

**ERRATA for**  
***PE Control Systems Practice Exam***  
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**Revisions are shown in red.**

**Solution 15, p. 60:**

$$\Delta P = (SG_1 \times H_H + SG_1 \times H_W - (SG_f \times H_{H+W}))$$

This application is a wet-leg standard DP transmitter with a fill pot. It is not a capillary DP level transmitter, and therefore the high side  $H$  is exposed to the process liquid  $SG_1$ , and the low side  $L$  is filled with  $SG_f$  from the fill seal pot.

Span (tank is full):

$$\begin{aligned}\text{Span} &= (1.0 \times 1,200 \text{ mm} + 1.0 \times 300 \text{ mm}) - [(0.95 \times (1,200 \text{ mm} + 300 \text{ mm})] \\ &= 1,500 - 1,425 \text{ mm H}_2\text{O} \\ &= +75 \text{ mm H}_2\text{O}\end{aligned}$$

Zero (tank is empty):

$$\begin{aligned}\text{Zero} &= (0 \times 1,200 \text{ mm} + 1.0 \times 300 \text{ mm}) - [(0.95 \times (1,200 \text{ mm} + 300 \text{ mm})] \\ &= 300 - 1,425 \text{ mm H}_2\text{O} \\ &= -1,125 \text{ mm H}_2\text{O}\end{aligned}$$

Therefore, the range (zero to span) is  $-1,125$  to  $+75$ .