

NOTE:-

ALL HOLES TO BE DRILLED AFTER SHEETS ARE ROLLED AND IN POSITION ALL BURRS TO BE REMOVED.

3-1/2" TRY COCKS

1" PIPE TAP FOR INJECTOR

4" PIPE TAP FOR STEAM GA.

1/2" WATER GAUGE

2" TAP - 12 THREADS

ALL HANDHOLES 3 1/2" x 4 1/2"

30-3/4" RIVETS - 60x HOLES

18" STAYS - 12 THDS.

14 EQUAL SPACES ABT 5 3/4" = 80 1/16"

1/2" BLOWOFF 16" DBLG PLATE 1/2" RIVETS

3" RIVETS - 100 HOLES - ABT 2 1/8" PITCH

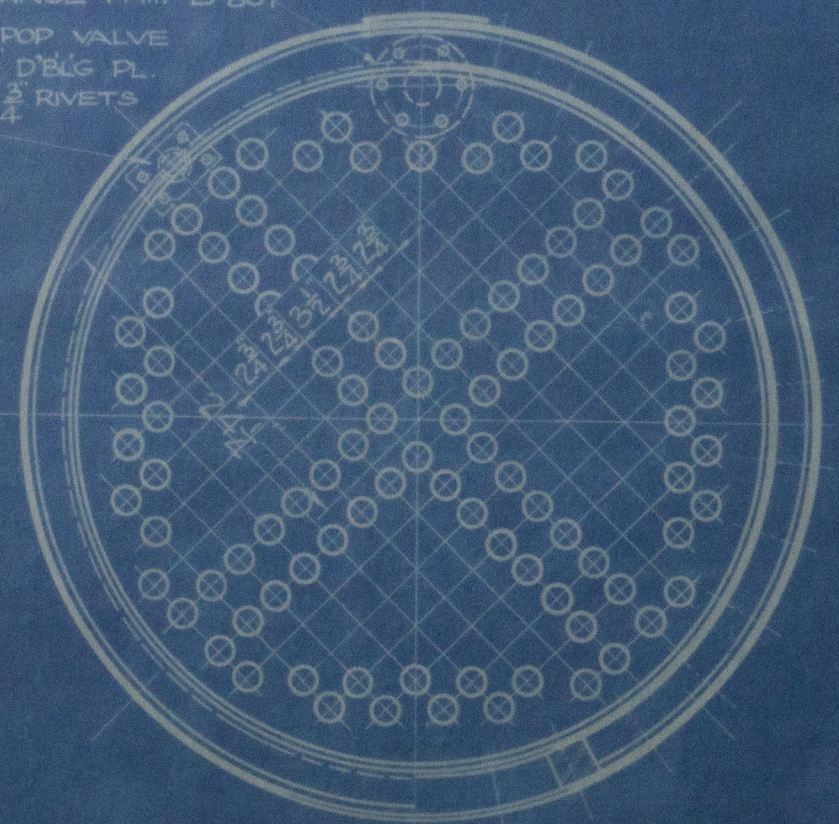
33 EQUAL SPACES @ 27 1/2" = 90 3/4" 3" BUTT STRAPS 3/4" RIVETS - 13 HOLES

