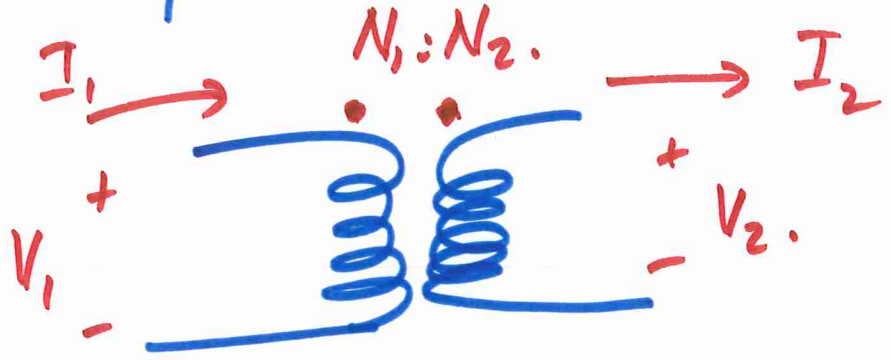


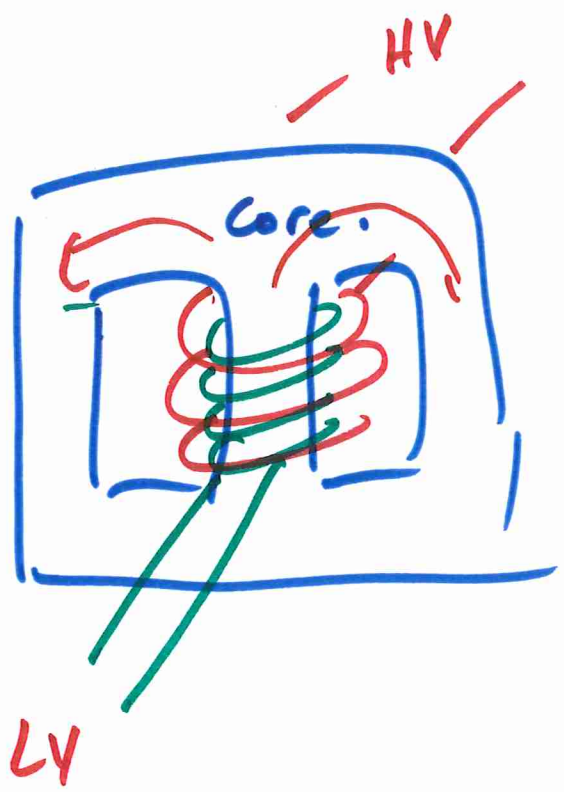
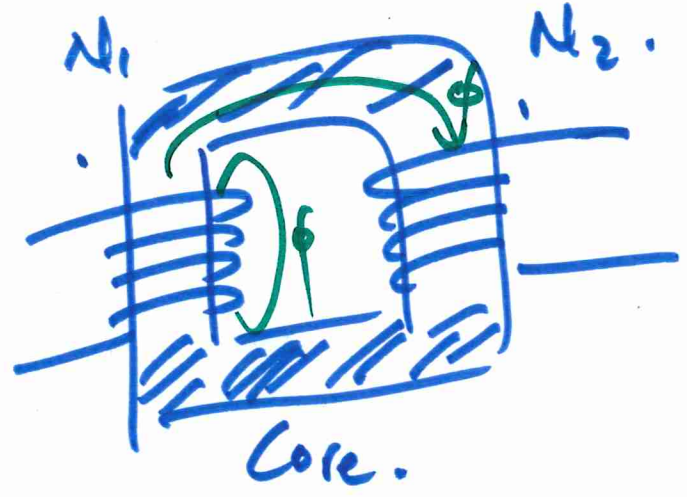
transformer:

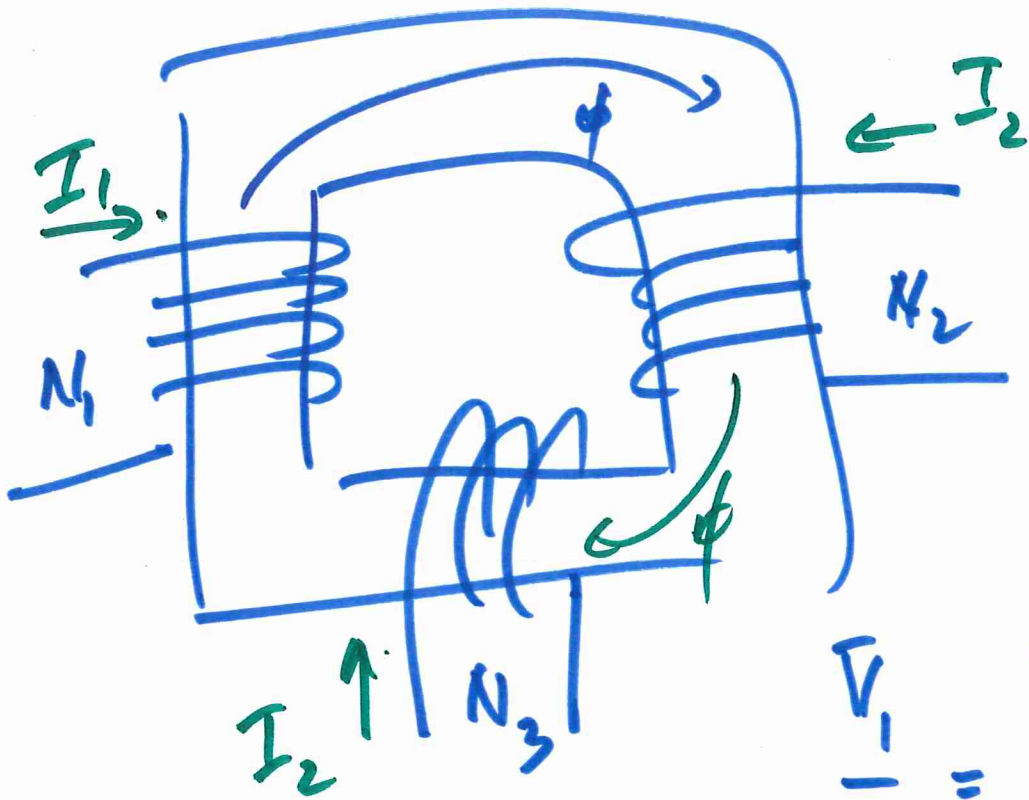
Ideal:



\times

$$\frac{\bar{V}_1}{N_1} = \frac{\bar{V}_2}{N_2}, \quad N_1 \bar{I}_1 = N_2 \bar{I}_2$$
$$\bar{S}_1 = \bar{S}_2$$



