

# REPORT ON BOILERS.

DONKEY

No. 95349.

Received at London Office

AUG 27 1937

of writing Report 16/8/37 19

When handed in at Local Office 16/8/37 19

Port of

NEWCASTLE-ON-TYNE

in Survey held at Newcastle on Tyne

Date, First Survey 18 Feb 37

Last Survey 13 Aug 1937

on the Steel Motor Tanker "YENANG YAUNG"

(Number of Visits)

Gross 5447

Net 3031

Built at Newcastle on Tyne By whom built Swan, Hunter &amp; Wigham Richardson Ltd Yard No. 1531 When built 1937

Boilers made at Sunderland By whom made Wm Daxford &amp; Sons Engine No. 198 When made 1937

Boilers made at Newcastle on Tyne By whom made Swan, Hunter &amp; Wigham Richardson Ltd Boiler No. 1538 When made 1937

Key Boiler Initial Horse Power  $\frac{2595}{15} = 173$  Owners Burma Oil Company Port belonging to RANGOON NEWCASTLE

WASTE EXH. GAS and/or OIL FIRED.

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

Manufacturers of Steel Steel Coy. of Scotland. &amp; Furnace Plates by Parkhead I. &amp; S. Co. Rotherham (Letter for Record 5. ✓)

Heating Surface of Boilers 2595 sq. ft. Is forced draught fitted Yes ✓ Coal or Oil fired Oil fired for WASTE EXH. GAS.

and Description of Boilers One Single Ended "Scotch" Multitubular. Working Pressure 150 lbs/sq. in. ✓

Tested by hydraulic pressure to 275 lbs. Date of test 18/5/37 No. of Certificate 716. Can each boiler be worked separately Yes ✓

No. of Firegrate in each Boiler Oil fired No. and Description of safety valves to each boiler Two of 2 3/4" Cockburn's Improved High-Lift Spring Loaded

No. of each set of valves per boiler {per Rule 9.85 ✓ as fitted 11.84. ✓ Pressure to which they are adjusted 150 lbs. Are they fitted with easing gear Yes ✓

Use 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'-6" Is oil fuel carried in the double bottom under boilers Yes ✓

Smallest distance between shell of boiler and tank top plating 2'-6" Is the bottom of the boiler insulated Yes ✓

Smallest internal dia. of boilers 13'-4 1/2" Length 11'-6" Shell plates: Material Steel Tensile strength 30/34 tons ✓

Thickness 7/8" Are the shell plates welded or flanged No ✓ Description of riveting: circ. seams {end DR Lap. ✓ inter. none. ✓

Seams T.R. Dble Butt straps Diameter of rivet holes in {circ. seams 1" ✓ long. seams 15/16" ✓ Pitch of rivets {3.24" ✓ 6.625" ✓

Percentage of strength of circ. end seams {plate 69.18 ✓ rivets 42.41 ✓ Percentage of strength of circ. intermediate seam {plate none. ✓ rivets none. ✓

Percentage of strength of longitudinal joint {plate 85.84 ✓ rivets 85.65 ✓ combined 88.80 ✓ Working pressure of shell by Rules 151 lbs ✓

Thickness of butt straps {outer 2 1/32" ✓ inner 25/32" ✓ No. and Description of Furnaces in each Boiler Two at Wings - Deighton corrugated. ✓ Plain tube at centre back for access. ✓

Material Steel Tensile strength 26/30 tons ✓ Smallest outside diameter 37 3/16" ✓

Length of plain part {top 2'-4" c.c. bot. ✓ Thickness of plates {crown 13/32" ✓ bottom 5/8 c.c. bot. ✓ Description of longitudinal joint Furnace, fire welded. ✓

Dimensions of stiffening rings on furnace or c.c. bottom None ✓ Working pressure of furnace by Rules 155 lbs. ✓

