



TROFAZNI MOSNI ISPRAVLJAČI

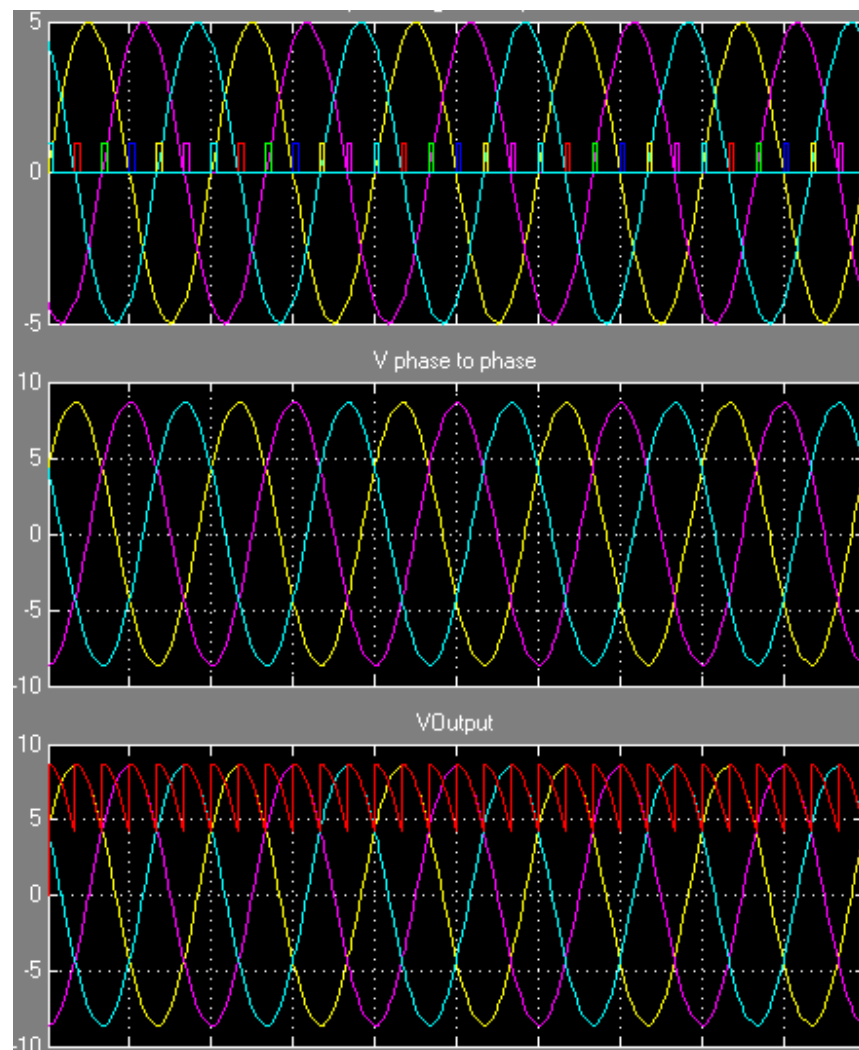
OPTEREĆENJE STRUJNI PONOR



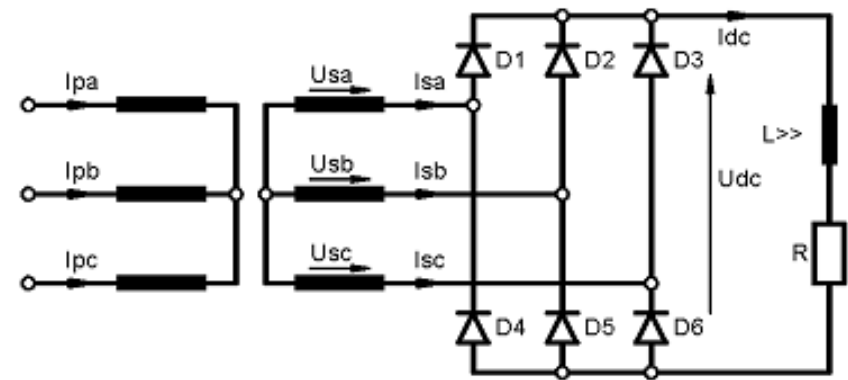