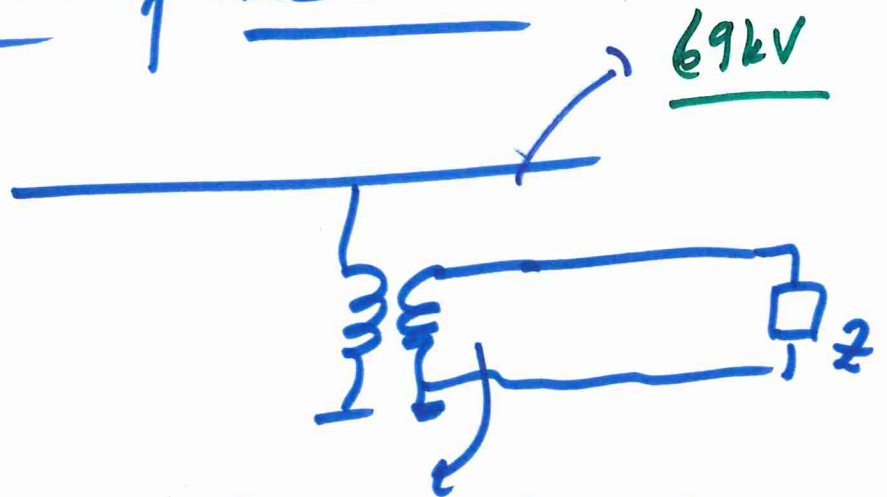


$$\frac{\bar{V}_1}{N_1} = \frac{\bar{V}_2}{N_2} = \frac{\bar{V}_3}{N_3}$$

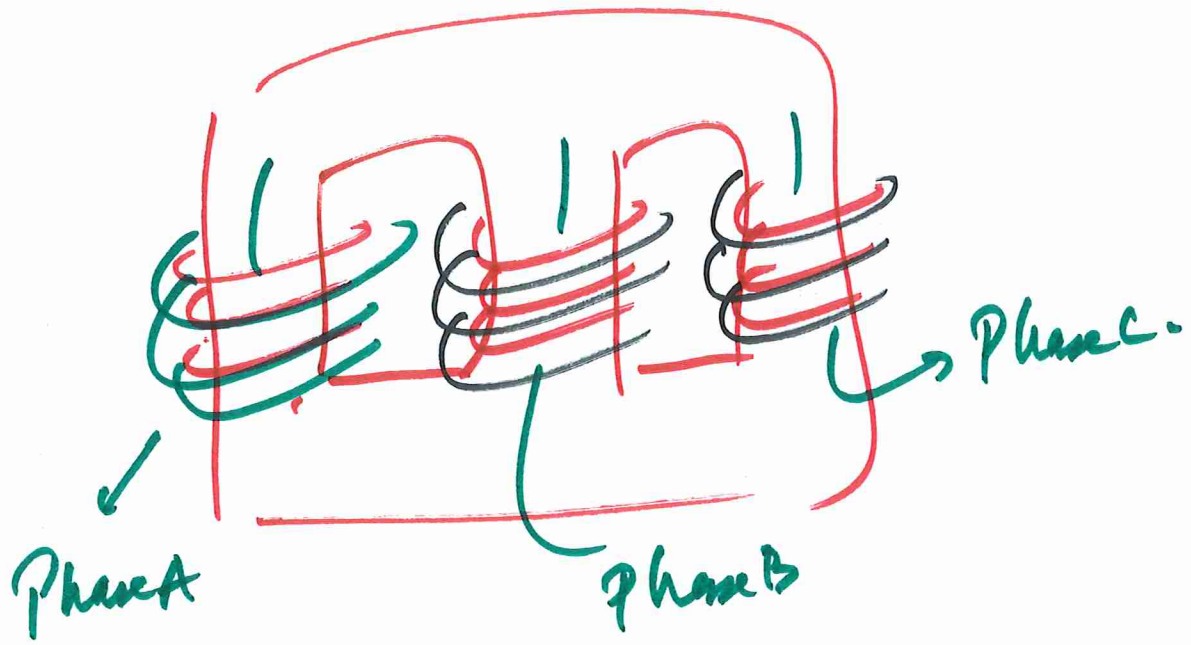
$$\underline{N_1 \bar{I}_1 + N_2 \bar{I}_2 + N_3 \bar{I}_3 = 0.}$$

Instrument transformers:

