2.14 Base of Load: 400V, 5000 VA

\[ I_b = \frac{5000}{400} = 12.5 \text{A} \]

\[ Z_b = \frac{V_b}{I_b} = \frac{400}{12.5} = 32 \Omega \]

\[ Z \text{ in ohms is } (0.2)(32) = 6.4 \Omega \]

When considered on a system base of 10 kVA and 800 V,

\[ I_{\text{BASE}} = \frac{10,000}{800} = 12.5 \text{A} \]

\[ Z_{\text{BASE}} = \frac{V_b}{I_b} = \frac{800}{12.5} = 64 \Omega \]

\[ Z = \frac{Z}{Z_{\text{BASE}}} = \frac{6.4 \Omega}{64 \Omega} = 0.10 \text{ p.u.} \]

Note: Load's impedance in ohms does not change. We can, however, consider its value on any convenient base we choose.