

REC'D NEW YORK MAR -5 1921

# REPORT ON BOILERS.

No. 620

Received at London Office

Date of writing Report Feb. 24 1921 When handed in at Local Office Feb. 28 1921. Port of Portland, Oregon,

No. in Survey held at Vancouver, Washington Date, First Survey Aug. 19, 1920 Last Survey Feb. 15, 1921.

Reg. Book. on the Steel Single Screw Oil Tank Steamer "LIVINGSTONE ROE" (Number of Visits 7) } Gross 8194.18  
Tons } Net 5934.96

Master R. A. Smith Built at Vancouver, Wash. By whom built G.M. Standifer Const. Corp. When built 1921

Engines made at Hamilton, Ohio By whom made Hooven, Owens & Rentschler Co. When made 1920

Boilers made at Portland, Oregon By whom made Willamette Iron & Steel Works When made 1920

Registered Horse Power Owners Standard Oil Co. of New Jersey Port belonging to Bayonne, N.J.

## MULTITUBULAR BOILERS—~~MAIN, AUXILIARY OR~~ DONKEY.—Manufacturers of Steel Midvale Steel Co.

(Letter for record ) Total Heating Surface of Boilers 1230 sq. ft. Is forced draft fitted No No. and Description of Boilers 1-Single End, Scotch Marine Working Pressure 180 Tested by hydraulic pressure to 270 Date of test Sept. 11, 1920.

No. of Certificate 200 Can each boiler be worked separately  Area of fire grate in each boiler 39 sq. ft. No. and Description of safety valves to each boiler 2 Ashton Duplex 2 1/2" dia Area of each valve 4.9 sq. in. 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

Smallest distance between boilers or uptakes and bunkers or woodwork  Mean dia. of boilers 10'-11" Length 10'-10 1/2"

Material of shell plates Steel Thickness 31/32" Range of tensile strength 62720 to 71680 Are the shell plates welded or flanged Hds. Flanged

Descrip. of riveting: cir. seams Lap Joint long. seams Double Butt Strap Diameter of rivet holes in long. seams 1-3/16" Pitch of rivets 7 1/2"-3 3/4"

Lap of plates or width of butt straps 20 1/4" Per centages of strength of longitudinal joint rivets 113.4% Working pressure of shell by rules 190 plate 84.1%

Size of manhole in shell 12"x16" Size of compensating ring 30"x33" No. and Description of Furnaces in each boiler 2-Morrison Suspension Material Steel Outside diameter 43-1/16" Length of plain part top Thickness of plates 17/32"

Description of longitudinal joint Double Riveted No. of strengthening rings 1 Working pressure of furnace by the rules 190 Combustion chamber plates: Material Steel Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 3/4" Pitch of stays to ditto: Sides 6 3/4"x8" Back 7 1/8"x7 1/2"

Top 6 1/2"x8" If stays are fitted with nuts or riveted heads Nuts & R.H. Working pressure by rules 182 Material of stays Steel Area at smallest part 1 1/2=1.474

Area supported by each stay 54 Working pressure by rules 205 End plates in steam space: Material Steel Thickness 1"

Pitch of stays 15"x16" How are stays secured Double Nuts Working pressure by rules 185 Material of stays Steel Area at smallest part 6.08

Area supported by each stay 240 Working pressure by rules 260 Material of Front plates at bottom Steel Thickness 11/16" Material of lower back plate Steel Thickness 5/8" Greatest pitch of stays 12 1/2"

Working pressure of plate by rules 274 Diameter of tubes 2 3/4"

Pitch of tubes 3-7/8x3 3/4" Material of tube plates Steel Thickness: Front 11/16" Back 11/16" Mean pitch of stays 9 1/2" Pitch across wide

water spaces 13" Working pressures by rules 199 Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 10"x11/16" Length as per rule 32 1/2" Distance apart 8" Number and pitch of Stays in each 4 @ 6 1/2"

Working pressure by rules 230 Steam dome: description of joint to shell \_\_\_\_\_ % of strength of joint \_\_\_\_\_

