

# REPORT ON BOILERS.

No. 72160

15 OCT 1947

Received at London Office

Date of writing Report 11. 10 1947 When handed in at Local Office 13 10 1947 Port of GLASGOW.

No. in Reg. Book. Survey held at AYR Date, First Survey 5. 2. 47 Last Survey 11th Sept. 1947

6899 on the M.V. "PASS OF BRANDER" (Number of Visits 22) Gross Tons 1200 Net Tons 563

Master Built at LUBECK By whom built LUBECKER FLENDER WERKE A.G. Yard No. When built 1936

Engines made at LUBECK By whom made LUBECKER FLENDER WERKE A.G. Engine No. When made 1936

Boilers made at BECCLES By whom made ELLIOT & GARROOD LTD. Boiler No. - When made -

Nominal Horse Power Owners BULK OIL S.S. CO. LTD. Port belonging to

## MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel (Letter for Record S)

Total Heating Surface of Boilers 680 sq. ft. Is forced draught fitted No Coal or Oil fired oil

No. and Description of Boilers 1 single ended Working Pressure 180

Tested by hydraulic pressure to 220 lbs per sq. in. Date of test 5/5/47 No. of Certificate - Can each boiler be worked separately -

Area of Firegrate in each Boiler 24.7 No. and Description of safety valves to each boiler 2 at 2"

Area of each set of valves per boiler {per Rule 5.49 sq. in. as fitted 6.28 sq. in. Pressure to which they are adjusted 155 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 well clear Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating open floors Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 9.3 Length 9.3 Shell plates: Material steel Tensile strength -

Thickness 51/64" Are the shell plates welded or flanged flanged Description of riveting: circ. seams {end 31" inter. 31" long. seams treble Diameter of rivet holes in {circ. seams 1.1/32" long. seams 15/16" Pitch of rivets {6.11/64"

Percentage of strength of circ. end seams {plate rivets Percentage of strength of circ. intermediate seam {plate rivets

Percentage of strength of longitudinal joint {plate rivets combined Working pressure of shell by Rules approved 180

Thickness of butt straps {outer 3/4 inner 3/4 No. and Description of Furnaces in each Boiler two plain

Material steel Tensile strength Smallest outside diameter 2'-8"

Length of plain part {top 6'0" bottom 6'5" Thickness of plates {crown 21/32" bottom 21/32" Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom one 3 x 3 x 5/8" Working pressure of furnace by Rules -

End plates in steam space: Material steel Tensile strength - Thickness 25/32 Pitch of stays 18" x 10 1/2"

How are stays secured double nuts Working pressure by Rules -

Tube plates: Material {front steel back steel Tensile strength { Thickness {25/32" 11/16"

Mean pitch of stay tubes in nests 9" x 8 1/2" Pitch across wide water spaces 13 1/2" Working pressure {front back

Girders to combustion chamber tops: Material steel Tensile strength - Depth and thickness of girder

at centre 6 1/2" x 1 1/4" Length as per Rule - Distance apart 9" No. and pitch of stays

in each 2 at 7" Working pressure by Rules - Combustion chamber plates: Material steel

Tensile strength - Thickness: Sides 5/8" Back 19/32" Top 5/8" Bottom 5/8"

Pitch of stays to ditto: Sides 7" Back 8 5/8" x 8" Top 9" x 7" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules - Front plate at bottom: Material steel Tensile strength -

Thickness 25/32 Lower back plate: Material steel Tensile strength - Thickness 25/32"

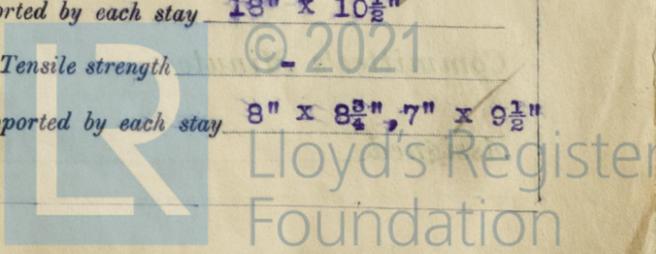
Pitch of stays at wide water space 13 1/2" x 8" Are stays fitted with nuts or riveted over nuts

Working Pressure - Main stays: Material steel Tensile strength -

Diameter {At body of stay, 2 1/4" eff. dia. No. of threads per inch 6 Area supported by each stay 18" x 10 1/2"

Working pressure by Rules - Screw stays: Material steel Tensile strength -

Diameter {At turned off part, 1 5/8" & 1 1/2" eff. dia. No. of threads per inch - Area supported by each stay 8" x 8 3/4", 7" x 9 1/2"



Working pressure by Rules - Are the stays drilled at the outer ends No Margin stays: Diameter  $1\frac{3}{4}$ "  
 No. of threads per inch - Area supported by each stay  $10.15/16$ " x  $8$ " Working pressure by Rules -  
 Tubes: Material steel External diameter  $3\frac{1}{4}$ " Thickness  $9$  wg. No. of threads per inch  $9$   
 Pitch of tubes  $4\frac{1}{2}$ " x  $4\frac{1}{2}$ " Working pressure by Rules - Manhole compensation: Size of opening in  
 shell plate  $12$ " x  $16$ " Section of compensating ring  $11$ " x  $3/4$ " No. of rivets and diameter of rivet holes  $13/16$ "  
 Outer row rivet pitch at ends  $6.11/64$ " Depth of flange if manhole flanged No Steam Dome: Material steel  
 Tensile strength - Thickness of shell  $1/2$ " Description of longitudinal joint Single riveted  
 Diameter of rivet holes  $13/16$ " Pitch of rivets  $2\frac{1}{8}$ " Percentage of strength of joint Plate -  
 Internal diameter  $2'-0$ " Working pressure by Rules approved Thickness of crown  $7/8$ " No. and diameter of  
 stays none Inner radius of crown  $3$ " Working pressure by Rules -  
 How connected to shell riveted Size of doubling plate under dome  $3'-1$ " dia. x  $3/4$ " Diameter of rivet holes and pitch  
 of rivets in outer row in dome connection to shell  $13/16$ " x  $6.11/64$ "

Type of Superheater 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 Working pressure as per  
 Rules Pressure to which the safety valves are adjusted Hydraulic test pressure:  
 tubes forgings and castings and after assembly in place Are drain cocks on  
 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

The foregoing is a correct description,  
 Manufacturer.

Dates of Survey { During progress of work in shops - - }  
 while building { During erection on board vessel - - }  
 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)  
 Total No. of visits

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

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

This boiler, which has been previously in service, has now been satisfactorily installed on board, examined internally and externally and the scantlings checked with the approved plan. It has been subjected to a hydraulic test pressure of 220 lbs per square inch and found sound and tight at that pressure. The safety valves were adjusted to 155 lbs per square inch at the request of the Owners representative and the boiler examined under steam.

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

J Crawford  
 Engineer/Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 14 OCT 1947

Assigned THE ACCOMPANYING MACHINERY REPORT

