

B.8.3

(Continue from chapter B.8-2)

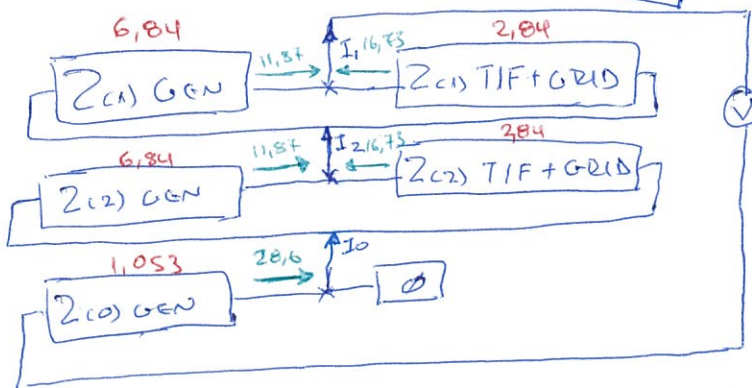
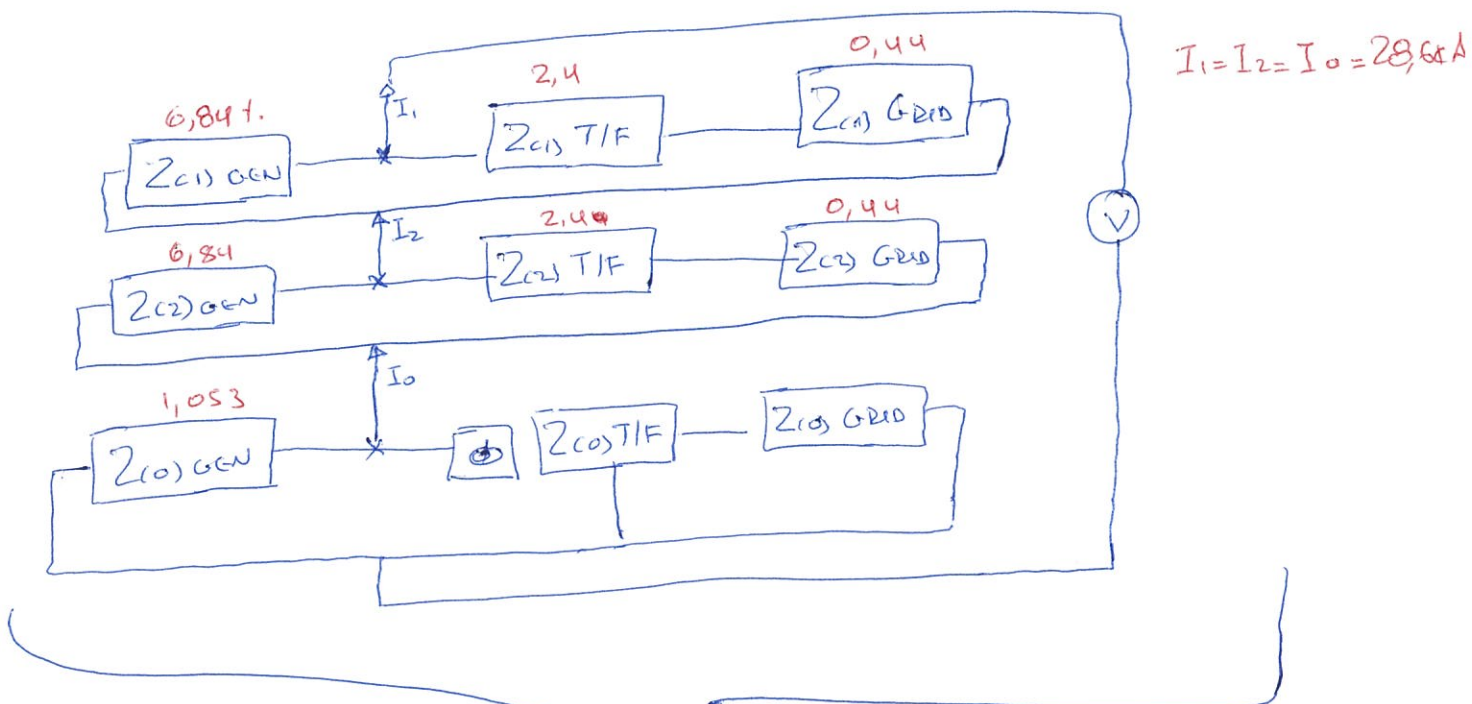
Result of Symmetrical Components analysis was

$$I_{\text{total}} = I_1 = I_2 = I_0 = 28,6 \text{ kA} \quad (= 1/3 I_k'')$$

~~Back to~~

~~chapter~~

Going back to scheme 1 of previous chapter :



$I_2 = 28,6 \text{ kA}$, split to $I_{(2) \text{ GEN}}$ and $I_{(2) \text{ T/F+GRID}}$.
 $\frac{2,4}{6,84} = 0,415$
 $Z_{\text{T/F}}$ is 0,415 of $Z_{2 \text{ GEN}}$ (smaller) thus
 current is split to $\rightarrow 0,415 \times 28,6 = 11,87$
 $\rightarrow 28,6 - 11,87 = 16,73$
 \Rightarrow Big Z = small current.
 - For I_0 we have all current coming from alternator

| | Generator Side | Grid Side + T/F |
|-------|----------------|-----------------|
| I_1 | 11,87 kA | 16,73 kA |
| I_2 | 11,87 kA | 16,73 kA |
| I_0 | 28,6 kA | 0 kA |
| Total | 52,34 kA | 33,46 kA |
| | vs 46 kA ETAP | vs 40,5 kA ETAP |