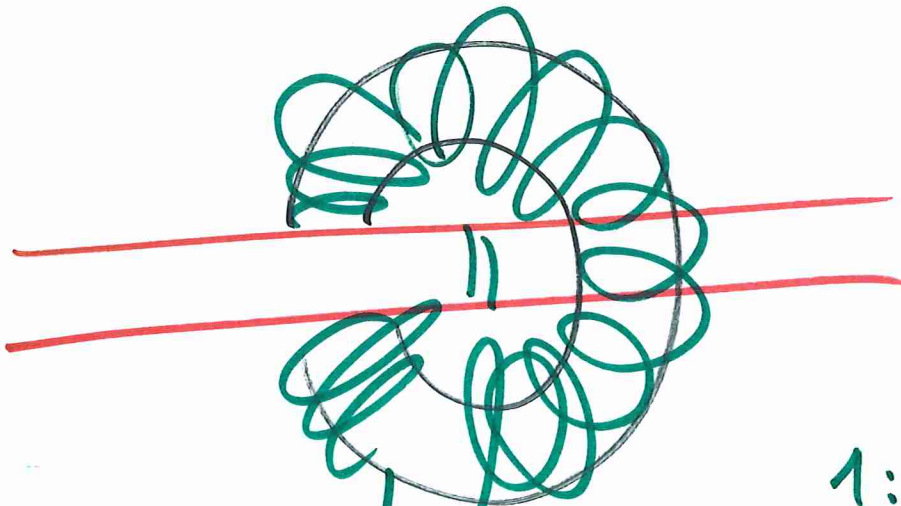
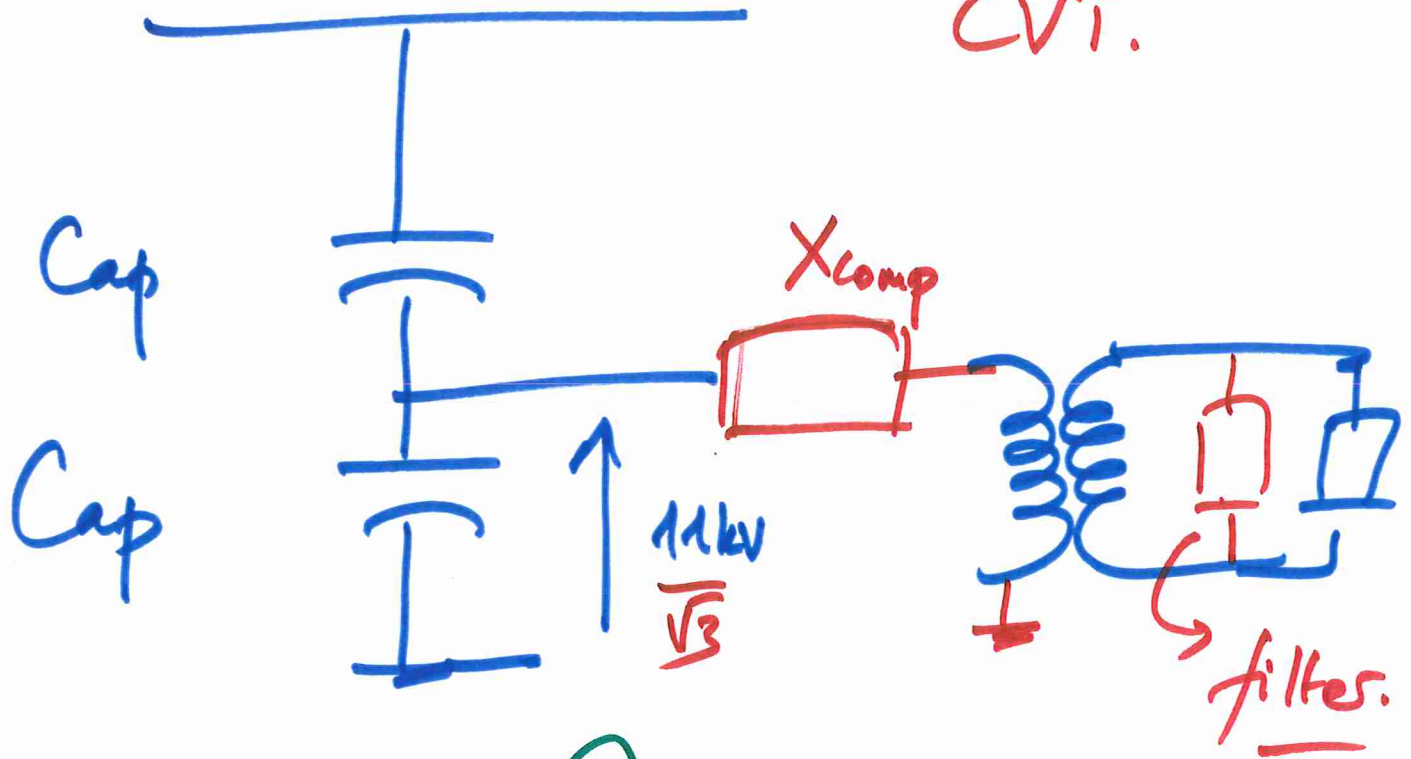
VT
CVT



