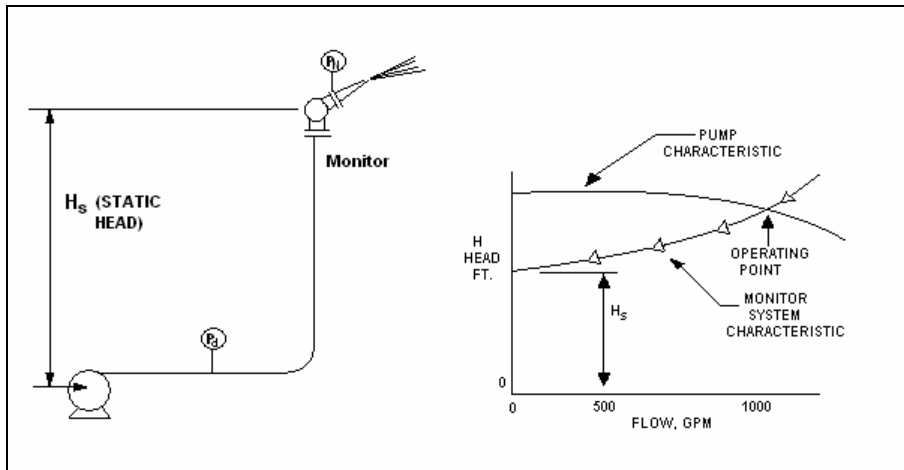


Technical Bulletin



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Technical Bulletin #: TB-3
Part #: N/A
Description: Flow Balancing—Operating Point (Fire Monitor and Centrifugal Pump System)
TB Description: Calculation formula for Flow Balancing & Operating Point



$$H = H_s + 2.31 (P_d - P_n) + 2.31 P_n$$

$P_d - P_n$ = Pressure loss characteristics of the system which is a function of flow rate, e.g. line losses + monitor loss.
(see Stang catalog page 10.10.1)

P_d = Pump discharge pressure, PSIG

P_n = Nozzle inlet pressure, PSIG

$$= (Q/K)^2$$

Q = Flow rate

K = Nozzle characteristics = $\frac{Q \text{ at } 100 \text{ PSIG}}{10}$

Procedure: Calculate the system pressure drop for several different flow rates, convert to FT. by multiplying by 2.31 and then add the static head. Plot the system pressure drop characteristics on the pump curve. The system flow rate is where the two lines cross.