

REPORT ON BOILERS.

No. 50837.

15.

14.

Date of writing Report 16-8-1940 When handed in at Local Office

2 SEP 1940

Port of

Received at London Office

HULL

No. in Survey held at
Reg. Book.

Hull

Date, First Survey

15-11-39.

Last Survey

12-8-1940.

(Number of Visits 39.)

Gross 580
Net 210

on the Steam Trawler

VIZALMA.

Master

✓

Built at

Derby.

By whom built

Cook, Weldon & Grummett

Yard No. 656

When built 1940-8.

Engines made at

Hull

By whom made

C. D. Holmes & Co.

Engine No. 1558 When made do.

Boilers made at

do

By whom made

do

Boiler No. do When made do.

Nominal Horse Power

165.

Owners

Atlas Steam Towing Co. Ltd.

Port belonging to

Grimsby.

6-2

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Appleby, Frodingham Steel Co., Ltd. Colvilles, Ltd.

(Letter for Record S)

Total Heating Surface of Boilers

2551 sq. ft.

Is forced draught fitted

Yes.

Coal fired Coal.

No. and Description of Boilers

One S.B. (Spt).

Working Pressure 225 lbs/sq. in.

Tested by hydraulic pressure to 338 lbs/sq. in. Date of test 4-3-40 No. of Certificate 4025. Can each boiler be worked separately ✓

Area of Firegrate in each Boiler 64 sq. ft. No. and Description of safety valves to each boiler One - Twin valve, Spring loaded ✓

Area of each set of valves per boiler { per Rule 16.1 sq. in. as fitted 19.25 sq. in. Pressure to which they are adjusted 225 lbs/sq. in. 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 No.

Smallest distance between shell of boiler and tank top plating ✓

Is the bottom of the boiler insulated No.

Largest internal dia. of boilers 15' 9 1/16" Length 11' 0"

Shell plates: Material Steel.

Tensile strength 31-35 tons/sq. in.

Thickness 1 15/32" Are the shell plates welded or flanged No.

Description of riveting: circ. seams { end D.R. lap inter. 3 7/8" ✓

long. seams T.R. - D.B.S. Diameter of rivet holes in { circ. seams 1 15/32" long. seams 1 1/2" Pitch of rivets { 9 9/16" ✓

Percentage of strength of circ. end seams { plate 62.1% rivets 44.2% ✓

Percentage of strength of circ. intermediate seam { plate 84.3% rivets 86.9% ✓

Percentage of strength of longitudinal joint { plate 84.3% rivets 86.9% combined 86% ✓

Working pressure of shell by Rules ✓

Thickness of butt straps { outer 1 5/32" inner 1 9/32" No. and Description of Furnaces in each Boiler 3 cf. Dighton Section.

Smallest outside diameter 3' 10"

Material Steel

Tensile strength 26/30 tons/sq. in.

Length of plain part { top 1 1/2" bottom 1 1/2" Thickness of plates { crown 2 3/32" bottom 2 3/32" ✓

Description of longitudinal joint welded ✓

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

Working pressure of furnace by Rules ✓

End plates in steam space: Material Steel

Tensile strength 26/30 tons/sq. in.

Thickness 1 1/4" Pitch of stays 18 5/8" x 19 1/4" ✓

How are stays secured Double nut & washers

Working pressure by Rules ✓

Tube plates: Material { front Steel back Steel

Tensile strength { 26/30 tons/sq. in. do ✓

Thickness { 3 1/32" 29/32" ✓

Mean pitch of stay tubes in nests 10 15/16" Pitch across wide water spaces 14 1/4" Working pressure { front do back do ✓

Girders to combustion chamber tops: Material Steel

Tensile strength 29/33 tons/sq. in.

Depth and thickness of girder

at centre 9" x 7 1/8" x 2.

Length as per Rule 2' 8 1/4" Distance apart 9 1/4" No. and pitch of stays

in each 3 - 7 1/2" Working pressure by Rules ✓

Combustion chamber plates: Material Steel

Tensile strength 26/30 tons/sq. in. Thickness: Sides 2 3/32" Back 2 3/32" Top 1 1/16" Bottom 1 5/16" ✓

Pitch of stays to ditto: Sides 8" x 9 3/4" Back 8 1/4" x 9 1/2" Top 9 1/4" x 7 1/2" Are stays fitted with nuts or riveted over Yes.

Working pressure by Rules ✓

Front plate at bottom: Material Steel

Tensile strength 26/30 tons/sq. in.

