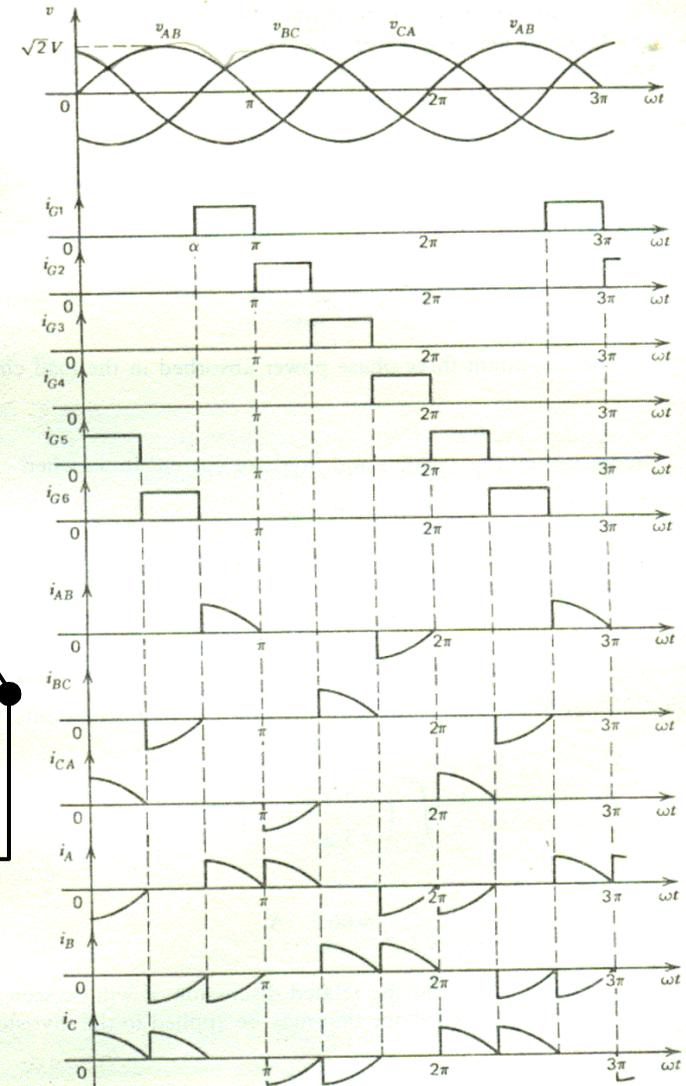
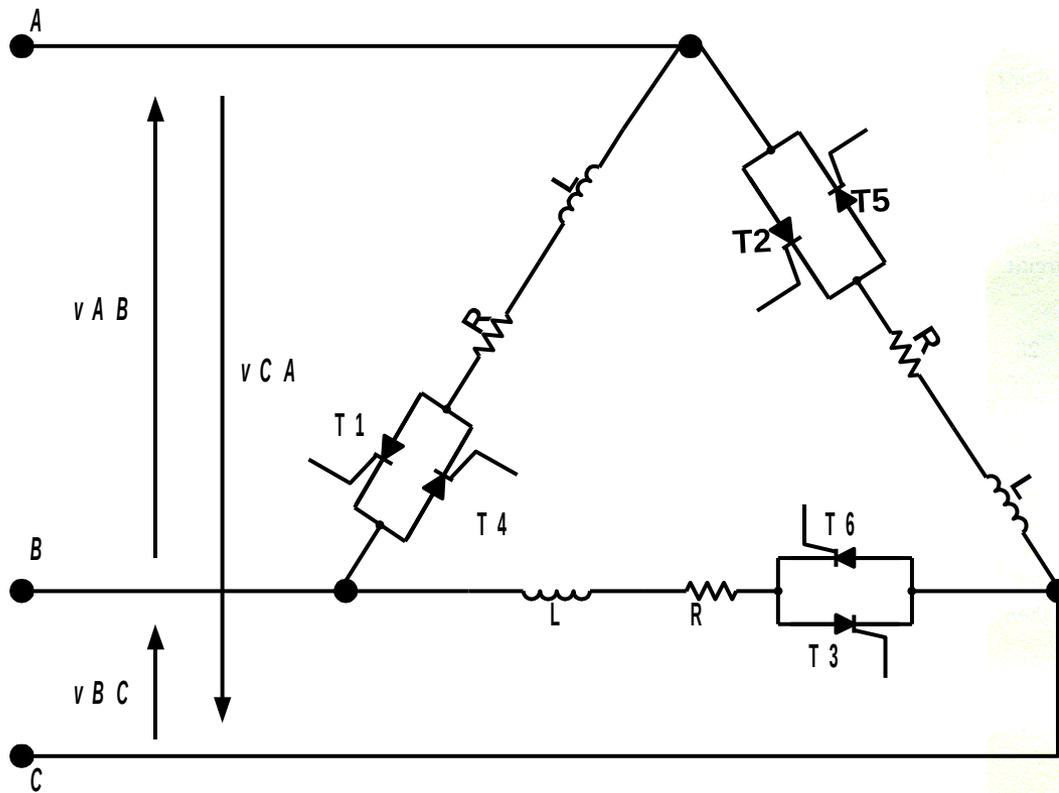