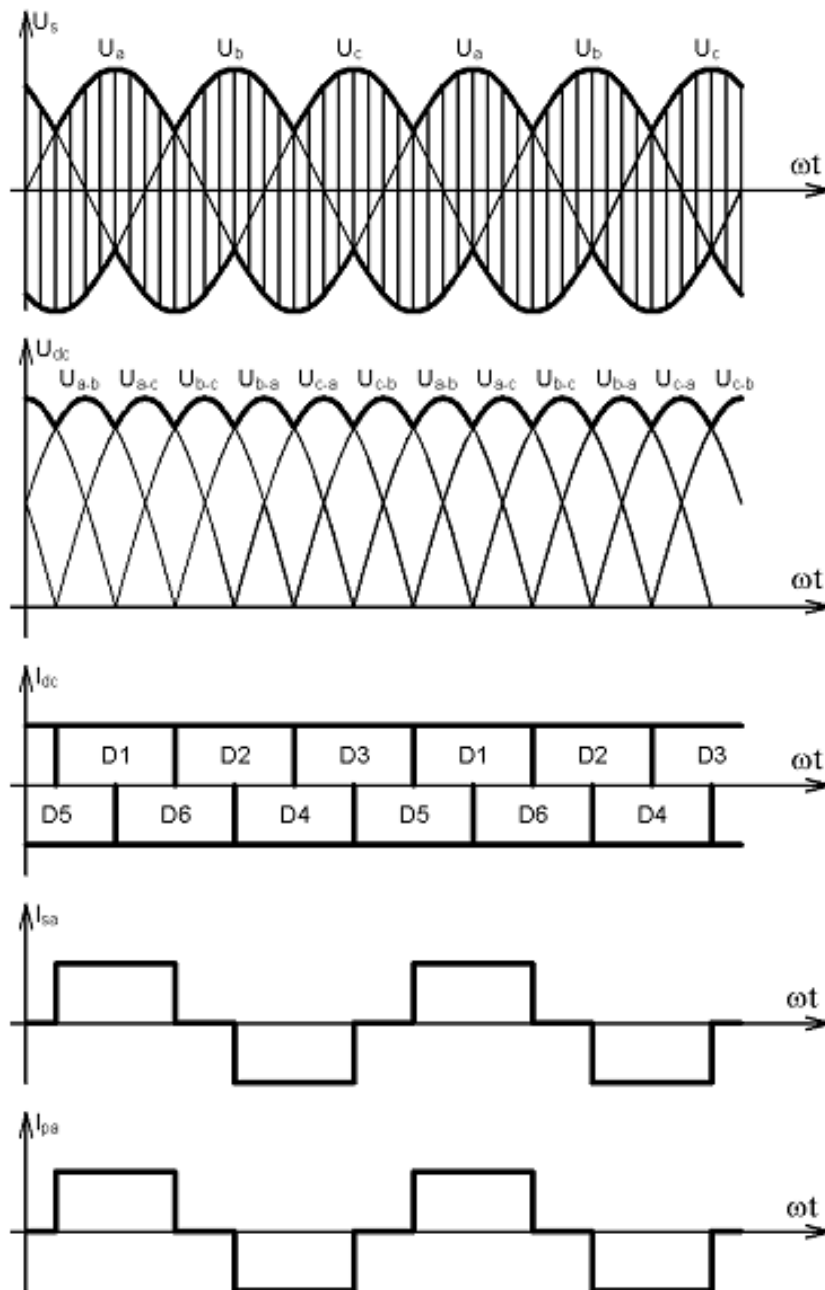
*-KARAKTERISTIČNI TALASNI OBLICI za
diodni i punoupravljivi tiristorski ispravljač*



