

Rev. 12-11-96.

MANHOLE 16" x 12"
COMPENSATION RING 1/2" THICK
28" DIAM. & DOUBLE RIVETTED
POSITION NOT FIXED

2" STEEL STAYS SCREWED
7 THREADS PER INCH.

STEEL STAYS 2" DIAM. SCREWED 7 THREADS PER INCH EFFECTIVE AREA = 2.58 SQ IN.

9'-0" OUTSIDE

64 PLAIN TUBES 3 1/2" EXT. DIAM. x 9 B.W.G.
30 STAY " 3 1/2" " " x 1/2" THICK
STAY TUBES 3 1/2" DIA. AT BOTTOM OF TUBE SCREWED 9 THDS PER INCH
" " SCREWED INTO BOTH PLATES WITH ONE NUT ON TUBE AT
OUTSIDE OF OUTSIDE TUBE PLATE (WHERE SHOWN ONLY)

DOUBLE RIVETTED

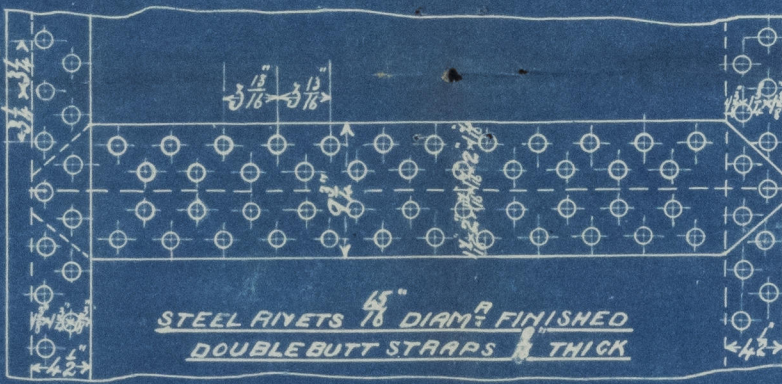
DOUBLE BUTT STRAPS & SINGLE RIVETTED

9'-6" MEAN DIAMETER

FIREBOX STAYS OF STEEL SCREWED 10 THREADS PER INCH
ALL ARE 1/4" DIAM. EXCEPT BACK MARGINAL ROWS
WHICH ARE TO BE 1/8" DIAM.

EFFECTIVE AREA OF 1/4" STAYS = .98 SQ IN.
" " 1/8" " = .125 " "

—ONE OFF.—



DONKEY BOILER N° 303

—SCALE 1 INCH = ONE FOOT—

DIAMETER 9'-6". LENGTH = 9'-0" WORKING PRESS = 100 LBS PER SQ IN.

HEATING SURFACE

TUBES 94 @ 6'-6" BETWEEN PLATES 509.4 SQ FT.
FURNACES TO 3' BELOW CENTRE 66 " "
FIREBOXES 84.4 " "
INNER TUBE PLATES 15 " "
TOTAL 648.1 SQ FT.

GATE SURFACE 4'-6" BARS 25.2 SQ FT.

THICKNESS OF PLATING

CIRCUMFERENTIAL SHELL — STEEL 5/16" THICK
BUTT STRAPS FOR " — 9/16" "
END UPPER PLATES — 3/4" "
FRONT LOWER " — 21/32" "
BACK " " — 5/8" "
INNER TUBE " — 5/8" "
FIREBOX - SIDES & TOPS — 7/8" "
" BACKS — 15/32" "
" GIRDELS — TWO IRON 5/8" "
FURNACES — STEEL 1/2" "

WORKING PRESSURE	LLOYD'S
PLATE SECTION	$\frac{L \cdot 125 - 9375}{4 \cdot 125} = 77.21$
RIJET "	$\frac{R \cdot 89 \cdot 1.75 \cdot 85}{4 \cdot 125 \cdot 625} = 99.6\%$
CIRCUMFERENTIAL SHELL	$\frac{R \cdot 0 \cdot (10 \cdot 2) 77.2}{114} = 108.3 \text{ LBS}$
END UPPER PLATES	$\frac{185 \cdot 12^2}{14 \cdot 5^2} = 126$ "
" " " STAYS	$\frac{2 \cdot 58 \cdot 9000}{14 \cdot 5^2} = 110.4$ "
OUTER TUBE PLATE	$\frac{130 \cdot 12^2}{14 \cdot 5^2} = 102.7$ "
STAY TUBES	$\frac{(746 - 541) 5000}{(11 \cdot 75 \cdot 10) (2 \cdot 25 \cdot 829)} = 113$ "
COMBUSTION CHAMBER TOPS & SIDES	$\frac{120 \cdot 7^2}{7 \cdot 5^2} = 104.5$ "
" " BACKS	$\frac{120 \cdot 7^2}{8^2} = 105.4$ "
" " STAYS (ORDINARY)	$\frac{98 \cdot 8000}{8 \cdot 7 \cdot 5} = 130.6$ "
" " " (BACK MARGINAL)	$\frac{125 \cdot 8000}{8 \cdot 10 \cdot 5} = 119$ "
" " GIRDELS	$\frac{9000 \cdot 5 \cdot 5 \cdot 1.25}{22 \cdot 25 \cdot 7 \cdot 5} = 118$ "
FURNACES	$\frac{89600 \cdot 53125^2}{6 \cdot 5 \cdot 33} = 111$ "
" COMPRESSION	$\frac{8000 \cdot 53125}{35} = 121$ "



13/11/96





Steel Donkey Boiler
for
Messrs Hall Russell's
S. S. ho 303.
S. S. "Angeli."
Pht ho. 5634

ABN26 - 0124



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Foundation