CONTROLADORES DE TENSÃO CA TRIFÁSICOS

Prof. Azauri A. de Oliveira Jr

CONTROLADORES DE TENSÃO CA TRIFÁSICOS

CONTROLADORES EM DELTA

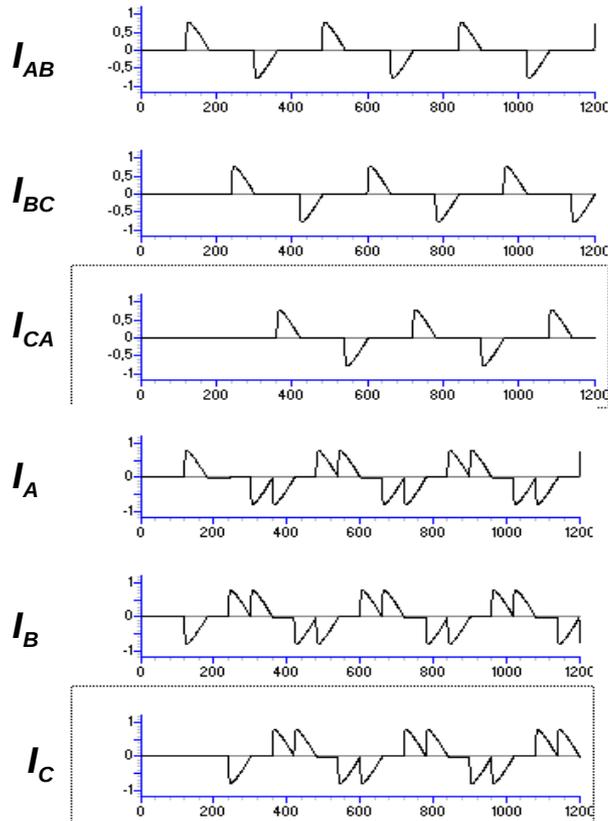


CONTROLADORES EM DELTA - CARGA R

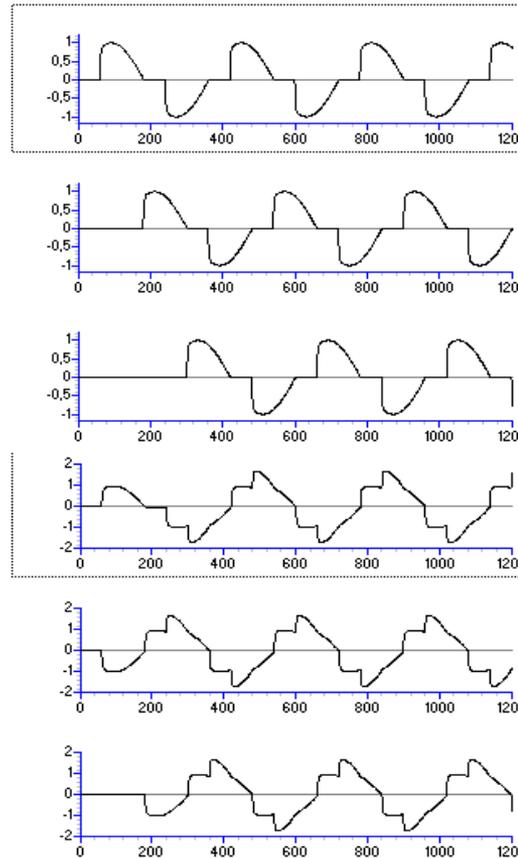
FORMAS DE ONDA DAS CORRENTES