6-1/2" RIVETS - 5 1/2" P.C. - CSK. OUTSIDE

186-2" TUBES - #12 B.W.G. - 3'-6" LONG

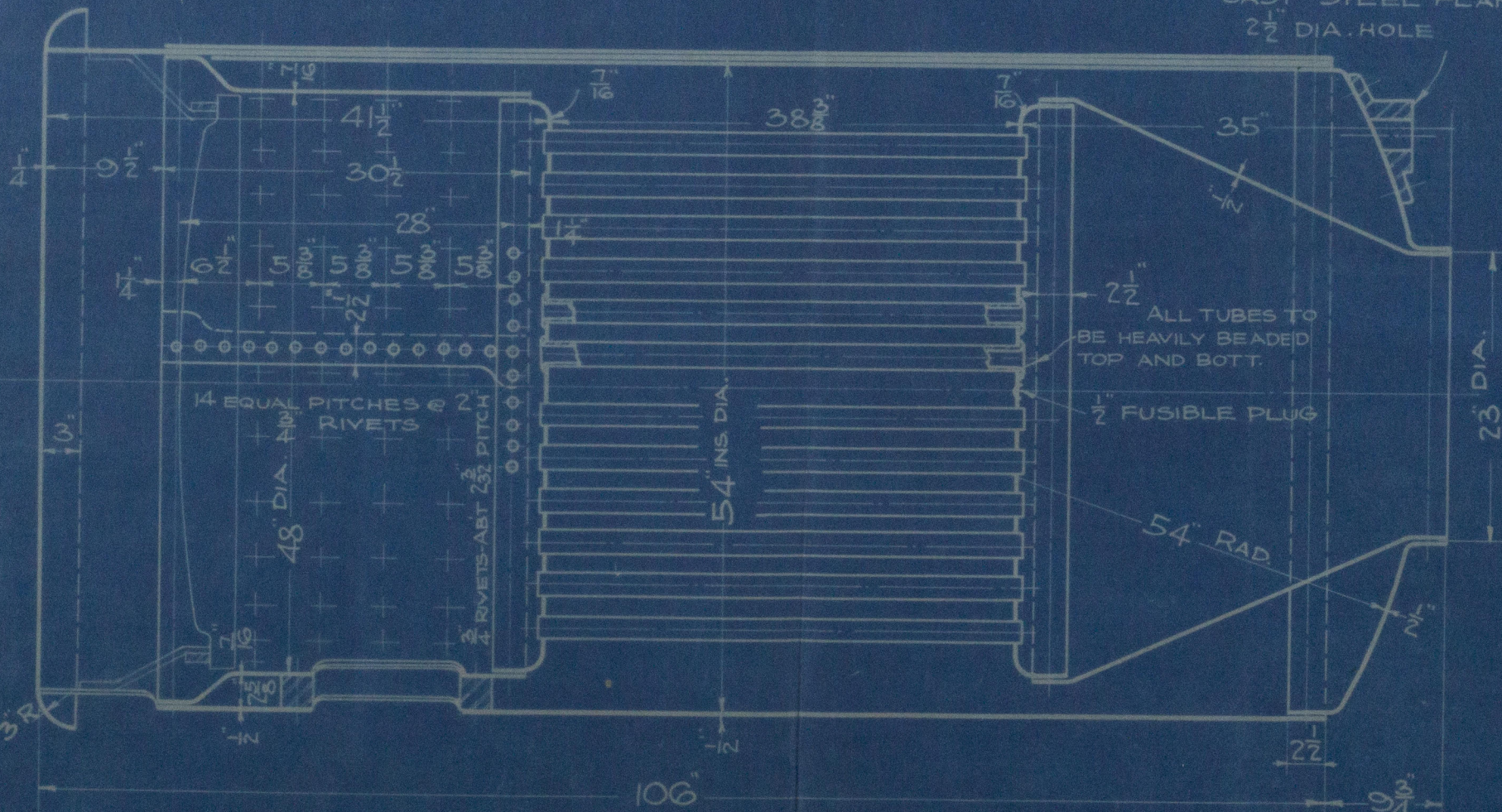
CAST STEEL FLANGE PAT. B-506 2 1/2" DIA. HOLE

FLANGE PAT. B-807 2" POP VALVE 100 DBLG PL. 4" RIVETS



SECTION BELOW FIREBOX - LOOKING UP-

SECTION THRU FIREBOX - LOOKING UP-



2 1/2" ALL TUBES TO BE HEAVILY BEADED TOP AND BOTT.

1/2" FUSIBLE PLUG

54" RAD

LLOYD'S REGISTER

EFFICIENCY OF JOINT PLATE	= $\frac{100(2.75-8125)}{2.75}$	= 70.5%
EFFICIENCY OF RIVETS	= $\frac{2 \times 1.75 \times 518 \times 85}{2.75 \times 0.5}$	= 112%
WORKING PRESSURE-SHELL	= $\frac{22(8-2) \cdot 705}{54}$	= 172#
W.P. FIREBOX WRAPPER	= $\frac{90 \times 7^2}{27}$	= 163#
W.P. STAYS	= $\frac{8000 \times .755}{29}$	= 208#
W.P. CONE	= $\frac{50(300 \times .5 - 31)}{36}$	= 165#
GRATE SURFACE	= 12.5	sq'
HEATING SURFACE	= 390	sq'

U.S. GOV'T RULES

EFFICIENCY OF JOINT PLATE	= $\frac{100(2.75-8125)}{2.75}$	= 70.5%
EFFICIENCY OF RIVETS	= $\frac{0.518 \times 2 \times 175}{2.75 \times .5}$	= 132%
W.P. SHELL	= $\frac{60,000 \times .5}{6 \times 27} + 20\%$	= 222
W.P. FIREBOX WRAPPER	= $\frac{112 \times 7^2}{5.375^2}$	= 189
W.P. STAYS	= $\frac{9,000 \times .755}{29}$	= 234
W.P. CONE	= $\frac{51.5}{36} \times [(18.75 \times 8) - (1.03 \times 31)]$	= 169

Aux. Item No. 5. Masked Wood Scheme
"G. C. Hansen"

By J. H. Blum approved
New York May 12th 1917

Seaborn Shipyard, Tacoma, Wash.
Donkey Boiler for

Tugboat No. 3

WASHINGTON IRON WORKS,
SEATTLE, WASH.

54" x 106" - SUBMERGED TUBE BOILER

163# WORKING PRESSURE

DRAWN CHET DUB APR'D LLOYD'S REGISTER

SCALE 1" = 10"

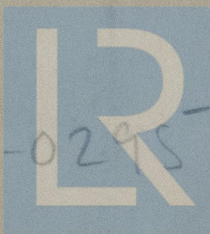
DATE APRIL 5, 17. DWG. No. 4504-EF

Donkey Boiler

H C Hansen

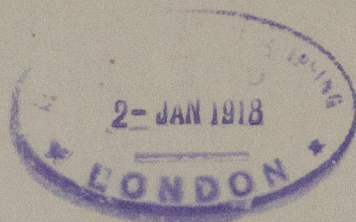
RETAIR

W 656 - 0295



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