$$V_s = K_p\ C_p \left[\frac{\sum_{i=1}^{n} \sqrt{\Delta\ p_i}}{n} \right] \sqrt{\frac{T_{s(abavg)}}{P_s\ \ M_s}} \qquad \text{Eq. 2-7}$$

Where:

$$K_p = 34.97 \frac{m}{\sec} \left[\frac{(g/g-mole)(mm\ Hg)}{(^oK)(mm\ H_2O)} \right]^{1/2} \qquad \textit{Metric}$$

$$= 85.49 \frac{ft}{\sec} \left[\frac{(lb/lb-mole)(in.\ Hg)}{(^oR)(in.\ H_2O)} \right]^{1/2} \qquad \textit{English}$$

12.7 Average Stack Gas Dry Volumetric Flow Rate.

$$\mathbf{Q = 3600(1 - B_{ws})} v_s A \left[\frac{T_{std} P_s}{T_{s(abavg)} P_{std}} \right] \quad Eq. 2-8$$