$\alpha = 120^\circ$

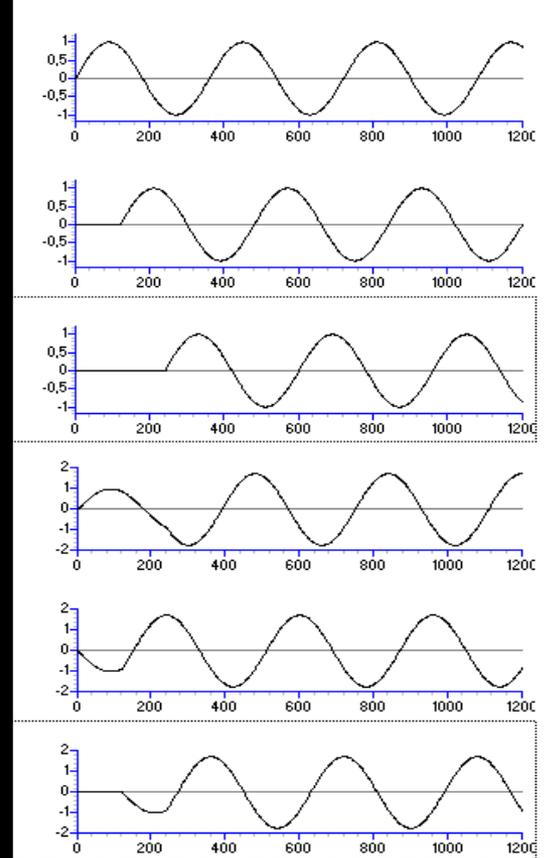
0



$\alpha = 60^\circ$



$\alpha = 0^\circ$

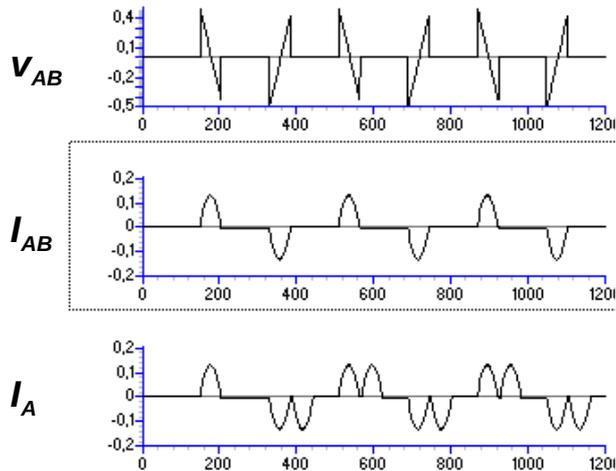


CONTROLADORES EM DELTA - CARGA RL

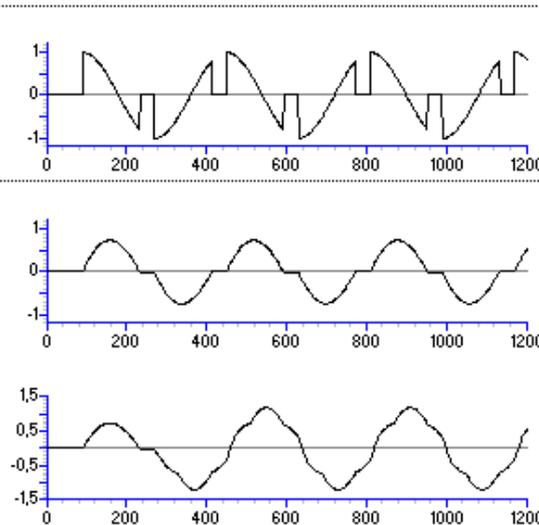
FORMAS DE ONDA DE TENSÃO E CORRENTE

