

Sujet 2002

Mesure de pression différentielle

→ Revoir la mesure de pression

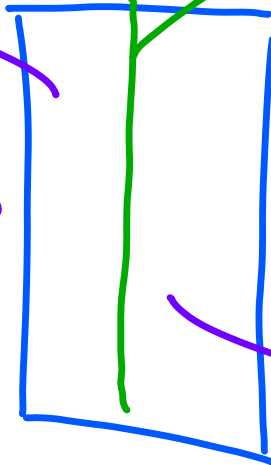
différentielle

$$p = \frac{F}{S}$$

- effet capacitif
- jauge de contrainte

chambre HP

H
+ HP



membrane avec la mesure de force

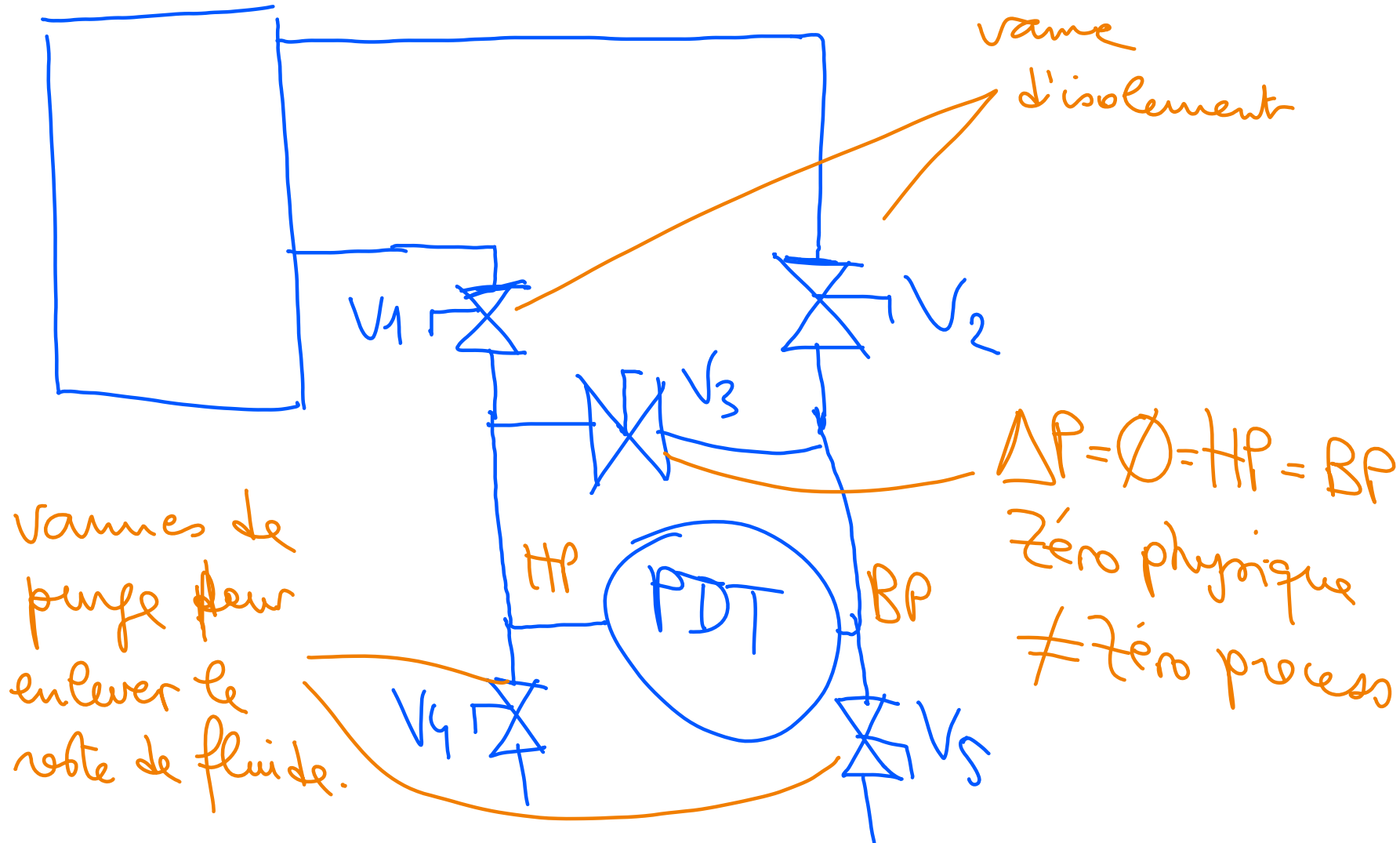
