Material
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
How connected to shell Inner radius of crown Working pressure by Rules
Size of doubling plate under dome Diameter of rivet holes and 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

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

Rules

Pressure to which the safety valves are adjusted

Hydraulic test pressure

tubes

forgings and castings

and after assembly in place

Are drain cocks

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*.

For HARRIS AND WOLFE, LIMITED
The foregoing is a correct description,
Secretary

Dates of Survey { During progress of work in shops - - - June. 20. 23. 28. 30. July 6. 18. 19. 25. 28. Aug. 1. 10. 22. 25. Sept. 2. 9. 19. 20. 22. 23. Oct. 3. 13. 18. 28. Nov. 3.
while building { During erection on board vessel - - -

Are the approved plans of boiler and superheater forwarded herewith *No*.
(If not state date of approval.) *Approval letter 26. 11. 48. Plans retained for Disposal*

Total No. of visits *24*

Is this Boiler a duplicate of a previous case *Yes*. If so, state Vessel's name and Report No. *13973. R/H No 14795.*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

These boilers have been built under special survey in accordance with the Rules and approved plan.

*The materials and workmanship are good.
The boilers have been dispatched to Glasgow for installation in the vessel.*

These boilers have been efficiently installed in the vessel, been under steam, safety valves adjusted to 150 lbf/sq. in. and accumulation tests as per Rules carried out satisfactorily.

R. C. C. Jenkins
Glasgow

February 1950.

Survey Fee ... £ 59 : 2 : - } When applied for, *30/11/49*
Travelling Expenses (if any) £ : : } When received, *19*

R. C. C. Jenkins

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute *GLASGOW - 8 MAR 1950*

Assigned *SEE ACCOMPANYING MACHINERY REPORT.*



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