

June 29, 1938

Calculation of Counterweights.

= 54.18 wt of cylinder.
 10.38 " " solid end.
 9.34 " " open "
 12.28 " " mirror
 5.00 " " amplifier
 #91.18 total weight at top.

20.00' focal length
 1.75' mirror above center
 2.50' half length of drum
 1.00' bottom of drum above
 focal point
 25.25' total moment arm.

$\frac{25.25}{10.75} \times \#91.18 = \#214$ counterweight.
 10.00' center to lower deck.
 .75' lower deck to weight.
 10.75' total moment arm.

#180/cuft weight of concrete.

$\frac{214 \cdot 1728}{2 \cdot 180} = 1025$ cu in required for each weight.

Weights made $36 \times 4\frac{1}{4} \times 7\frac{1}{4} = 1110$ cu in each.
 and weigh respectively. #87 and #94 (3 days after set) for a
 total of 181#. The cement undoubtedly
 contained too much sand so they are

33# short on weight.

Weights 84 + 92½ lbs two months later. = 176.5

$\frac{176.5}{2.35} = 75$ lbs additional at top. $\frac{176.5}{2 \cdot 1110 / 1728} = 137$ lbs/cuft