Diameter \_\_\_\_\_ Thickness of shell plates \_\_\_\_\_ Material \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_ Diam. of rivet holes \_\_\_\_\_

Number of rivets \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_ Crown plates \_\_\_\_\_ Thickness \_\_\_\_\_ How stayed \_\_\_\_\_

SUPERHEATER. Type \_\_\_\_\_ Date of Approval of Plan \_\_\_\_\_ Tested by Hydraulic Pressure to \_\_\_\_\_

Pressure of Test \_\_\_\_\_ Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler \_\_\_\_\_

Diameter of Safety Valve \_\_\_\_\_ Pressure to which each is adjusted \_\_\_\_\_ Is Easing Gear fitted \_\_\_\_\_

## VERTICAL DONKEY BOILER—

No. \_\_\_\_\_ Description \_\_\_\_\_ Manufacturers of steel \_\_\_\_\_

By whom made \_\_\_\_\_ When made \_\_\_\_\_ Where fixed \_\_\_\_\_ Working pressure \_\_\_\_\_

Tested by hydraulic pressure to \_\_\_\_\_ Date of test \_\_\_\_\_ No. of Certificate \_\_\_\_\_ Fire grate area \_\_\_\_\_ Description of safety valves \_\_\_\_\_

Area of each \_\_\_\_\_ Pressure to which they are adjusted \_\_\_\_\_ If fitted with easing gear \_\_\_\_\_ If steam from main boilers can enter the donkey boiler \_\_\_\_\_

Dia. of donkey boiler \_\_\_\_\_ Length \_\_\_\_\_ Material of shell plates \_\_\_\_\_ Thickness \_\_\_\_\_ Range of tensile strength \_\_\_\_\_

Descrip. of riveting long. seams \_\_\_\_\_ Dia. of rivet holes \_\_\_\_\_ Whether punched or drilled \_\_\_\_\_ Pitch of rivets \_\_\_\_\_

Per centage of strength of joint \_\_\_\_\_ Rivets \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_ Thickness of shell crown plates \_\_\_\_\_

No. of Stays to do. \_\_\_\_\_ Dia. of stays \_\_\_\_\_ Diameter of furnace Top \_\_\_\_\_ Bottom \_\_\_\_\_ Length of furnace \_\_\_\_\_

Description of joint \_\_\_\_\_ Working pressure of furnace by rules \_\_\_\_\_ Thickness of furnace crown \_\_\_\_\_

Radius of do. \_\_\_\_\_ Stayed by \_\_\_\_\_ Diameter of uptake \_\_\_\_\_ Thickness of uptake plates \_\_\_\_\_

Thickness of water tubes \_\_\_\_\_

The foregoing is a correct description,  
*G.M. Standifer Const. Corp.* Manufacturer.

Shipping \_\_\_\_\_ August 19, 20, 23, 24. Sept. 11. Jan. 17. Feb. 15

During progress of work in shops - - -  
During erection on board vessel - - -  
Total No. of visits 7.

Is the approved plan of main boiler forwarded herewith Yes  
" " " donkey " " " Yes.

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

The Donkey Boiler has been constructed under Special Survey in accordance with the Rules at Portland, Oregon of materials inspected by the Society's Surveyors and the workmanship is good. The Boiler has been installed at Vancouver, Washington.

It is submitted that the notation **+DBS 2-21** be made in the Register Book in the case of this Vessel.

Certificate (if required) to be sent to  
(The Surveyors are requested not to write on or below the space for Committee's Minute.)

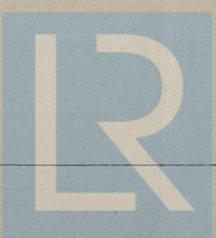
The amount of Entry Fee .. £	:	:	When applied for.
Special .. .. . £	:	:	Feb. 25 1921
Donkey Boiler Fee .. .. \$ 50 :00	:	:	When received.
Travelling Expenses (if any) £	:	:	See memo 19

*J. A. Mates*

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute New York MAR - 8 1921

Assigned See other Rpt - POR 620.



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