ÂNGULO DA IMPEDÂNCIA $\varphi = 60^\circ$

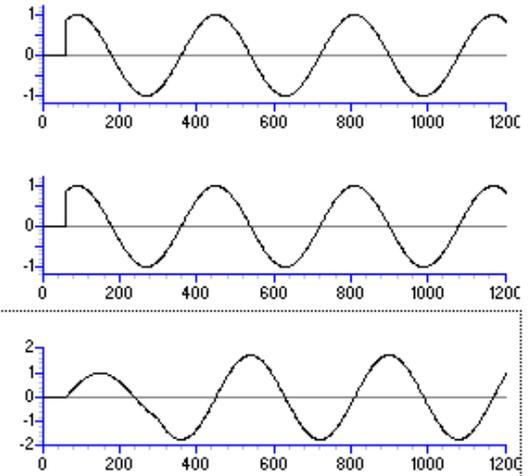
$\alpha = 150^\circ$



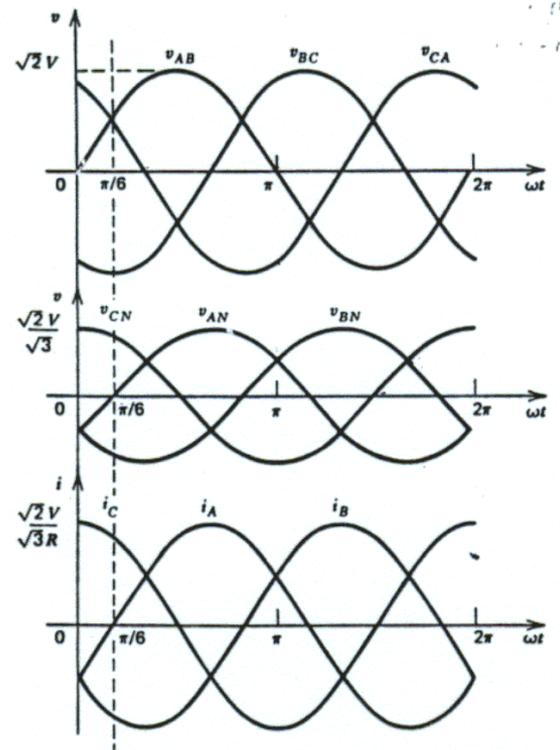
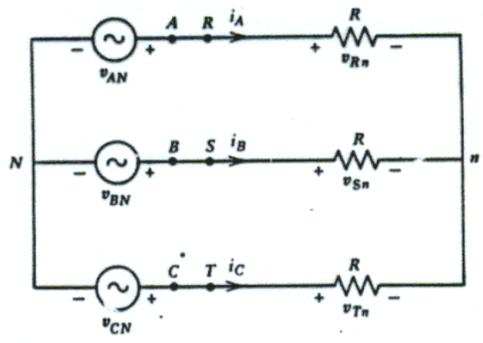
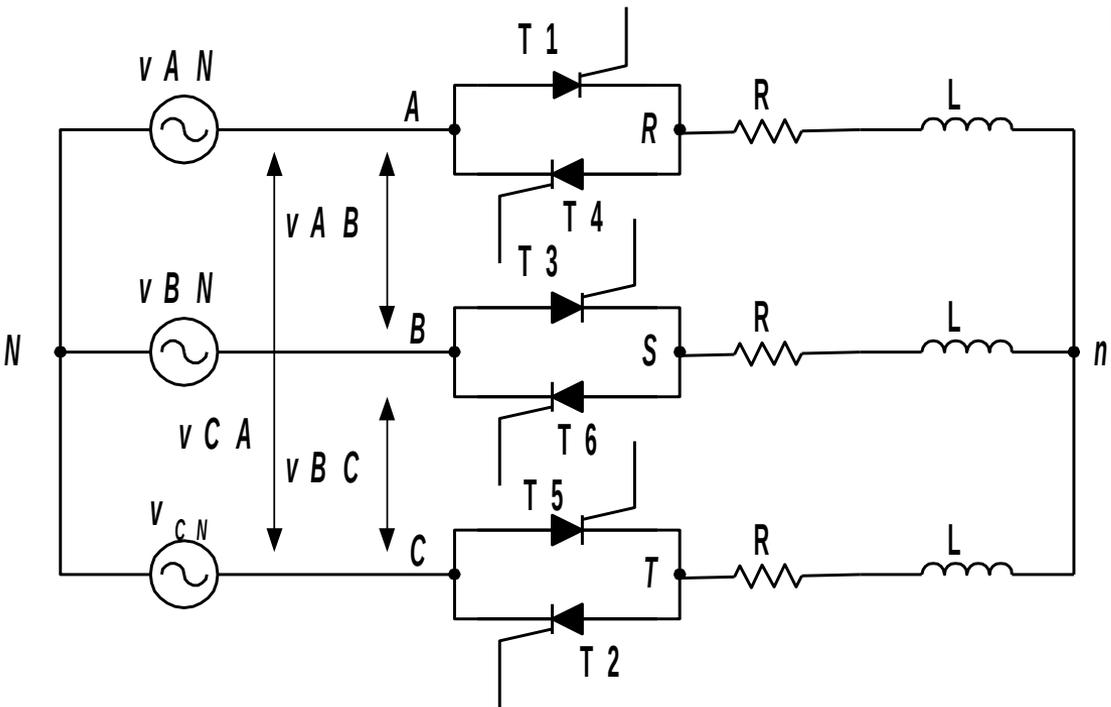
$\alpha = 90^\circ$



