



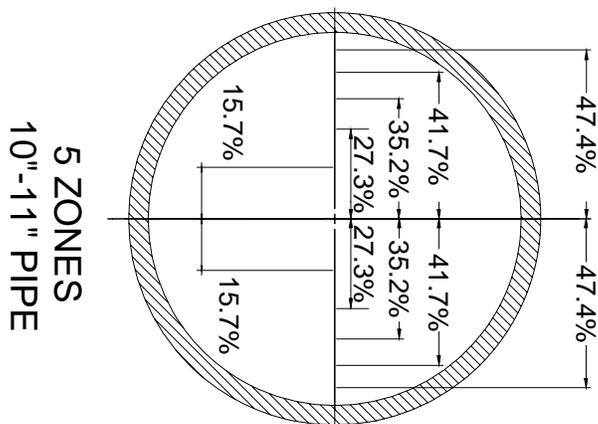
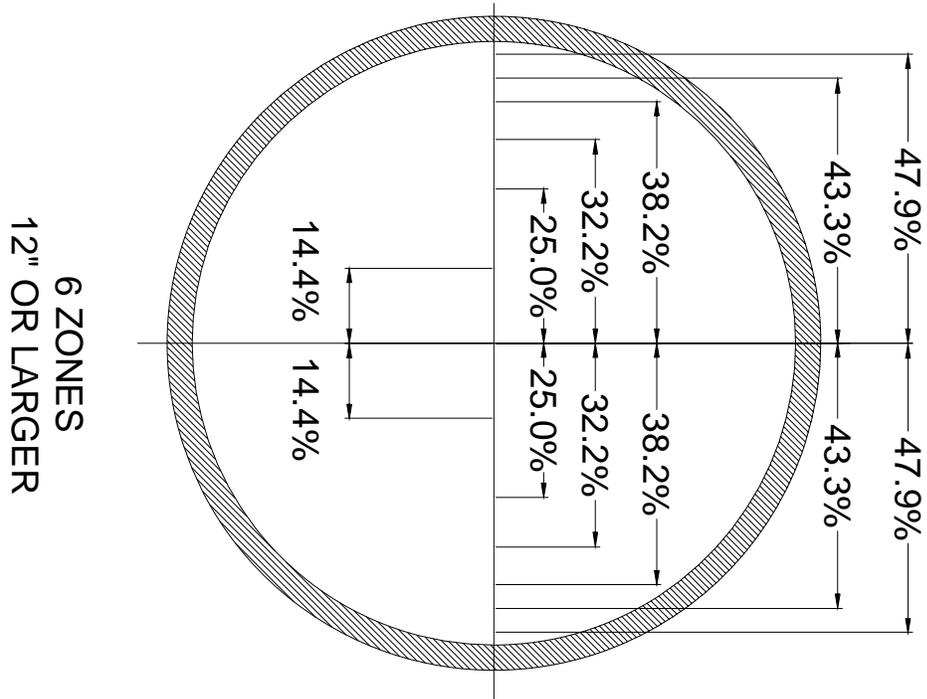
## ***Procedure for Marking Equal Area Grid Traverse Points on on a Pitot, Dirty Air, or Coal Sampling Probe***

---

### **Procedure for Marking Equal Area Grid Traverse Points on a Pitot, Dirty Air, or Coal Sampling Probe**

1. Ensure all previous traverse markings from are removed from the probe.
2. Install an ICT dustless connector onto the test port. Measure the length of all test ports. Locate the longest one, if a shorter one is used for initial marking reference, you will not be able to see the probe markings while testing on a longer port.
3. Slide the probe into the dustless connector until it contacts the ball valve, and make a large mark around the diameter of the probe flush with the dustless connector (this is to reference when you can shut the ball valve as you remove the probe from the pipe). Caution should be exercised to ensure that the mark is exposed when the valve is closed. This will keep the ball from damaging the deflector plate and changing the probes' "K" factor when closing the valve.
4. Open the ball valve and insert the probe to be marked into the pipe slowly until it contacts the back wall, (ramming the probe in can damage the tip and possibly change the "K" factor of a dirty air probe).
5. Rotate the probe so that the "flag" is perpendicular to the pipe, if you do not do this, the outer tips of the probe end will contact the radius of the pipe and cause the diameter to be @ 1/8" short.
6. Make a mark flush with back edge of the dustless connector on the probe. (all marks made until step 16 should be small dots.)
7. Remove the probe from the pipe.
8. Measure the distance from the tip of the probe to the front edge of the rear reference mark.
9. Measure the distance from the pipe surface to the back edge of the dustless connector, add 3/8" to this to compensate for pipe wall thickness.
10. Subtract this from the measurement taken in step 8, this will give you the pipe I.D.
11. Divide the pipe I.D. by two.
12. Subtract this number in inches from the reference mark, and make a centerline mark to reference the grid traverse points from.
13. Consult your ICT handbook (page 58 or rear cover) for the percent of pipe diameters needed to mark off an equal area grid.
14. Multiply these percentages by the pipe diameter to obtain the measurements from the centerline mark for each grid traverse point. (I.E.  $15.25 \times .144 = 2.19$ " For the first mark to each side of the centerline).
15. Make progressive marks to the left and right of the centerline mark until you have to proper amount of "zones" for the pipe diameter.
16. When all the marks have been made, remove the centerline mark and make complete marks around the circumference of the probe on the traverse points.

**Procedure for Marking Equal Area Grid Traverse Points on a  
Pitot, Dirty Air, or Coal Sampling Probe**



Dimensions are "Percent of Pipe Diameters"

# ***Procedure for Marking Equal Area Grid Traverse Points on a Pitot, Dirty Air, or Coal Sampling Probe***

Top view of dirty air probe typical markings

