



Transformer Short-Circuit Current Calculation

Transformer Details:

Capacity: 25 MVA

Voltage Level: 66/11kV

Impedance: 12.2%

$$\text{HV Current: } (25 \times 10^3 \times 10^3) / (\sqrt{3} \times 66 \times 10^3) \\ = 218.69 \text{ A}$$

$$\text{LV Current: } (25 \times 10^3 \times 10^3) / (\sqrt{3} \times 11 \times 10^3) \\ = 1312.16 \text{ A}$$

$$\text{Actual HV Current} = \frac{415 \text{ V (Applied Voltage)} \times 218.69 \text{ A (HVCURRENT)}}{0.12 (\% \text{ Impedance}) \times 66 \times 10^3 (\text{HV Voltage})}$$

$$= 11.45 \text{ A}$$

$$\text{Actual LV Current} = \frac{415 \text{ V (Applied Voltage)} \times 1312.16 \text{ A (LVCURRENT)}}{0.12 (\% \text{ Impedance}) \times 66 \times 10^3 (\text{HV Voltage})}$$

$$= 68.75 \text{ A}$$



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