



压力平衡图

(2) 待生剂循环压力平衡

推动力:

沉降器顶部压力: $P_{\text{沉}}=226.3 \text{ kPa}$

沉降器稀相静压:

$$\Delta P_1 \times (44.318 - 33.563) \times 9.8 = 1.865 \text{ kPa}$$

沉降器密相静压:

$$\Delta P_2 = 557 \times (33.563 - 27.763) \times 9.8 = 31.66 \text{ kPa}$$

沉降器密相静压:

$$\Delta P_3 = 627 \times (27.763 - 23.568) \times 9.8 = 25.78 \text{ kPa}$$

待生斜管静压: $\Delta P_4 = 629 \times (23.568 - 17.728) \times 9.8 = 36.00 \text{ kPa}$

阻力:

一再顶部压力: $P_{\text{一再}}=251.3 \text{ kPa}$

一再稀相静压:

$$\Delta P_5 = 16 \times (29.349 - 19.808) \times 9.8 = 1.496 \text{ kPa}$$

一再密相静压:

$$\Delta P_6 = 370 \times (19.808 - 9.746) \times 9.8 = 7.542 \text{ kPa}$$

待生滑阀压力降: $\Delta P_{\text{阀}1} = 61.27 \text{ kPa}$

(3) 半再生剂循环压力平衡

推动力:

一再顶部压力: $P_{\text{一再}}=251.3 \text{ kPa}$

一再稀相静压: $\Delta P_5 = 16 \times (29.349 - 19.808) \times 9.8 = 1.496 \text{ kPa}$

一再密相静压: $\Delta P_7 = 370 \times (19.808 - 9.746) \times 9.8 = 36.48 \text{ kPa}$

半再生斜管静压: $\Delta P_8 = 385 \times (9.746 - 3.8) \times 9.8 = 22.43 \text{ kPa}$

阻力:

二再顶部压力: $P_{\text{二再}}=251.3 \text{ kPa}$

二再稀相静压: $\Delta P_9 = 7 \times (35.552 - 26.051) \times 9.8 = 0.652 \text{ kPa}$

烧焦罐粗旋压降: $\Delta P_{10}=10.6 \text{ kPa}$

烧焦罐稀相静压: $\Delta P_{11}=66 \times (26.051-11.7) \times 9.8=9.28 \text{ kPa}$

烧焦罐密相静压: $\Delta P_{12}=86 \times (11.7-3.8) \times 9.8=6.66 \text{ kPa}$

半再生滑阀压力降: $\Delta P_{\text{阀}2}=33.21 \text{ kPa}$

(4) 再生剂循环压力平衡

推动力:

二再顶部压力: $P_{\text{二再}}=251.3 \text{ kPa}$

二再稀相静压: $\Delta P_9=7 \times (35.552-26.051) \times 9.8=0.652 \text{ kPa}$

二再密相静压: $\Delta P_{13}=166 \times (26.051-19.795) \times 9.8=10.18 \text{ kPa}$

再生斜管静压: $\Delta P_{14}=382 \times (19.795-8.213) \times 9.8=43.36 \text{ kPa}$

阻力:

沉降器顶部压力: $P_{\text{沉}}=226.3 \text{ kPa}$

沉降器部分稀相静压: $\Delta P_{15} \times (44.318-42.328) \times 9.8=0.345 \text{ kPa}$

沉降器粗旋压降: $\Delta P_{16}=12 \text{ kPa}$