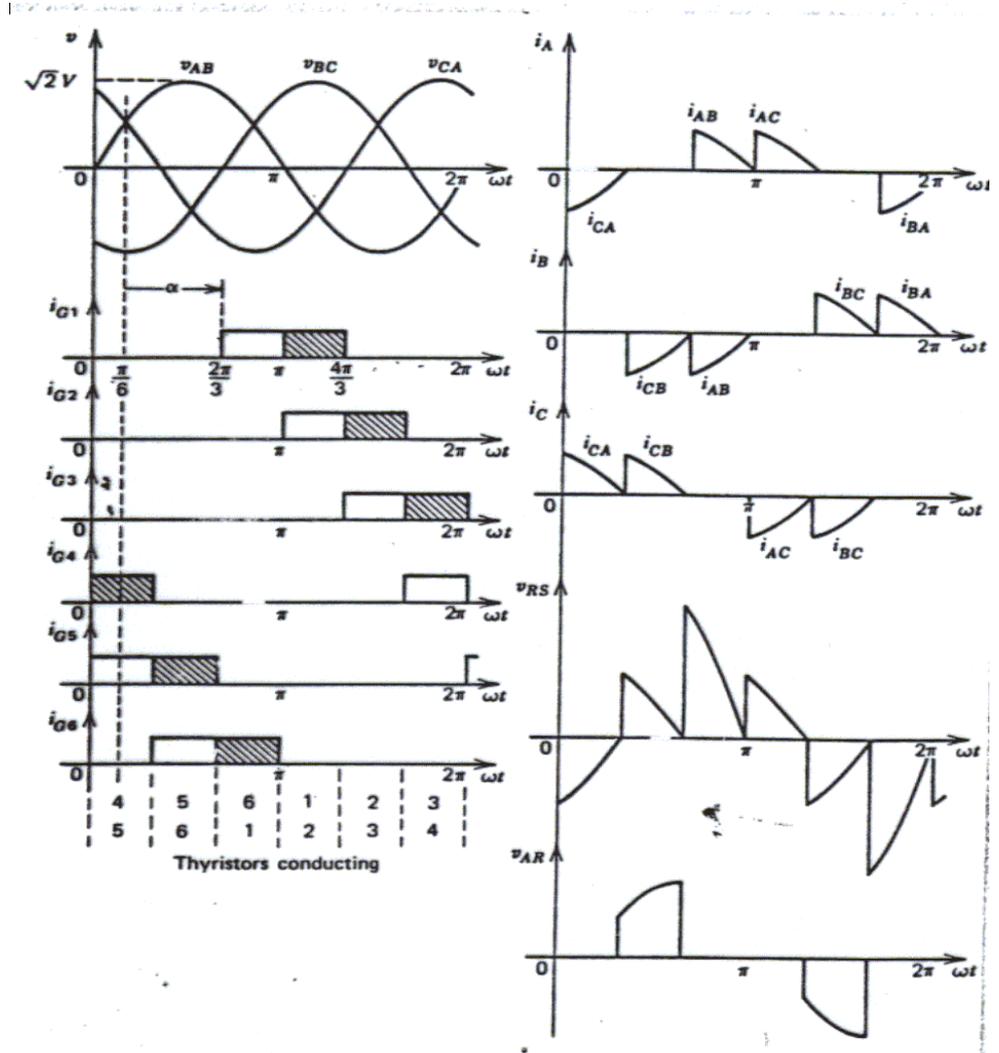
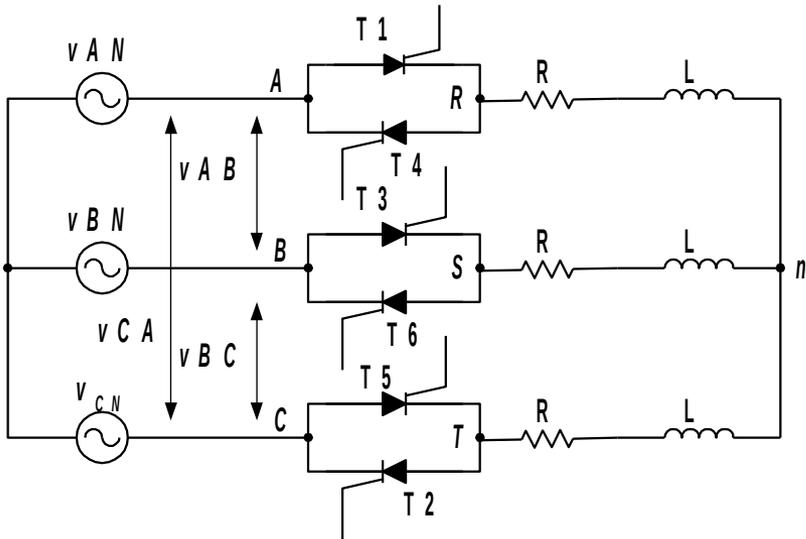
$\alpha = 60^\circ$