Predmetni profesor: Dr Željko Despotović, dipl.el.inž



Diodni Trofazni Neupravljivi Ispravljač

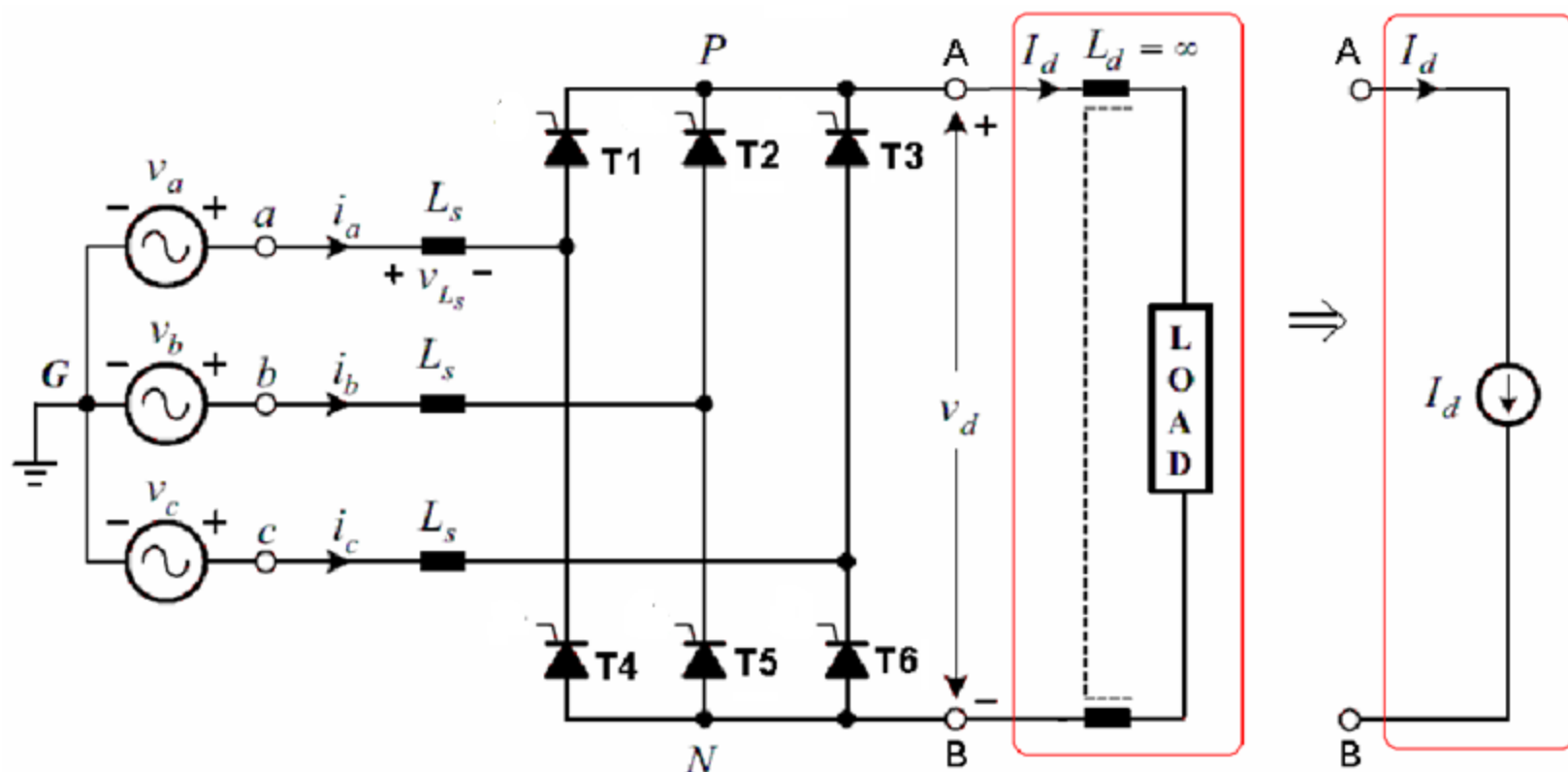


U_s -efektivna vrednost mrežnog linijskog (međufaznog) napona

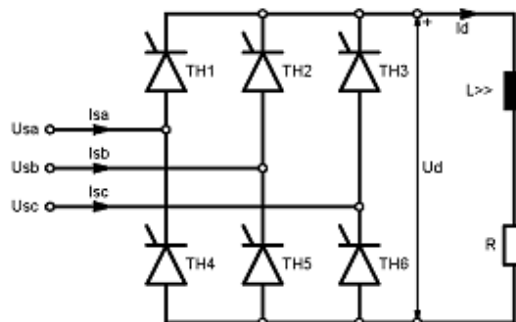
$$U_{sr} = 1.35 U_s$$

TROFAZNI MOSNI ISPRAVLJAČ (PUN MOST- 6 TIRISTORA)

