

REPORT ON BOILERS.

No. 53267.

22 JAN 1946

Received at London Office

Date of writing Report 19 When handed in at Local Office 19 Port of Hull

No. in Survey held at Hull Date, First Survey 13. 4. 45 Last Survey 1. 1. 1946

Reg. Book. on the Steam Trawler "BULBY" (Number of Visits 25.) Tons Gross 361 Net 139

Built at Beverley By whom built Books Winton & Gemmell L. Yard No. 756 When built 1946

Engines made at Hull By whom made Charles D Holmes Engine No. 1714 When made

Boilers made at Hull By whom made Charles D Holmes Boiler No. 1714 When made

Nominal Horse Power Owners Boston Deep Sea Fishing & Ice Co L Port belonging to Flitwood

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel apply Frodingham Steel Co. L. (Letter for Record S)

Total Heating Surface of Boilers 1710 Is forced draught fitted no Coal or Oil fired Coal

No. and Description of Boilers One single end multitubular cylindrical boiler Working Pressure 210 lb

Tested by hydraulic pressure to 365 lb Date of test 28/9/45 No. of Certificate 4253 Can each boiler be worked separately

Area of Firegrate in each Boiler 52 No. and Description of safety valves to each boiler One 2 1/2" D.S. Ordry

Area of each set of valves per boiler per Rule 9.5 as fitted 9.8 Pressure to which they are adjusted 216 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 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 end DR 31/35 inter. DR

long. seams TR - DBS 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 rivets

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 Dighton corrugated furnaces

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.e. 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 back Steel Tensile strength 26/30 Thickness 15/16" 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 29/33 Depth and thickness of girder

at centre 10" Two 7/8" 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

Tensile strength 26/30 Thickness: Sides 23/32 Back 23/32 Top 23/32 Bottom 25/32

Pitch of stays to ditto: Sides 9 3/4" x 8 1/2" Back 9 3/8" x 8 3/8" 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 15/16" Lower back plate: Material Steel Tensile strength 26/30 Thickness 7/8"

Pitch of stays at wide water space 14" 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, or Over threads 3 1/8" No. of threads per inch 8

Screw stays: Material Steel Tensile strength 26/30

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



BULOY

Are the stays drilled at the outer ends No Margin stays: Diameter $\left\{ \begin{array}{l} \text{At turned off part, } \checkmark \\ \text{or } \\ \text{Over threads } \end{array} \right. 2" \text{ \& } 2\frac{1}{8}"$

No. of threads per inch 10

Tubes: Material Seamless External diameter $\left\{ \begin{array}{l} \text{Plain } 3\frac{1}{2}" \\ \text{Stay } 3\frac{1}{2}" \end{array} \right. \checkmark$ Thickness $\left\{ \begin{array}{l} \frac{8}{16} \text{ WG } \checkmark \\ \frac{3}{8} \\ \frac{5}{16} \end{array} \right. \checkmark$ No. of threads per inch 9

Pitch of tubes 4 $\frac{7}{8}$ x 4 $\frac{1}{8}$ Manhole compensation: Size of opening in shell plate 16 x 12 Section of compensating ring 2'-11 $\frac{3}{8}$ " x 1 $\frac{1}{4}$ " No. of rivets and diameter of rivet holes 60 - 1 $\frac{1}{32}$ "

Outer row rivet pitch at ends 10 $\frac{5}{16}$ Depth of flange if manhole flanged Bot 3 $\frac{3}{8}$ top 3 $\frac{1}{4}$ Steam Dome: Material Steel

Tensile strength 26/30 Thickness of shell 3/4 Description of longitudinal joint SR

Diameter of rivet holes 1 $\frac{1}{32}$ Pitch of rivets 2 $\frac{1}{4}$ " Percentage of strength of joint $\left\{ \begin{array}{l} \text{Plate } 54 \\ \text{Rivets } 43.8 \end{array} \right. \checkmark$

Internal diameter 2'-9" Thickness of crown 7/8 No. and diameter of stays 2 - 2 $\frac{1}{4}$ " Inner radius of crown ✓

How connected to shell 2R Size of doubling plate under dome 4'-9 $\frac{1}{2}$ " DIA. x 1 $\frac{1}{4}$ " Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell 1 $\frac{1}{32}$ " 3 $\frac{3}{4}$ " pitch.

Type of Superheater NONE

Manufacturers of $\left\{ \begin{array}{l} \text{Tubes} \\ \text{Steel forgings} \\ \text{Steel castings} \end{array} \right.$

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,

W. R. Evans Manufacturer.

Dates of Survey $\left\{ \begin{array}{l} \text{During progress of work in shops - - } \text{July 13, 26, Aug. 17, 19, Sept. 5, 14,} \\ \text{while building } \left\{ \begin{array}{l} \text{During erection on board vessel - - - } \end{array} \right. \text{20, Oct. 5, 10, 22, 31, Nov. 9.} \end{array} \right.$ Are the approved plans of boiler and superheater forwarded herewith 24.4.45. (If not state date of approval.)

Total No. of visits 25

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 and afterwards primed with steam, safety valves adjusted to overleaf, accumulation test held, and found satisfactory on completion of all tests.

Survey Fee £ Sample : : } When applied for, 19

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

W. S. Shivers
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 15 FEB 1946

Assigned See F.E. Machy. rpt

