

A1  $Re = \frac{\rho v D}{\mu}$ ,  $v = \frac{4Q}{\pi D^2}$ ,  $f$  は一定

(1) O

$\Delta P = 4f \times \frac{\rho v^2}{2} \cdot \frac{L}{D}$   $\Delta P' = (1.2)^2 \Delta P = 1.44 \Delta P$  X

(2), (3)  $\frac{1}{1.2} = X$

(4)  $Re = \frac{\rho v D}{\mu} = \frac{4\rho Q}{\mu \pi D}$  X

$\Delta P = 4f \times \frac{\rho v^2}{2} \cdot \frac{L}{D} = 4f \cdot \frac{\rho L}{2} \cdot \frac{1}{D^5}$  X  $\Delta P' = \frac{1}{(1.2)^5} \Delta P = \underline{0.402 \Delta P}$

(5) O (6) X

- A2
- (a) 揮発性
  - (b) 減圧
  - (c) 低温
  - (d) 低沸点
  - (e) 高沸点