L
- LP

chambre BP

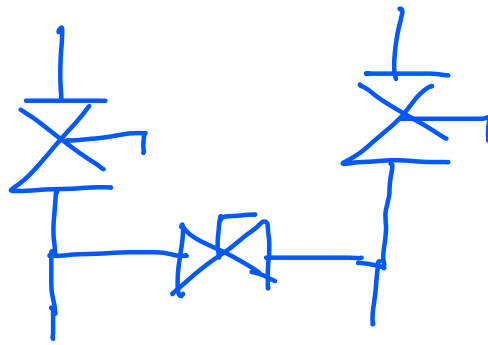
A tout instant le capteur mesure

$$\Delta P = P_{HP} - P_{BP}$$

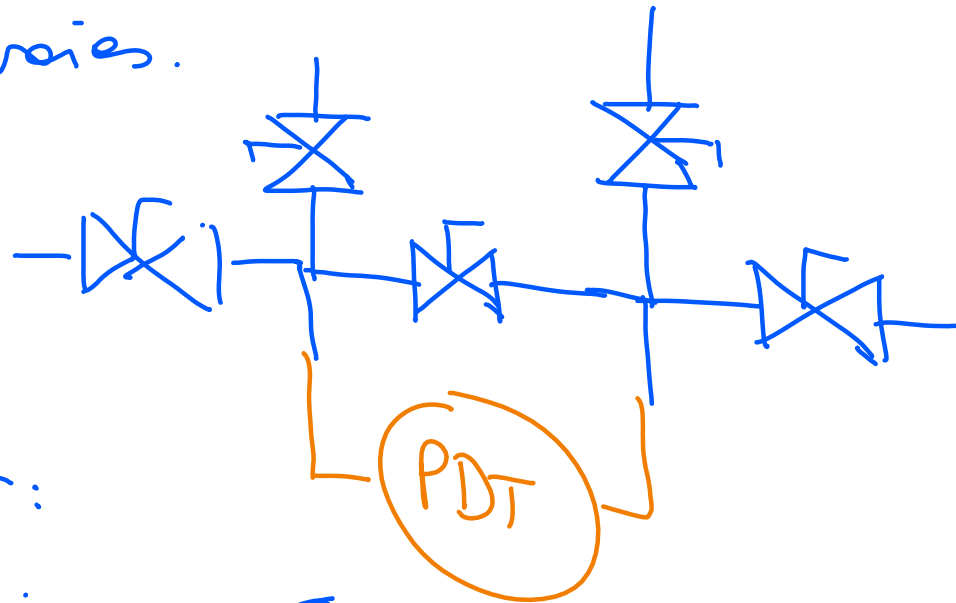
↳ le montage des capteurs.



Manifold 3 voies



Manifold 5 voies.

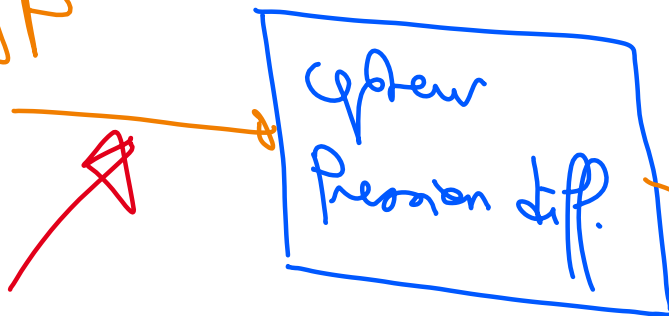


Dans le sujet:

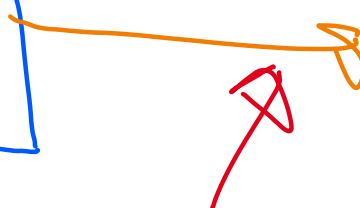
I_S sortie du signal

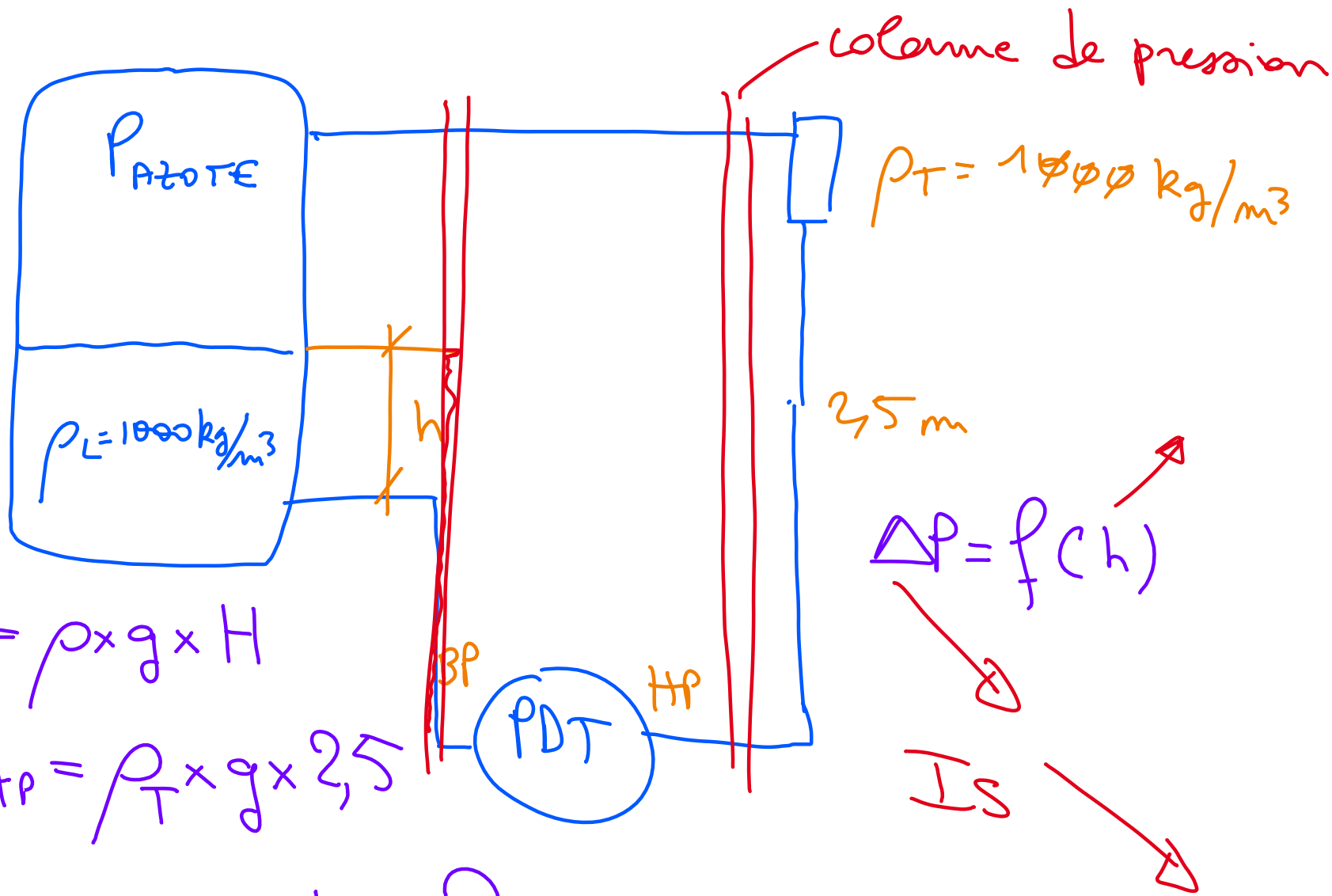
quand $\Delta P = P_{H0} - P_{BP}$

ΔP



$I_S (4-20mA)$





$$P = \rho \times g \times H$$

$$P_{HP} = \rho_T \times g \times 2,5$$

$$P_{BP} = \rho_L \times g \times h + P_{Azote}$$

$$\Delta P = P_{HP} - P_{BP} = \rho_T \times g \times 2,5 - \rho_L \times g \times h - P_{Azote} = f(h)$$