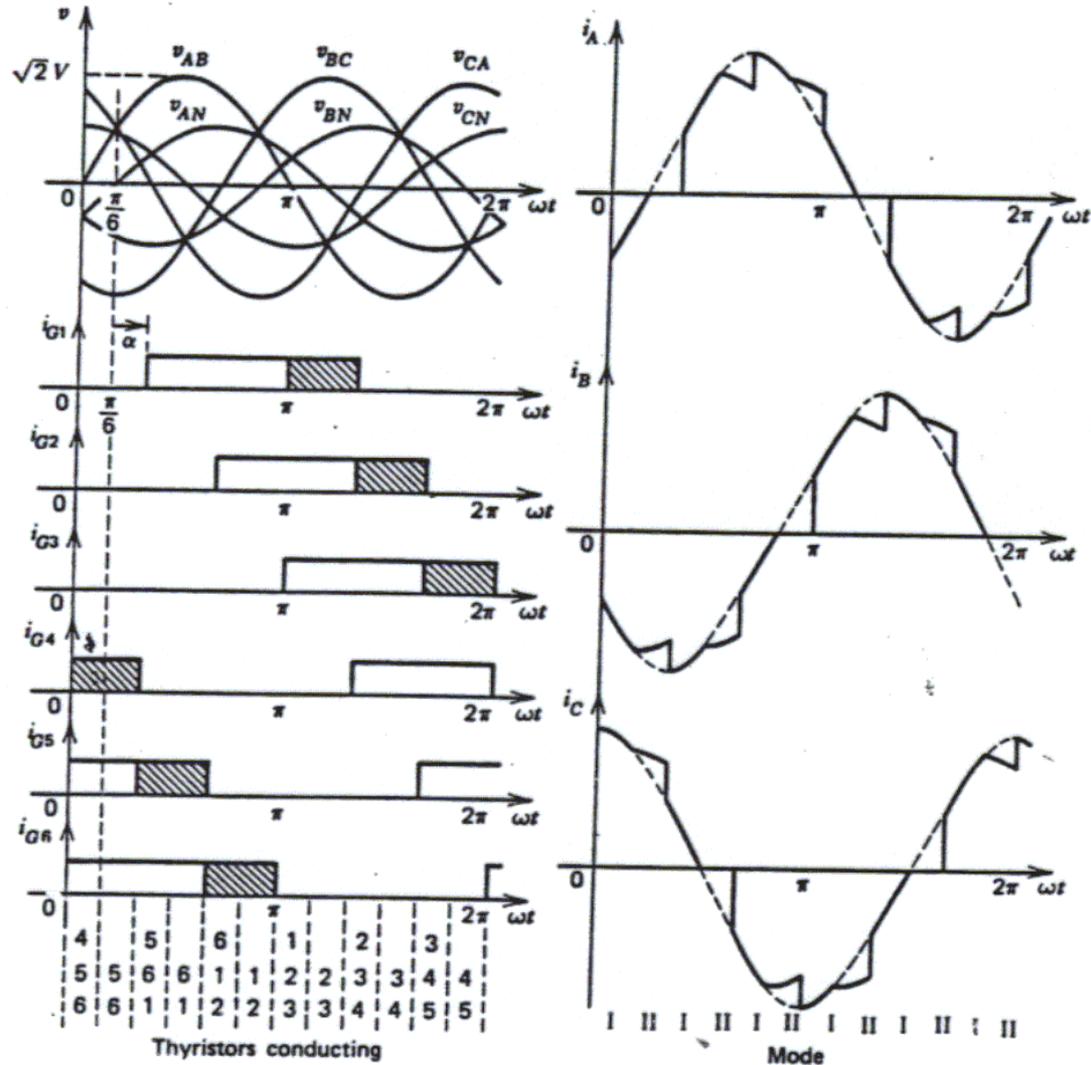
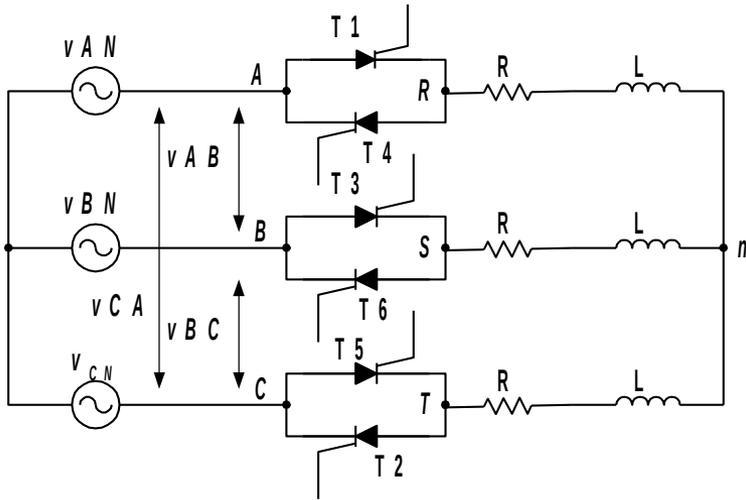
CONTROLADORES DE TENSÃO CA TRIFÁSICOS CONTROLADORES EM ESTRELA (Y)



