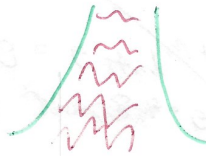


4FA430 4.2

2500
250-ton
307
1,004°C

volym?



Lsg Ideal gaslagen: $pV = nRT \Leftrightarrow V = \frac{nRT}{p} = \frac{\frac{m}{M}RT}{p} = \frac{mRT}{M \cdot p}$

$m = 250 \text{ ton} = 250 \cdot 10^3 \text{ kg}$; $1 \text{ atm} = 1,013 \cdot 10^5 \text{ Pa}$

$M_{\text{SO}_2} = M_S + M_{\text{O}_2} = (32 + 2 \cdot 16) \cdot 10^{-3} \text{ kg/mol}$

$$V = \frac{m \cdot R \cdot T}{M \cdot p} = \frac{250 \cdot 10^3 \text{ kg} \cdot 8,314 \text{ J mol}^{-1} \text{ K}^{-1} \cdot (273 + 25) \text{ K}}{64 \cdot 10^{-3} \text{ kg mol}^{-1} \cdot 1,013 \cdot 10^5 \text{ Pa}}$$

$\cancel{49,7 \cdot 10^3 \text{ m}^3} = \underline{\underline{96 \text{ tonen/m}^3}}$