

## REPORT ON BOILERS.

No. 472.

Received at London Office -4 FEB 1937

Date of writing Report 3-2-1937. When handed in at Local Office 3-2-1937. Port of Sheffield.

No. in Survey held at Loughborough.  
Reg. Book

Date, First Survey 14-12-36 Last Survey 29-1-1937.

(Number of Visits 5) Tons { Gross ✓  
Net ✓

✓ on the

Built at Jm. ✓ By whom built ✓

Yard No. ✓ When built ✓

Engines made at ✓

By whom made ✓

Engine No. ✓ When made ✓

Boilers made at Loughborough.

By whom made Walter W. Collman &amp; Co. Ltd.

Boiler No. 6166. When made 1937.

Owners Messrs Gotauken Yard No 510.\*

Port belonging to ✓

## VERTICAL DONKEY BOILER.

Made at Loughborough By whom made Walter W. Collman &amp; Co. Ltd. Boiler No. 6166. When made 1937. Where fixed ✓

Manufacturers of Steel Park Gate Steel &amp; Iron Co. Ltd. ✓

Total Heating Surface of Boiler 155 sq ft ✓ Is forced draught fitted No. Coal or Oil fired Oil.

No. and Description of Boilers One off. Vertical Crown Tube. Working pressure 85 lbs sq in.

Tested by hydraulic pressure to 170 lbs sq in. ✓ Date of test 29th January 1937. No. of Certificate 578.

Area of Firegrate in each Boiler ✓ No. and Description of safety valves to each boiler One 2 1/2" Double Spring, marine type.

Area of each set of valves per boiler { per rule 3.54 sq in. ✓  
as fitted 9.82 sq in. ✓ Pressure to which they are adjusted Not adjusted. 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 ✓ Smallest distance between base of boiler and tank top plating

Is the base of the boiler insulated ✓ Largest internal dia. of boiler 5'-0" Height 13'-8"

Shell plates: Material S.M. Steel. Tensile strength 28-32 Tons sq in. Thickness 7/16"

Are the shell plates welded or flanged No. ✓ Description of riveting: circ. seams { end Single ✓  
inter. Single ✓ long. seams Double lap ✓Dia. of rivet holes in { circ. seams 13/16" ✓  
long. seams 13/16" ✓ Pitch of rivets { 2" ✓  
2 5/8" ✓ Percentage of strength of circ. seams { plate 59% ✓  
rivets 47% ✓ of Longitudinal joint { plate 69% ✓  
rivets 72% ✓ combined ✓Working pressure of shell by rules 133 lbs sq in. ✓ Thickness of butt straps { outer ✓  
inner ✓

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat Dished partial spherical, Material S.M. Steel.

Tensile strength 26-30 Tons sq in. Thickness 9/16" ✓ Radius 60" ✓ Working pressure by rules 110 lbs sq in.

Description of Furnace: Plain, spherical, or dished crown Dished, Material S.M. Steel. Tensile strength 26-30 Tons sq in.

Thickness 1/2" External diameter { top 51" ✓  
bottom 53" ✓ Length as per rule 78" ✓ Working pressure by rules 107 lbs sq in.

Pitch of support stays circumferentially 7" ✓ and vertically 26 1/2" ✓ Are stays fitted with nuts or riveted over Yes.

Diameter of stays over thread 1" ✓ Radius of spherical or dished furnace crown 51" ✓ Working pressure by rule 102 lbs sq in.

Thickness of Ogee Ring ✓ Diameter as per rule { D ✓  
a ✓ Working pressure by rule ✓

Combustion Chamber: Material ✓ Tensile strength ✓ Thickness of top plate ✓

Radius if dished ✓ Working pressure by rule ✓ Thickness of back plate ✓ Diameter if circular ✓

Length as per rule ✓ Pitch of stays ✓ Are stays fitted with nuts or riveted over ✓

Diameter of stays over thread ✓ Working pressure of back plate by rules ✓

Tube Plates: Material { front ✓  
back ✓ Tensile strength { ✓ Thickness { ✓ Mean pitch of stay tubes in nests ✓If comprising shell, Dia. as per rule { front ✓  
back ✓ Pitch in outer vertical rows { ✓ Dia. of tube holes FRONT { stay ✓  
plain ✓ BACK { stay ✓  
plain ✓Is each alternate tube in outer vertical rows a stay tube ✓ Working pressure by rules { front ✓  
back ✓

Girders to combustion chamber tops: Material ✓ Tensile strength ✓

Depth and thickness of girder at centre ✓ 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 ☒ Tensile strength ☒ Diameter { at turned off part... ☒  
or over threads... ☒ No. of threads per inch ☒  
Area supported by each stay ☒ Working pressure by rules ☒ Are the stays drilled at the outer ends ☒  
**Tubes:** Material ☒ External diameter { plain... ☒  
stay... ☒ Thickness { ☒  
No. of threads per inch ☒ Pitch of tubes ☒ Working pressure by rules ☒  
**Manhole Compensation:** Size of opening in shell plate 16" x 12" Section of compensating ring 6" x 9/16" No. of rivets and diameter  
of rivet holes 42 - 13/16" Outer row rivet pitch at ends 5 1/2" Depth of flange if manhole flanged ☒  
**Uptake:** External diameter 16" Thickness of uptake plate 9/16"  
**Cross Tubes:** No. 4 External diameters { 10" Thickness of plates 3/8"  
Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Yes

PER WALTER W. GOLDMAN & CO. LTD.  
The foregoing is a correct description.  
W. Goldman Director, Manufacture

Dates of Survey { During progress of work in shops - 11-12-36, 12-1-36, 11-12-36, 6-1-37, 29-1-37.  
while building { During erection on board vessel - ☒  
Is the approved plan of boiler forwarded herewith No. 20-6-34.  
(If not state date of approval.)  
Total No. of visits 5.

Is this Boiler a duplicate of a previous case Yes. If so, state Vessel's name and Report No. 452 (Sheffield).  
**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.) This boiler (complete with mountings.)  
has been constructed under Special Survey of tested materials. The workmanship is good  
& the finished boiler agrees with the approved plan. The boiler has been tested to 170 lbs.  
hydraulic pressure with satisfactory results.  
For identification the boiler has been marked:-

LLOYD'S TEST  
NO 578.  
T.P. 170 LBS □"  
W.P. 85 LBS □"  
W.K. 29-1-37.  
WK

Survey Fee ... £ 4 : 4 :  
Travelling Expenses (if any) £ 1 : 3 :  
When applied for, 19 37  
When received, 19 37 6/4

W. Kimber  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute  
Assigned Su Got 11428  
TUE 21 SEP 1937