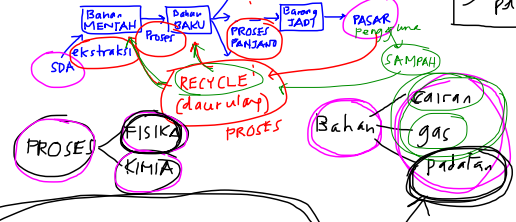


Teknologi Kendali Proses (Process Control Technology)

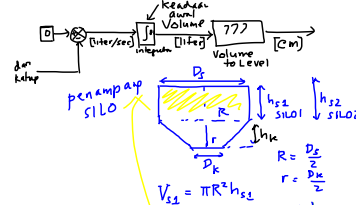
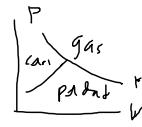
PROSES di industri manufaktur:



* Project 1 → Alat-nya pada Anda
* Project 2 → Batubara

Simulink & Matlab

2 org → 1 laporan.
Bab I Project 1
Bab II Project 2



$$V_{s1} = \pi R^2 h_{s1}$$

$$V_k = \text{Volume kerucut besar} - \text{Volume kerucut kecil}$$

$$\frac{x}{h_k + x} = \frac{r}{R}$$

$$R \cdot x = r(h_k + x)$$

$$(R - r)x = h_k r$$

$$x = \frac{h_k r}{R - r}$$

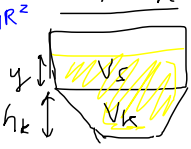
$$\text{Volume kerucut besar} = \frac{1}{3}(h_k + x) \cdot \pi R^2$$

$$\text{Volume kerucut kecil} = \frac{1}{3}x \cdot \pi r^2$$

$$V_k = \frac{1}{3}(h_k + x) \pi R^2 - \frac{1}{3}x \pi r^2$$



$$V_{in} > V_k$$



$$h = h_k + y$$

$$V_s = y \cdot \pi R^2 = V_{in} - V_k$$

$$y = \frac{V_{in} - V_k}{\pi R^2}$$

$$h = h_k + \frac{V_{in} - V_k}{\pi R^2}$$

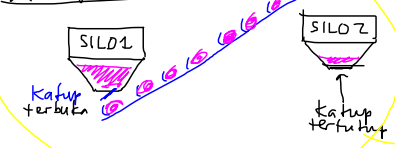
$$\frac{h+x}{h_k+x} = \frac{r}{R}$$



$$V_{ih} = \frac{1}{3}(h+x) \pi R^2 - \frac{1}{3}x \pi r^2 \rightarrow h = \dots \dots \dots ? ? ?$$

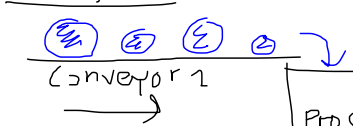
- * P.R: 1) Ukur R, r, h_k, h_{s1} dan h_{s2}
- 2) Selesaikan persamaan h = ... untuk V_{ih} ≤ V_k

* Project 1



Material di SILO 1 dipindahkan ke SILO 2 melalui Conveyor

* Project 2



PLC

Proses permukaan Batubara

PENJUMPAN

Conveyor 2