

latent heat of fusion	$Q_m$	334	$\text{kJ kg}^{-1}$
melting point	$T_m$	0	$^{\circ}\text{C}$
latent heat of vaporization	$Q_v$	2264.705	$\text{kJ kg}^{-1}$
boiling point	$T_v$	100	$^{\circ}\text{C}$
Heat Capacity at $25^{\circ}\text{C}$	$C_{25}$	4.1813	$\text{J g}^{-1} \text{K}^{-1}$
Heat capacity at $100^{\circ}\text{C}$ (steam)		2.080	$\text{J g}^{-1} \text{K}^{-1}$
Desity of steam at $100^{\circ}\text{C}$ and 1atm pressure		0.6	$\text{kg m}^{-3}$

## 1 Some equations

**Flow through opening** goes with square-root of the pressure

$$q_m = \rho q_v = C A_2 \sqrt{2\rho(p_1 - p_2)} \quad (1)$$

Where  $C$  is the flow coefficient,  $A_2$  is the area of the opening, and  $p_1$  the pressure in the vessel with  $p_2$  the external pressure.

**Heat Capacity**

$$\Delta T = \frac{\Delta H}{Cm} \quad (2)$$

or for a mixture

$$\Delta T = \frac{\Delta F}{C_1 m_1 + C_2 m_2} \quad (3)$$