TOPOLOGIJA

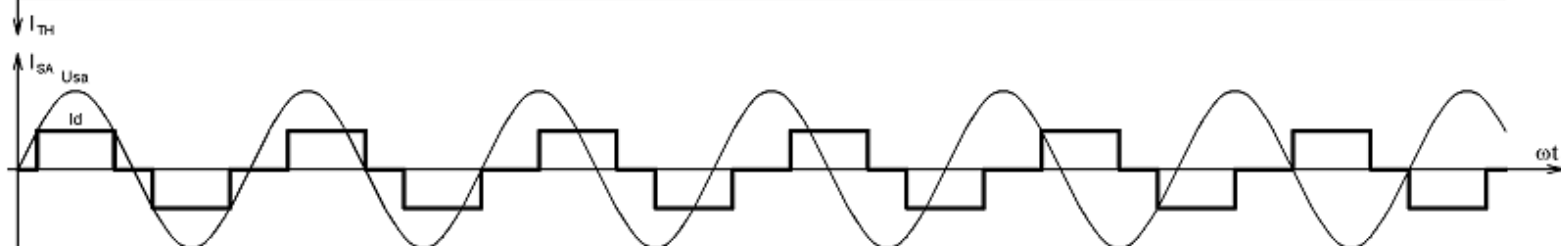
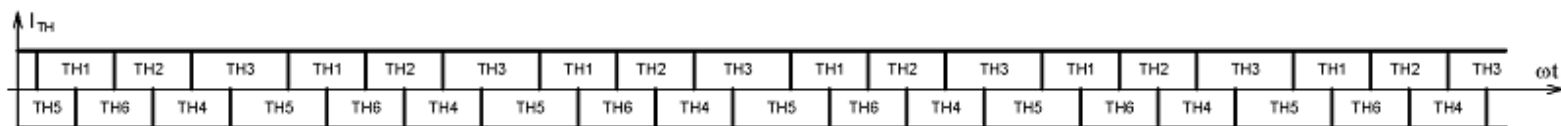
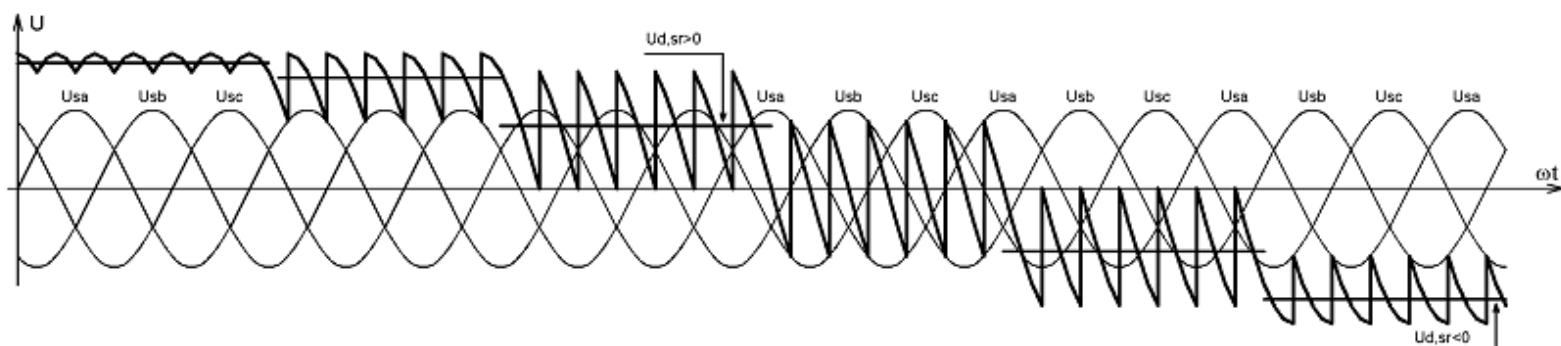
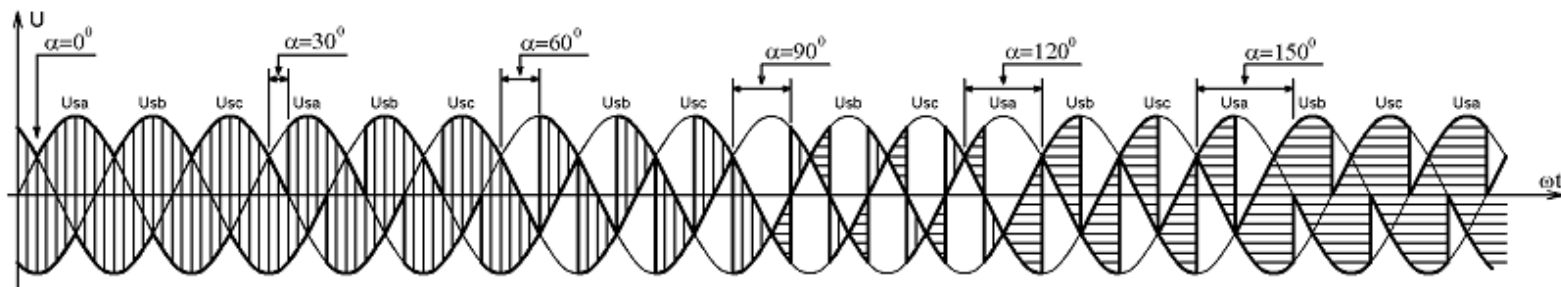


