

Rpt. 5b.

REPORT ON BOILERS.

No. 13387

Received at London Office 3 AUG 1928

Date of writing Report 4.8.28 When handed in at Local Office 7.8.28 Port of MIDDLESBROUGH.

No. in Survey held at STOCKTON Date, First Survey 6.3.28 Last Survey 4-8-1928

on the boiler for Messrs Swan, Hunter & Wigham-Richardson, 74 1242, (Number of Visits 13) Gross 7983
Twin Screw Motor Vessel "Port Alma." Tons Net 4926

Built at Newcastle-on-Tyne By whom built Swan Hunter, Wigham & Richardson No. 1341 When built 1928

Engines made at Sunderland By whom made W. & A. D. & Co. Ltd. Engine No. 140 When made "

Boilers made at Stockton By whom made Riley Bros, Ltd. Boiler No. 5782 When made "

Owners Commercial Union & Dominion Line, Ltd. Port belonging to London.

VERTICAL DONKEY BOILER.

Made at Stockton By whom made Riley Bros. Boiler No. 5782. When made 1928. Where fixed Engine Room.

Manufacturers of Steel David Colville & Sons.

Total Heating Surface of Boiler 315 sq. Is forced draught fitted No Coal or Oil fired oil

No. and Description of Boilers One Vertical Riley Type. Working pressure 100 lbs.

Tested by hydraulic pressure to 200 lbs. Date of test 4-8-28 No. of Certificate 6660

Area of Firegrate in each Boiler — No. and Description of safety valves to each boiler 1 Pair Spring loaded.

Area of each set of valves per boiler { per rule 4.10 sq. as fitted 4.80 sq. Pressure to which they are adjusted 100 lbs. Are they fitted with easing gear Yes

State whether steam from main boilers can enter the donkey boiler — Smallest distance between boiler or uptake and bunkers

or woodwork — Is oil fuel carried in the double bottom under boiler No Smallest distance between base of boiler and tank top plating

Is the base of the boiler insulated No Largest internal dia. of boiler 5'-6" Height 12'-0"

Shell plates: Material Steel Tensile strength 28/32 Thickness 13/32 & 3/4"

Are the shell plates welded or flanged No Description of riveting: circ. seams { end S.R. inter S.R. long. seams Centre T.R. lap

Dia. of rivet holes in { circ. seams 15/16 Pitch of rivets 2 1/8 Percentage of strength of circ. seams { plate 55.9 rivets 66.7 of Longitudinal joint { plate 69.7 & 74.6 rivets 78.5 & 70. combined

Working pressure of shell by rules 112 lbs. Thickness of butt straps { outer inner

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat dished Material Steel

Tensile strength 26/30 Thickness 2 1/32 Radius 5'-0" Working pressure by rules 130 lbs.

Description of Furnace: Plain, spherical, or dished crown spherical Material Steel Tensile strength 26/30

Thickness 5/8 External diameter { top bottom Length as per rule Working pressure by rules

Pitch of support stays circumferentially and vertically Are stays fitted with nuts or riveted over

Diameter of stays over thread Radius of spherical dished furnace crown 26 5/2 Working pressure by rule 177 lbs.

Thickness of Ogee Ring 5/8 Diameter as per rule { D 5'-6" a 4'-11" Working pressure by rule 109 lbs.

Combustion Chamber: Material Steel Tensile strength 26/30 Thickness of top plate 5/8

Radius if dished Working pressure by rule 107 lbs. Thickness of back plate 19/32 Diameter if circular 2'-5 1/2" rad.

Length as per rule Pitch of stays 11" x 11" Are stays fitted with nuts or riveted over

Diameter of stays over thread 1 1/2 Working pressure of back plate by rules 100 lbs.

Tube Plates: Material { front Steel back Tensile strength { 28/32 26/30 Thickness { 3/4 19/32 Mean pitch of stay tubes in nests 9 7/8

comprising shell, Dia. as per rule { front back Pitch in outer vertical rows { 5 1/4 7 1/2 Dia. of tube holes FRONT { stay 2 3/4 plain 2 7/16 BACK { stay 2 1/2 plain 2 1/2

each alternate tube in outer vertical rows a stay tube 4 lbs. Working pressure by rules { front 108 lbs. back 133 lbs.

Access to combustion chamber tops: Material Steel Tensile strength 26/30

Depth and thickness of girder at centre 1/2 Gusset secured by 3 1/2 x 3 1/2 x 3/8 bar. Length as per rule

Distance apart No. and pitch of stays in each Working pressure by rule

Crown stays: Material ☒ Tensile strength ☒ Diameter { at body of stay, ☒ or over threads ☒
 No. of threads per inch ☒ Area supported by each stay ☒ Working pressure by rules ☒
 Screw stays: Material Steel Tensile strength 26/30 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 121 Working pressure by rules 103 lbs Are the stays drilled at the outer ends no
 Tubes: Material Iron External diameter { plain 2 1/2" to 2 3/4" stay 2 1/2" to 2 3/4" Thickness { 11 WG 9/16
 No. of threads per inch 9 Pitch of tubes 3 3/4 x 3 3/4 & 3 3/4 x 5 1/4 Working pressure by rules p. 125 lbs. s. 240 lbs.
 Manhole Compensation: Size of opening in shell 16" x 12" Section of compensating ring ☒ No. of rivets and diameter
 of rivet holes ☒ Outer row rivet pitch at ends ☒ Depth of flange if manhole flanged 3"
 Uptake: External diameter ☒ Thickness of uptake plate ☒
 Cross Tubes: No. ☒ External diameters { ☒ Thickness of plates ☒
 Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with Yls.

The foregoing is a correct description,
RILEY BROS. (BOILERMAKERS) LIMITED.

Manufacturer.

J. H. Shields SECRETARY,

Dates of Survey { During progress of work in shops - Mar 6-16 Apr 3-26 May 16-25 Jun 1-6 Is the approved plan of boiler forwarded herewith Yls.
 while building { During erection on board vessel - Jul 6-18 26-30 Aug 4 (If not state date of approval.)
 Total No. of visits 13

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

This boiler is a duplicate of Messrs Riley Bros No 5781 (Inst. Rpt No 13339).

The materials and workmanship are good. This boiler has been built under special survey in accordance with the Rules and Approved Plan.

The Boiler was forwarded to Newcastle-on-Tyne with all mountings complete. It has been securely fitted on board the vessel & its safety valves adjusted under steam to working pressure.

Survey Fee ... £ 44-4-0 When applied for, MONTHLY A/C.
 Travelling Expenses (if any) £ : : When received, 19

Committee's Minute

Assigned

FRI 14 DEC 1928

A. J. Maun. & S. Wood.

Engineer Surveyor to Lloyd's Register of Shipping.

Wm. A. Bignall
Newcastle-on-Tyne

Date of writing

No. in Sur
 Reg. Book.

Built at

Owners

Oil Engines

Generators

No. of Sets

OIL ENG

Maximum pres

Span of bearing

Revolutions per

Crank Shaft

Flywheel Sha

Is a governor o

Are the cylinde

Cooling Wat

Lubricating

Air Compres

Scavenging A

AIR REC

Can the interna

Is there a drain

High Pressur

Seamless, lap w

Starting Air

Seamless, lap w

ELECTRIC

Pressure of st

If alternating c

Has the Autot

Generators, a

are they over co

is an adjustable

are they so spac

PLANS. A

PARE G

The fo

FOR MESS

Lloyd's Register
 Foundation