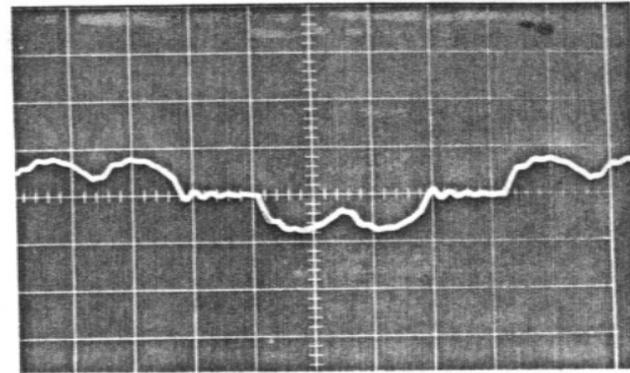
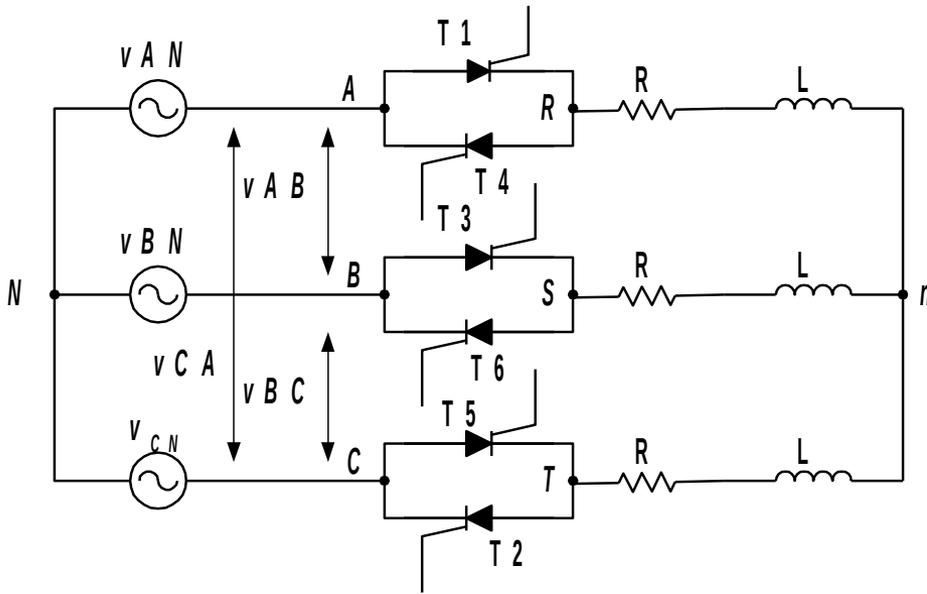
CONTROLADORES EM ESTRELA (Y) CARGA RESISTIVA ($\alpha = 90^\circ$)



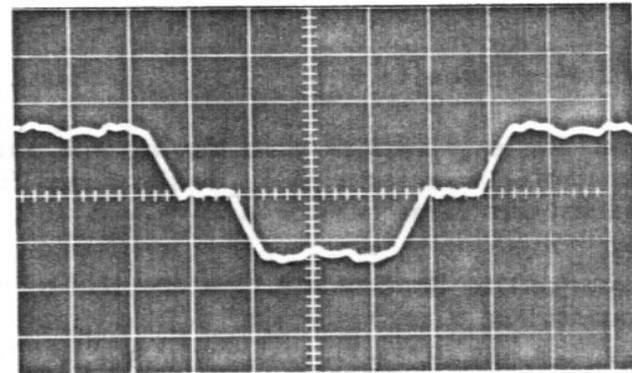
CONTROLADORES EM ESTRELA (Y) CARGA RESISTIVA ($\alpha = 30^\circ$)