Tiristorski Trofazni Punoupravljivi Ispravljac

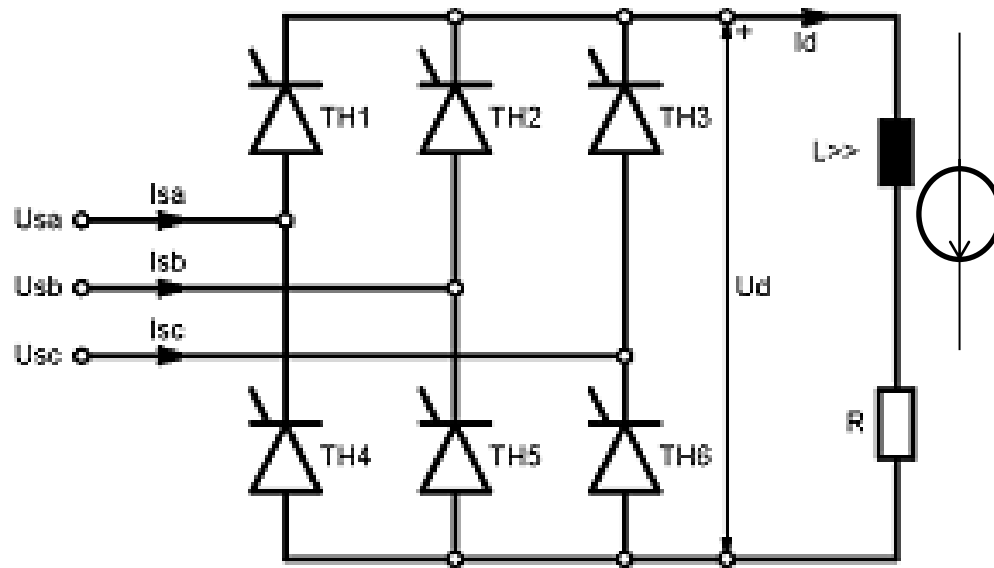


$$U_{SR} = U_{SR,0} \cos \alpha$$

$$U_{SR,0} = \frac{3\sqrt{6}}{\pi} U_{S,f} = \frac{3\sqrt{6}}{\pi} \frac{U_S}{\sqrt{3}} = \frac{3\sqrt{2}}{\pi} U_S = 1,35 \cdot U_S$$



Karakteristični talasni oblici i
srednja vrednost napona na opterećenju
ugao upravljanja $\alpha=0^\circ$ (ugao vođenja tiristora 120°)