Stays in steam space: Material Steel Tensile strength 26/30 tons ✓ Thickness 1 1/32" ✓ Pitch of stays 18" x 18" ✓

Are stays secured Dble nuts &amp; washers. ✓ Working pressure by Rules 151.5 lbs. ✓

Stays in steam space: Material {front Steel. ✓ Tensile strength 26/30 tons ✓ Thickness {7/8" ✓ 5/8" ✓

Pitch of stay tubes in nests 9.375" Pitch across wide water spaces 13 1/2" x 7 3/8" Working pressure {front 159 lbs. ✓ back 156 lbs. ✓

Boilers to combustion chamber tops: Material Steel Tensile strength 28/32 tons ✓ Depth and thickness of girder 7 7/8" x 1 1/4" ✓

Centre Length as per Rule 30 21/32" Distance apart 8 3/4" (max. at centre) No. and pitch of stays Two at 9 3/8" ✓

Tensile strength 26/30 tons ✓ Thickness: Sides 5/8" ✓ Back 3/4" Wign 23/32" Top 5/8" ✓ Bottom 5/8" ✓

Pitch of stays to ditto: Sides 9 1/2" x 9 3/8" Back 9" x 9" c.c. c.g. Top 9 3/8" x 8 3/4" Are stays fitted with nuts or riveted over are riveted both ends. ✓

Working pressure by Rules 152 lbs. Front plate at bottom: Material Steel Tensile strength 26/30 tons ✓ Thickness 7/8" ✓

Lower back plate: Material Steel Tensile strength 26/30 tons ✓ Thickness 3/4" ✓

Pitch of stays at wide water space 13 1/2" x 9" Are stays fitted with nuts or riveted over nuts ✓

Working Pressure 172 lbs Main stays: Material Steel Tensile strength 28/32 tons ✓

Pitch of stays {Over threads Two top stays 2 3/4" ✓ No. of threads per inch 6 ✓ Area supported by each stay (18 x 18) - 4.57 sq. in. ✓

Working pressure by Rules 155 lbs Screw stays: Material Steel Tensile strength 26/30 tons ✓

Pitch of stays {Over threads 1 1/2" x 1 5/8" ✓ No. of threads per inch 9 ✓ Area supported by each stay (9 3/8 x 8 3/4) - 1.45 sq. in. c.c. tops ✓



Working pressure by Rules 155 lb Are the stays drilled at the outer ends No Margin stays: Diameter 1 7/8"  
 No. of threads per inch 9 Area supported by each stay (11 1/4" x 9") - 1.73 sq ft Working pressure by Rules 152 lb  
 Tubes: Material IRON External diameter 2 1/2" Thickness 10 WG. No. of threads per inch 9  
 Pitch of tubes 3 3/4" x 3 3/4" Working pressure by Rules 229 lb (min at sides) Manhole compensation: Size of opening  
 shell plate 20 x 16" Section of compensating ring 8 1/4 x 7/8 x 2 No. of rivets and diameter of rivet holes 32 g 1 1/4"  
 Outer row rivet pitch at ends 8 3/4" Depth of flange if manhole flanged 2 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 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 \_\_\_\_\_, 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,  
 CHAS. HUNTER & CO. LTD. Manufacturer

Dates of Survey {During progress of work in shops - - - } Please see Machinery Report. Are the approved plans of boiler and superheater forwarded herewith (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 Yes If so, state Vessel's name and Report No. British Dame Nov Rpt 94124 etc.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)  
The Boiler has been built under Special Survey in accordance with the Rules & approved plans, and the materials & workmanship are good  
The Boiler is installed on top of the O.F. double bottom tank in stokehold forward of Engine Room. and is fitted for burning oil fuel, and for waste exhaust gas from the main engine. The safety valves were adjusted under steam & stated overleapt, and the accumulation test was satisfactory

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

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

Committee's Minute FRI 3 SEP 1937  
 Assigned See Nov. Rpt. 95379