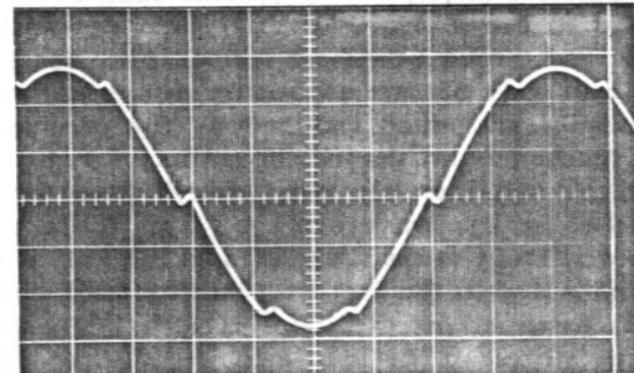
CONTROLADORES EM ESTRELA (Y) CARGA INDUTIVA



(a) $\alpha = 135^\circ$



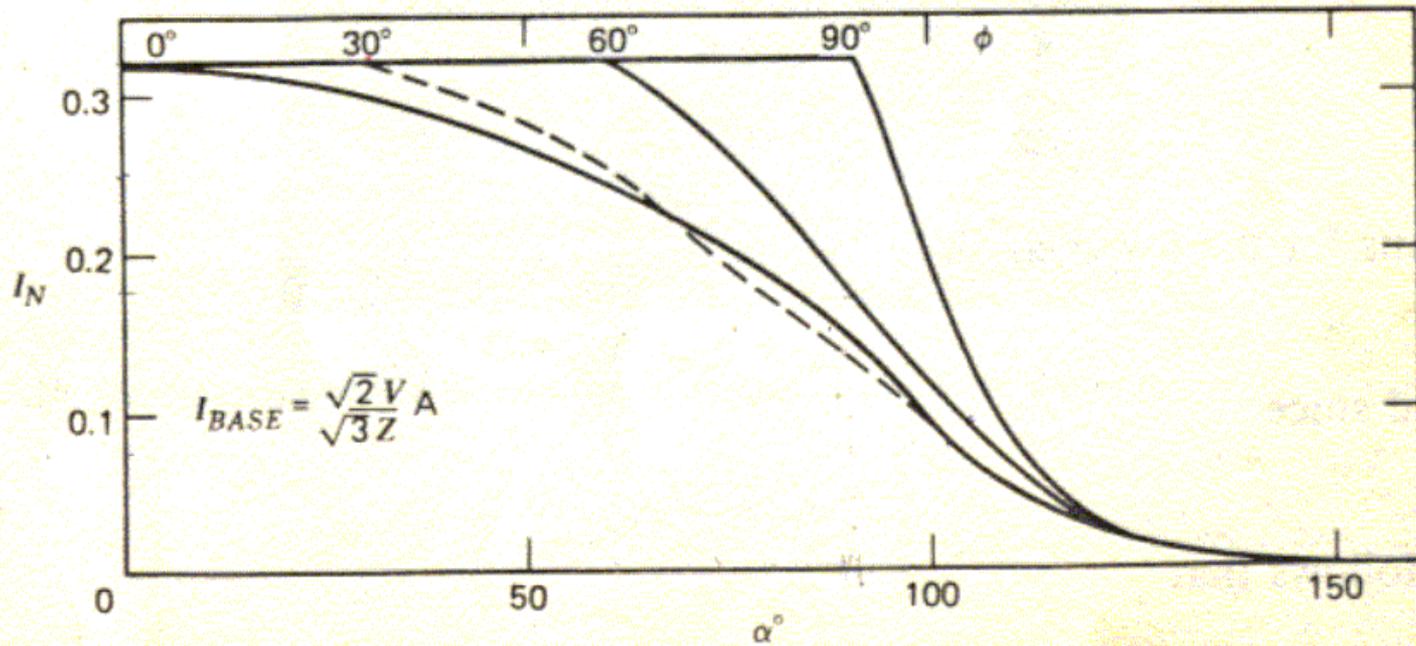
(b) $\alpha = 120^\circ$



(c) $\alpha = 90^\circ$

CONTROLADORES EM ESTRELA (Y)

Corrente Média Normalizada por Tiristor – Carga RL



CONTROLADORES EM ESTRELA (Y)

Corrente Média Normalizada por Tiristor – Carga RL