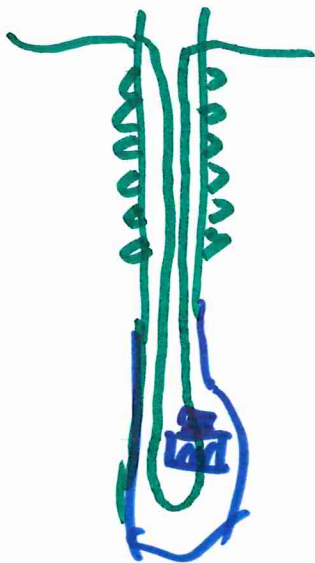
$\frac{115}{\sqrt{3}}$ to $\frac{120}{\sqrt{3}}$ Line to line.
neutral.



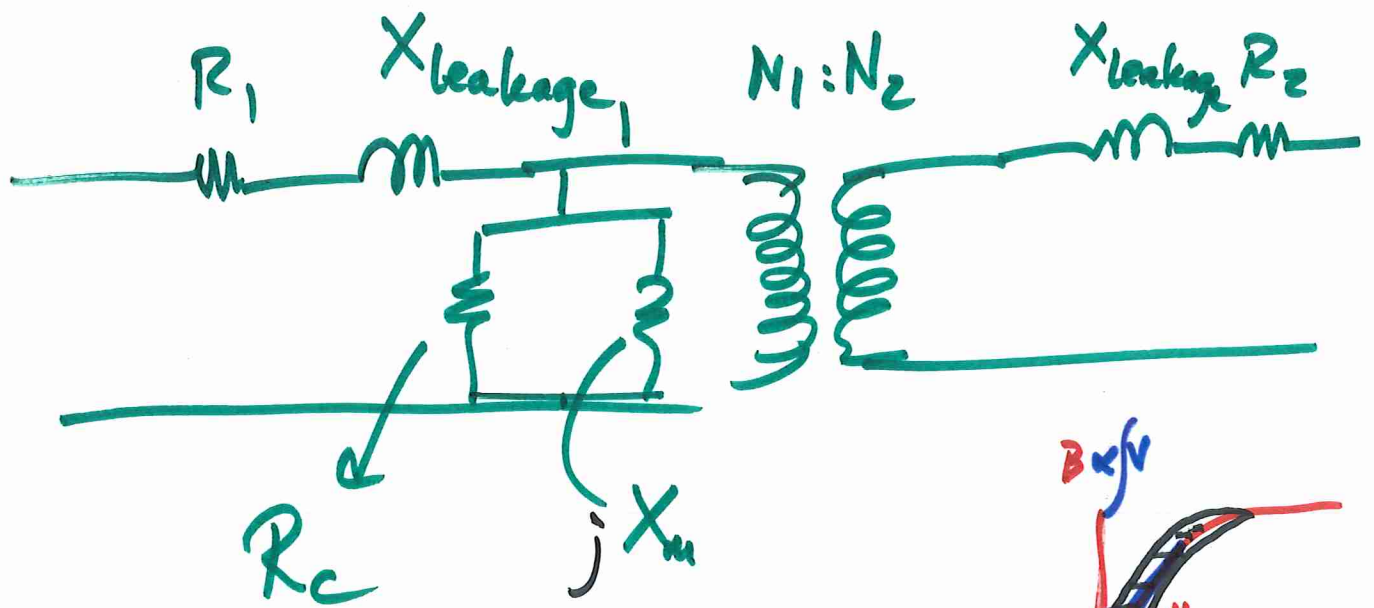
CVT.



$1: N$
turns.



1-5A



$\frac{X}{R} \sim 15-20$ times.

500 MVA \rightarrow 20 times.

