

REPORT ON BOILERS.

Received at London Office AUG 13 1938

Date of writing Report 19 When handed in at Local Office 10/8/38 Port of NEWCASTLE-ON-TYNE

No. in Reg. Book Survey held at Newcastle on Tyne Date, First Survey 4 Nov 1937 Last Survey 3rd Aug 1938

on the Steel motor tanker "REGENT TIGER" (Number of Visits) Gross 10177 Tons Net 6184

Master Built at Newcastle By whom built Swan, Hunter & Wigham Richardson Ltd. Yard No. 1545 When built 1938

Engines made at Newcastle By whom made ditto Engine No. 1562 When made 1938

Boilers made at ditto By whom made ditto Boiler No. 1562 When made 1938

Nominal Horse Power 269. Owners Port belonging to LONDON.

MULTITUBULAR BOILERS ~~MAIN, AUXILIARY, OR~~ DONKEY.

Manufacturers of Steel Appellby-Frodingham, & The Steel Company of Scotland (Letter for Record S.)

Total Heating Surface of Boilers 4030 sq. ft. Is forced draught fitted Yes Coal or Oil fired oil fired

No. and Description of Boilers Two, Single Ended Multitubular Working Pressure 180 lbs.

Tested by hydraulic pressure to 320 lbs. Date of test 22/3/38 No. of Certificate 770. Can each boiler be worked separately Yes

Area of Firegrate in each Boiler oil fired No. and Description of safety valves to each boiler Two 2 1/2" Cookeburn's Improved High Lift.

Area of each set of valves per boiler {per Rule 6.45 sq. ins. as fitted 7.96. Pressure to which they are adjusted 180 lbs. Are they fitted with easing gear Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler no main boilers

Smallest distance between boilers or uptakes and bunkers or woodwork 2'-3" Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and deck tank top plating 35" Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 13'-4 1/16" Length 11'-0" mean Shell plates: Material Steel Tensile strength 29 to 33 tons

Thickness 1 1/16" Are the shell plates welded or flanged No Description of riveting: circ. seams end DR. lap. inter. none

long. seams T.R. Dbl butt straps Diameter of rivet holes in circ. seams 1 1/8" long. seams 1 1/8" Pitch of rivets 3.433 8"

Percentage of strength of circ. end seams {plate 67.27 rivets 43.16 Percentage of strength of circ. intermediate seam {plate none rivets none

Percentage of strength of longitudinal joint {plate 85.937 rivets 86.94 Working pressure of shell by Rules 180-19 lbs. combined 89.26

Thickness of butt straps {outer 13/16 inner 15/16 No. and Description of Furnaces in each Boiler Three Deighton Type

Material Steel Tensile strength 26 to 30 tons Smallest outside diameter 37 27/32"

Length of plain part {top 4'-2" bottom 2'-5" c.c. bot. Thickness of plates {crown 3/64 bottom 3/64 Description of longitudinal joint fire welded.

Dimensions of stiffening rings on furnace or c.c. bottom none Working pressure of furnace by Rules 183 lbs.

End plates in steam space: Material Steel Tensile strength 26 to 30 tons Thickness Front 1 3/32 Back 1 1/8" Pitch of stays 18 1/4" x 16 5/8"

How are stays secured double nuts Working pressure by Rules 182 lbs. Front 1" Back 1 1/8"

Tube plates: Material {front back Steel Tensile strength 26 to 30 tons Thickness Back. Centre 25/32 Wagon 13/16

Mean pitch of stay tubes in nests 10 5/8" Pitch across wide water spaces 14" x 8 1/2" Working pressure {front 186 lbs back 194 lbs.

Girders to combustion chamber tops: Material Steel Tensile strength 26 to 32 tons Depth and thickness of girder

at centre 8 1/2" x 1 1/4" Length as per Rule 31 1/32" Distance apart 8 1/2" max at Centre C.C. No. and pitch of stays

in each two @ 9 3/4" Working pressure by Rules 183 lbs. Combustion chamber plates: Material Steel

Tensile strength 26 to 30 tons Thickness: Sides 2 1/32" Back 7/8" Top 2 1/32" Bottom 2 1/32"

Pitch of stays to ditto: Sides 9 3/4" x 8 7/16" Back 8 3/4" x 8 1/2" Top 9 3/4" x 8 7/16" Are stays fitted with nuts or riveted over with nuts

Working pressure by Rules 182 lbs min. Front plate at bottom: Material Steel Tensile strength 26 to 30 tons

Thickness 1" Lower back plate: Material Steel Tensile strength 26 to 30 tons Thickness 2 7/32"

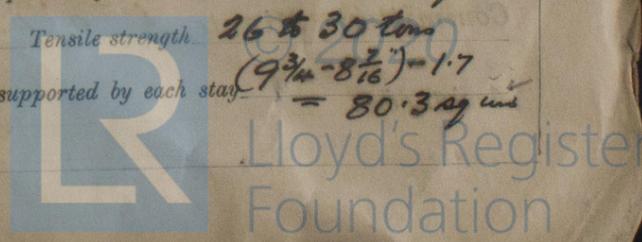
Pitch of stays at wide water space 14 3/4" x 8 3/4" max Are stays fitted with nuts or riveted over with nuts.

Working Pressure 195 lbs. Main stays: Material Steel Tensile strength 28 to 32 tons

Diameter {At body of stay, or Over threads 3" + 2 3/4" No. of threads per inch 6 Area supported by each stay (17 1/2" x 17 1/2") - 5 sq. ins = 302 sq. ins

Working pressure by Rules 183 lbs. Screw stays: Material Steel Tensile strength 26 to 30 tons

Diameter {At turned off part, or Over threads 1 7/8" No. of threads per inch 9 Area supported by each stay (9 3/4" - 8 7/16") - 1.7 = 80.3 sq. ins



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Working pressure by Rules **189 lb** Are the stays drilled at the outer ends **No** Margin stays: Diameter { At turned off part, or Over threads **1 5/8" + 1 3/4"**

No. of threads per inch **9** Area supported by each stay $\frac{7 \times 1 7/8 \times (8 \times 10 7/8) - 1.7 = 81.54 \text{ sq in}}$ Working pressure by Rules **186 lb + 186 lb**

Tubes: Material **W. IRON** External diameter { Plain } **3" o/d** Thickness { Stay } **5/16" + 1/4"** No. of threads per inch **9**

Pitch of tubes **4 1/4" x 4 1/4"** Working pressure by Rules **199 lb min** Manhole compensation: Size of opening in shell plate **20" x 16"** Section of compensating ring **22 1/4" x 1 1/8"** No. of rivets and diameter of rivet holes **32 of 1 3/8" dia.**

Outer row rivet pitch at ends **9 7/8"** Depth of flange if manhole flanged **3 1/2"** 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 **Yes**

FOR The foregoing is a correct description, **SWAN, HUNTER, & WIGHAM RICHARDSON, LTD.** Manufacturer. **M. J. J. J.**

Dates of Survey { During progress of work in shops - - } **See Machinery Rpt.** Are the approved plans of boiler and superheater forwarded herewith **ho. 14/6/38.** (If not state date of approval.)

while building { During erection on board vessel - - - } Total No. of visits

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

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

These Boilers have been constructed under special survey in accordance with the Rules and approved plans, and the materials and workmanship are good. They have been fitted in the main Engine Room on the Tween deck at its forward end. The safety valves have been adjusted under steam to 180 lbs per sq inch and the accumulation tests were satisfactory.

Survey Fee £ **See Machinery Rpt.** When applied for, 19

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

A. Watt.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **TUE. 23 AUG 1938**

Assigned **See F.C. Rpt.**

