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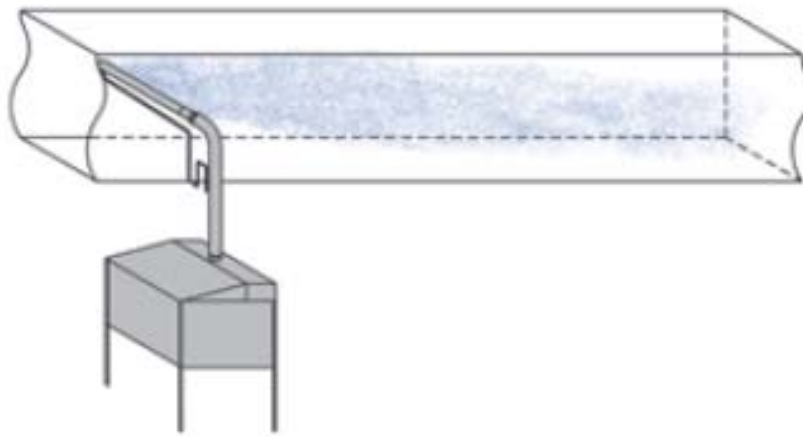
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March 2nd 2012 ~ Monday Morning Minutes:

FACTORS THAT AFFECT ABSORPTION

by Chris Lieder



Absorption is affected primarily by three things.

1. Duct or AHU temperature. Cool air absorbs less than warm air and requires a longer absorption distance.

When equal amounts of steam are introduced into equivalent ducts but with different air temperatures, the lower temperature systems of 50 °F to 55 °F are more difficult to ensure absorption than systems with higher temperatures.

2. Δ RH (the difference between entering and leaving RH). The more vapor that needs to be dispersed into the airstream, the longer the absorption distance.

In general, the higher the relative humidity or load that must be dispersed in the airstream the more challenging it is to control absorption distance.

3. Mixing of air and steam. Uneven airflow, non-uniform mixing of steam with air, and the number of steam discharge points on a dispersion assembly affect absorption distance. In general the more tubes with the airstream the shorter the absorption distance.

Next week we look at placement in the airstream.

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