APPENDIX VI

Values of Thermal Conductivity of Copper and Brass Used for Calculation of Heat Flux In. Chapter III (Tables 3.9 to 3.10) and Chapter V (Tables 5.3 to 5.4)

1. COPPER (99% Pure):

\[ K_t = K_0 \left(1 + 10^{-3} \alpha t + 10^{-6} \beta t^2\right) \]

\( K_t \) = Conductivity at \( t \) °C

\( \alpha = -0.13 \); \( \beta = +2.5 \) for \( 100 \leq t \leq 600 \) °C

\( K_0 = 3.78 \text{ W/cm } °C \).

2. BRASS (70% cu, 30% zn):

\[ K_t = K_0 \left(1 + 10^{-3} \alpha t\right) \]

\( K_t \) = Conductivity at \( t \) °C

\( \alpha = +1.5 \)

\( K_0 = 0.88 \text{ W/cm } °C \).

Data Collected From Reference (157) Volume 5.