

REPORT ON BOILERS.

No. 62180

Received at London Office

Date of writing Report 19 1. 4. 1940 When handed in at Local Office Port of GLASGOW

No. in Reg. Book Glasgow Survey held at Glasgow Date, First Survey 1939 May 30th Last Survey 27th March 1940

on the M/V "SUTLET" (Number of Visits 17) Tons {Gross 5188.91 Net }

Master Built at Glasgow By whom built Chas. Connell & Co. Yard No. 428 When built 1940

Engines made at Glasgow By whom made Baxley Curle & Co. Ld. Engine No. 123 When made 1940

Boilers made at -do- By whom made -do- Boiler No. 123 When made 1940

Nominal Horse Power Owners James Arncliffe Ld. Port belonging to London

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Grillies Ld. (Letter for Record S)

Total Heating Surface of Boilers 1183 sq ft Is forced draught fitted no Coal or Oil fired Oil fired & gas

No. and Description of Boilers One SE Oil fired & Exhaust Heat Working Pressure 120 lbs.

Tested by hydraulic pressure to 230 lbs. Date of test 6/10/39 No. of Certificate 20459 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler - No. and Description of safety valves to each boiler 1-2 1/4" Imp. High Lift Safety

Area of each set of valves per boiler {per Rule 10.950" as fitted 7.950"} Pressure to which they are adjusted 120 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 - Is oil fuel carried in the double bottom under boilers Yes

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

Largest internal dia. of boilers 9'-9" Length 10'-6" Shell plates: Material steel Tensile strength 29/32 tons

Thickness 9/16" Are the shell plates welded or flanged no Description of riveting: circ. seams {end D.R. inter. -}

long. seams D.B.S. T.R. Diameter of rivet holes in {circ. seams 13/16" long. seams 3/4"} Pitch of rivets {2.978" 5"}

Percentage of strength of circ. end seams {plate 72.71 rivets 49.05} Percentage of strength of circ. intermediate seam {plate - rivets -}

Percentage of strength of longitudinal joint {plate 85.0 rivets 98.05 combined 84.61} Working pressure of shell by Rules 123 lbs.

Thickness of butt straps {outer 9/16" inner 9/16"} No. and Description of Furnaces in each Boiler One Single

Material steel Tensile strength 26/30 tons Smallest outside diameter 37 1/4"

Length of plain part {top - bottom -} Thickness of plates {crown 3/8" bottom 3/8"} Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom - Working pressure of furnace by Rules 141 lbs.

End plates in steam space: Material steel Tensile strength 26/30 tons Thickness 25/32" Pitch of stays 16" x 14" max

How are stays secured Double nuts Working pressure by Rules 122 lbs.

Tube plates: Material {front steel back steel} Tensile strength {26/30 tons 26/30 tons} Thickness {25/32" 11/16"}

Mean pitch of stay tubes in nests 10.4395" Pitch across wide water spaces 13 7/8" Working pressure {front 165 lbs. back 153}

Girders to combustion chamber tops: Material steel Tensile strength 28/32 tons Depth and thickness of girder at centre 7 7/8" x 20 1/2" Length as per Rule 30 29/32" Distance apart 9 1/2" No. and pitch of stays in each 2 @ 10 1/2" Working pressure by Rules 124 lbs. Combustion chamber plates: Material steel

Tensile strength 26/30 tons Thickness: Sides 19/32" Back 19/32" Top 19/32" Bottom 19/32"

Pitch of stays to ditto: Sides 10 1/2" x 9 1/2" Back 9 1/2" x 10 1/2" Top 9 1/2" x 10 1/2" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 120 lbs. Front plate at bottom: Material steel Tensile strength 26/30 tons

Thickness 25/32" Lower back plate: Material steel Tensile strength 26/30 tons Thickness 25/32"

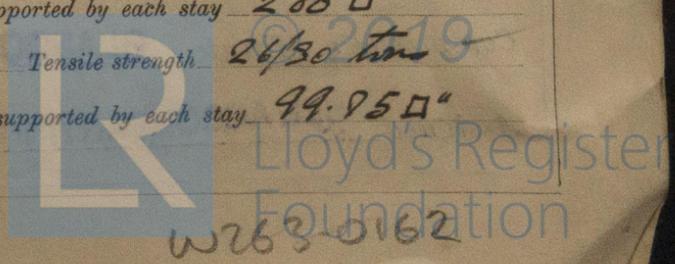
Pitch of stays at wide water space 13 7/8" Are stays fitted with nuts or riveted over nuts

Working Pressure 121 lbs. Main stays: Material steel Tensile strength 28/32 tons

Diameter {At body of stay, 2 7/8" or Over threads 2 7/8"} No. of threads per inch 6 Area supported by each stay 200 sq in

Working pressure by Rules 151 lbs. Screw stays: Material steel Tensile strength 28/30 tons

Diameter {At turned off part, 1 1/2" or Over threads 1 1/2"} No. of threads per inch 9 Area supported by each stay 99.950 sq in



Working pressure by Rules 125 lb. Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 1 7/8" or Over threads 1 7/8" }
 No. of threads per inch 9" Area supported by each stay 120 sq" Working pressure by Rules 120 lb.
 Tubes: Material steel External diameter { Plain 3" + 1/4" Stay 3" } Thickness { 10-11 W.G. } No. of threads per inch 9
 Pitch of tubes 4 1/8" x 4 1/4" + 2 7/8" x 2 3/4" Working pressure by Rules 140 lb. Manhole compensation: Size of opening in shell plate 20" x 16" Section of compensating ring 19" x 9/16" No. of rivets and diameter of rivet holes 44 @ 7/8"
 Outer row rivet pitch at ends 5 1/2" Depth of flange if manhole flanged 4" Steam Dome: Material none
 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
 Inner radius of crown Working pressure by Rules
 How connected to shell Size of doubling plate under dome Diameter of rivet holes and pitch 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 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 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
 The foregoing is a correct description, Alexander Macneill - Manufacturer.

Dates of Survey { During progress of work in shops -- 1939 May 30, June 8, 13, July 12, 31, Aug. 11, 16, 25, Sept. 6, 8, 15, 27 / Oct. 2, 6, Nov. 3, Dec. 5, 1940 Mar. 27 } while building { During erection on board vessel -- }
 Are the approved plans of boiler and superheater forwarded herewith Yes (If not state date of approval.)
 Total No. of visits 19

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. "INDUS" GLS. R.P. No 61982

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been built under special survey in accordance with the Rules and approved plans and the material and workmanship are good. The boiler has been satisfactorily installed in the vessel and the safety valves have been adjusted under steam to 120 lb/sq"

216
1/4/40

Survey Fee £ 6 : 4 : - } When applied for, 19
 Travelling Expenses (if any) £ : : } When received, 31/5/1940 R.S.F.
5/6

A. Brown
 Engineer, Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 2 APR 1940

Assigned SEE ACCOMPANYING MACHINERY REPORT