Thickness 3 1/32" Lower back plate: Material Steel

Tensile strength 26/30 tons/sq. in. Thickness 29/32" ✓

Pitch of stays at wide water space 14 1/2" x 9 1/2" x 9 3/16" Are stays fitted with nuts or riveted over Yes.

Working Pressure ✓

Main stays: Material Steel

Tensile strength 28/32 tons/sq. in.

Diameter { At body of stay, 3 7/8" or Over threads 3 7/8" No. of threads per inch 8.

Area supported by each stay 19 1/4" x 19 1/8" + 18 5/8" 2.

Working pressure by Rules ✓

Screw stays: Material Steel

Tensile strength 26/30 tons/sq. in.

Diameter { At turned off part, 1 3/4" or Over threads 1 3/4" No. of threads per inch 10

Area supported by each stay 8 x 9 3/4"

Working pressure by Rules ☒ Are the stays drilled at the outer ends ☒ Margin stays: Diameter { At turned off part, or Over threads $1\frac{1}{8} \times 2 \times 2\frac{1}{8}$ "

No. of threads per inch 10. Area supported by each stay $9\frac{1}{2} \times 14\frac{1}{2} + 8\frac{1}{4}$ " Working pressure by Rules ☒

Tubes: Material 4W Iron External diameter { Plain $3\frac{1}{2}$ " Stay $3\frac{1}{2}$ " Thickness { $5\frac{1}{16}$, $3\frac{1}{8}$, $7\frac{1}{16}$ No. of threads per inch 9.

Pitch of tubes $4\frac{3}{4} \times 4\frac{3}{4}$ Working pressure by Rules ☒ Manhole compensation: Size of opening in shell plate $16" \times 12"$ Section of compensating ring $4'-1" \times 1\frac{15}{32}"$ No. of rivets and diameter of rivet holes $57 - 1\frac{1}{2}"$ dia

Outer row rivet pitch at ends $10\frac{1}{4}"$ Depth of flange if manhole flanged Top $3\frac{1}{4}"$ Bottom $3\frac{1}{2}"$ Steam Dome: Material Steel

Tensile strength $26/30$ tons/sq. in. Thickness of shell $3\frac{1}{4}"$ Description of longitudinal joint S.R. lap.

Diameter of rivet holes $1\frac{1}{32}"$ Pitch of rivets $2\frac{1}{4}"$ Percentage of strength of joint { Plate 54% Rivets 43.8%

Internal diameter $2'-9"$ Working pressure by Rules ☒ Thickness of crown $1\frac{5}{16}"$ No. and diameter of stays $2 - 2\frac{3}{8}"$ dia Inner radius of crown Flat. Working pressure by Rules ☒

How connected to shell Riveted. Size of doubling plate under dome $4'-11\frac{1}{4}"$ dia $\times 1\frac{15}{32}"$ Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell $1\frac{1}{2}"$ dia $10\frac{1}{4}"$ pitch.

Type of Superheater Smoke tube type Manufacturers of { Tubes Steel forgings } See Man Rpt. { Steel castings }

Number of elements 60 Material of tubes Steel Internal diameter and thickness of tubes $17\frac{1}{2}"$ bore $3\frac{1}{2}"$ thick

Material of headers Steel Tensile strength Man Rpt. Thickness $5\frac{1}{8}"$ 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 1.77 sq. ft. Are the safety valves fitted with easing gear Yes. Working pressure as per Rules Man Rpt. Pressure to which the safety valves are adjusted 250 lbs/sq. in. Hydraulic test pressure: tubes Man Rpt. forgings and castings Man Rpt. and after assembly in place 675 lbs/sq. in. 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.

The foregoing is a correct description,
FOR CHARLES B. HOLLAND & CO. LTD.
W. R. Evans Manufacturer.

Dates of Survey { During progress of work in shops - - } 1939. Nov. 15, 24. Dec. 7, 9, 21. 1940. Jan. 5, 7, 12, 18, 26, 31.
while building { During erection on board vessel - - } Feb. 5, 7, 9, 12, 15, 20, 29. Mar. 4, 7, 8. Apr. 3, 9, 18, 22, 25. May 9, 24, 30. June 4, 5, 14, 21. July 11, 26. Aug. 2, 12.
Total No. of visits 39.

Is this Boiler a duplicate of a previous case Yes. If so, state Vessel's name and Report No. ST APOLLO Hull Rpt No 50776. EADY LILIAN " " 50402

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
This boiler has been built under Special Survey in accordance with the approved plans & the Rules. The workmanship & Materials are good & when tested by hydraulic pressure as prescribed it was found tight & satisfactory in every respect.

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

W. R. Evans & W. R. Evans
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned See minute on 1st E. machy opt



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Foundation