

# REPORT ON BOILERS.

No. 4830.

JAN 16 1939

Received at London Office

Date of writing Report 10<sup>th</sup> Dec, 1928 When handed in at Local Office 10<sup>th</sup> Dec, 1928 Port of Montreal

No. in Survey held at Socel P.Q. Date, First Survey 9<sup>th</sup> Aug. Last Survey 26<sup>th</sup> Nov. 1928  
Reg. Book 89751 on the M.V. "Petrolite" (Number of Visits 6) Tons Gross 1560.56  
Net 856.46

Built at Socel P.Q. By whom built Marine Industries Lt. Yard No. 65 When built 1928  
Engines made at Detroit Wis. By whom made Fairbanks Morse Co. Lt. Engine No. 809119 When made 1928  
Boilers made at Annan, Scotland By whom made Cochran Boiler Co. Boiler No. 13708 When made 1928  
Owners Imperial Oil Shipping Co. Lt. Port belonging to Montreal

## VERTICAL DONKEY BOILER.

Made at Annan By whom made Cochran Boiler Co. Boiler No. 13708 When made 1928 Where fixed Engine Room  
Manufacturers of Steel W. & A. Mitchell

Total Heating Surface of Boiler 450 sq Is forced draught fitted no. Coal or Oil fired Oil fired

No. and Description of Boilers One Cochran Boiler 6'6" dia. x 15'9" high Working pressure 100 lbs.

Tested by hydraulic pressure to 200 lbs. Date of test 10/12/28 No. of Certificate 20170

Area of Firegrate in each Boiler 22.5 sq No. and Description of safety valves to each boiler One 2 1/2" double valve

Area of each set of valves per boiler per rule 4.89 Pressure to which they are adjusted 100 lbs. Are they fitted with easing gear Yes  
as fitted 9.86

State whether steam from main boilers can enter the donkey boiler Yes Smallest distance between boiler or uptake and bunkers 6 feet

or woodwork 6 feet Is oil fuel carried in the double bottom under boiler no. Smallest distance between base of boiler and tank top plating 6 feet

Is the base of the boiler insulated Yes Largest internal dia. of boiler 6'6" Height 15'9"

Shell plates: Material Seamans-Martin Mild Steel Tensile strength 28 to 32 tons Thickness 19/32" & 1/2"

Are the shell plates welded or flanged Spliced Description of riveting: circ. seams end double drilled lap long. seams butt angle drilled lap

Dia. of rivet holes in circ. seams 27/32" Pitch of rivets 2 1/8" & 2 3/4" Percentage of strength of circ. seams plate 68.2%  
long. seams 27/32" rivets 2 1/16" of Longitudinal joint rivets 69.75%  
combined

Working pressure of shell by rules 110 lbs. Thickness of butt straps outer none  
inner none

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat Complete Hemisphere Material Seamans-Martin Steel

Tensile strength 28 to 32 tons Thickness 13/32" & 27/32" Radius 3'3" Working pressure by rules 125 lbs.

Description of Furnace: Plain, spherical, or dished crown Spherical Material Seamans-Martin Tensile strength 26 to 30 tons

Thickness 1/2" External diameter top 6'7" Length as per rule Yes Working pressure by rules 125 lbs.  
bottom 6'7"

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

Diameter of stays over thread Yes Radius of spherical or dished furnace crown 2'9" Working pressure by rule Yes

Thickness of Ogee Ring 27/32" Diameter as per rule D 101.1 lbs.  
a

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

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

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

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

Tube Plates: Material front Steel Tensile strength 26 to 30 tons Thickness 19/16" Mean pitch of stay tubes in nests 13"  
back "

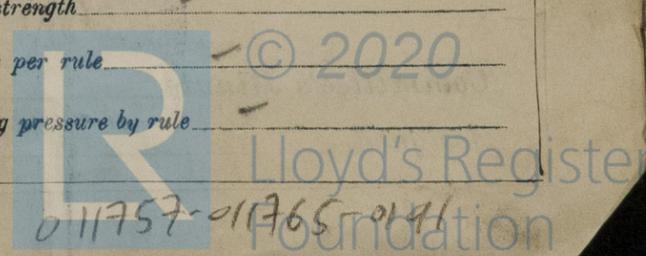
If comprising shell, Dia. as per rule front 2 1/16" screwed stay 2 1/2" screwed  
back 2 1/16" Pitch in outer vertical rows 4 3/16" Dia. of tube holes FRONT 2 1/16" BACK 2 1/2"  
plain 2 1/16"

Is each alternate tube in outer vertical rows a stay tube Yes Working pressure by rules front 120.8 lbs  
back 126 lbs

Girders to combustion chamber tops: Material Yes Tensile strength Yes

Depth and thickness of girder at centre Yes Length as per rule Yes

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



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 *Lapwelded Mild Iron* External diameter  plain *2 1/2"* Thickness  *11 L.S.G.*  stay *2 1/2"*  *11/32"*

No. of threads per inch *9* Pitch of tubes *4 7/16 Vert x 3 7/16 Hor.* Working pressure by rules

Manhole Compensation: Size of opening in shell plate *16" x 12"* Section of compensating ring *2' 4" dia x 1/16"* No. of rivets and diameter

of rivet holes *86 - 27/32* Outer row rivet pitch at ends *3.969"* Depth of flange if manhole flanged

Uptake: External diameter *23 3/4"* Thickness of uptake plate

Cross Tubes: No.  External diameters  Thickness of plates

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with

The foregoing is a correct description,

*G. Edgar*

Manufacture

Dates of Survey  During progress of work in shops - -  while building  During erection on board vessel - -  Is the approved plan of boiler forwarded herewith (If not state date of approval.) *Aug 9, Sept 28, Oct 5, 20, Nov 15, 26* Total No. of visits *6*

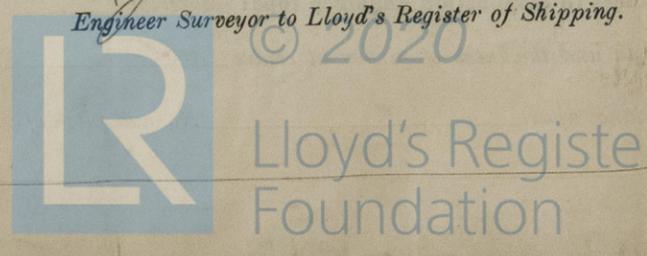
Is this Boiler a duplicate of a previous case *Yes* If so, state Vessel's name and Report No. *M. V. "Imperial"*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)  
*This boiler has been satisfactorily fitted on board the vessel and examined under steam. The safety valves have been adjusted as stated and tested for accumulation.*

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

*Geo. Allan*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI 8 FEB 1939*  
Assigned *See Inst J.C. Rpt 4830*



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The Surveyors are requested not to write on or below the space for Committee's Min