

Problem 2.6

The threshold diameter, according to Suo and Griffith (1964) is

$$D = 0.3 \left[\frac{\sigma}{g \Delta \rho} \right]^{1/2}$$

Define

- ① air-water at room temperature
- ② saturated water-steam at 10 MPa
- ③ saturated R-134a mixture at 1.02 MPa

	ρ_L (kg/m ³)	ρ_G (kg/m ³)	σ (N/m)	$0.3 \sqrt{\frac{\sigma}{g \Delta \rho}}$ (m)
①	997	1.185	0.072	8.15×10^{-4}
②	688.6	55.48	0.012	4.19×10^{-4}
③	1,146	50.23	0.0061	2.26×10^{-4}