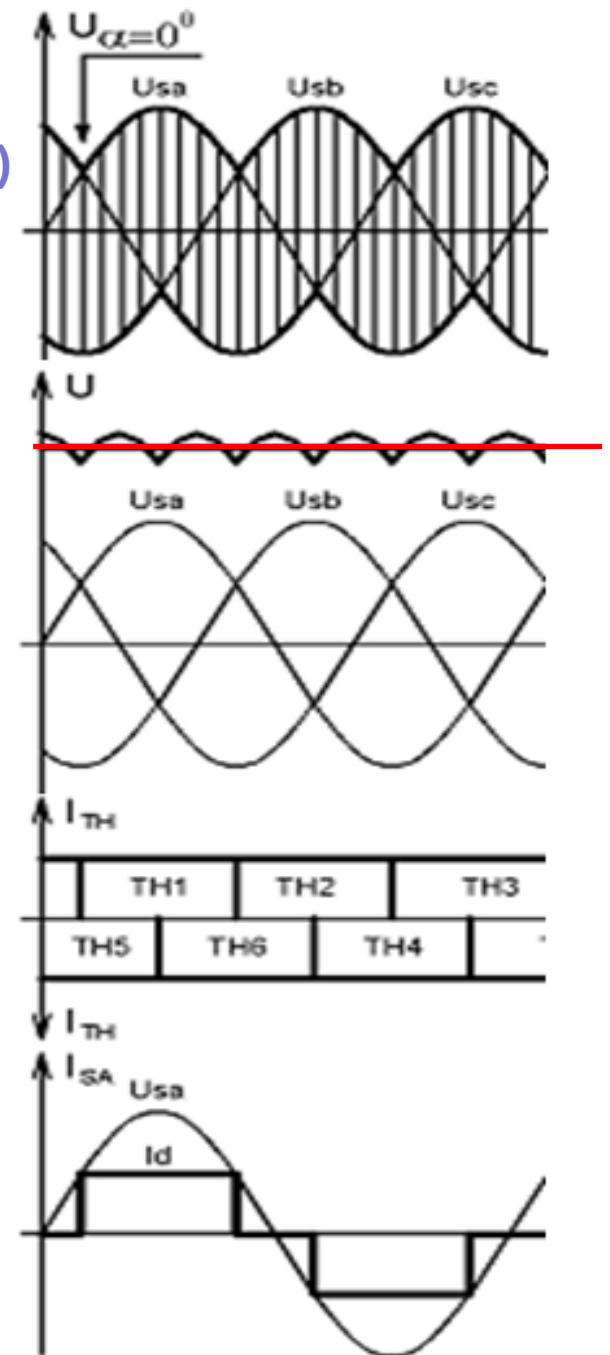


$$U_{SR} = U_{SR,0} \cos \alpha$$

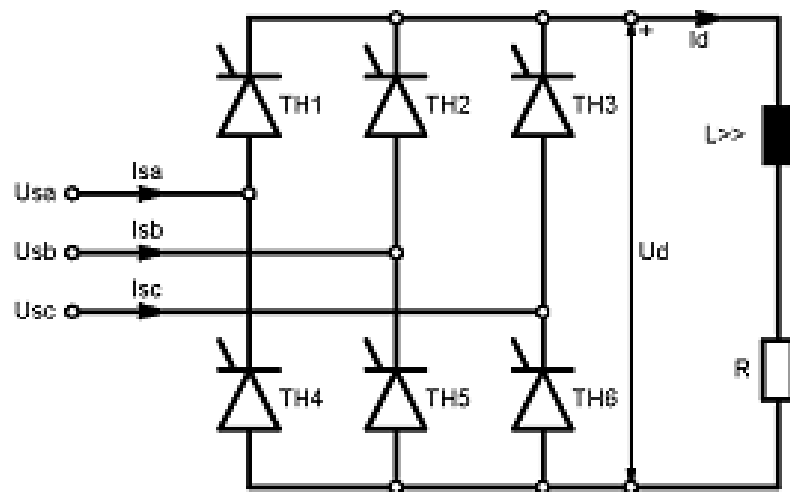
$$U_{SR,0} = \frac{3\sqrt{6}}{\pi} U_{S,f} = \frac{3\sqrt{6}}{\pi} \frac{U_S}{\sqrt{3}} = \frac{3\sqrt{2}}{\pi} U_S = 1,35 \cdot U_S$$

U_S -efektivna vrednost mrežnog linijskog
(međufaznog) napona

$$U_{sr} = 1.35 U_s$$

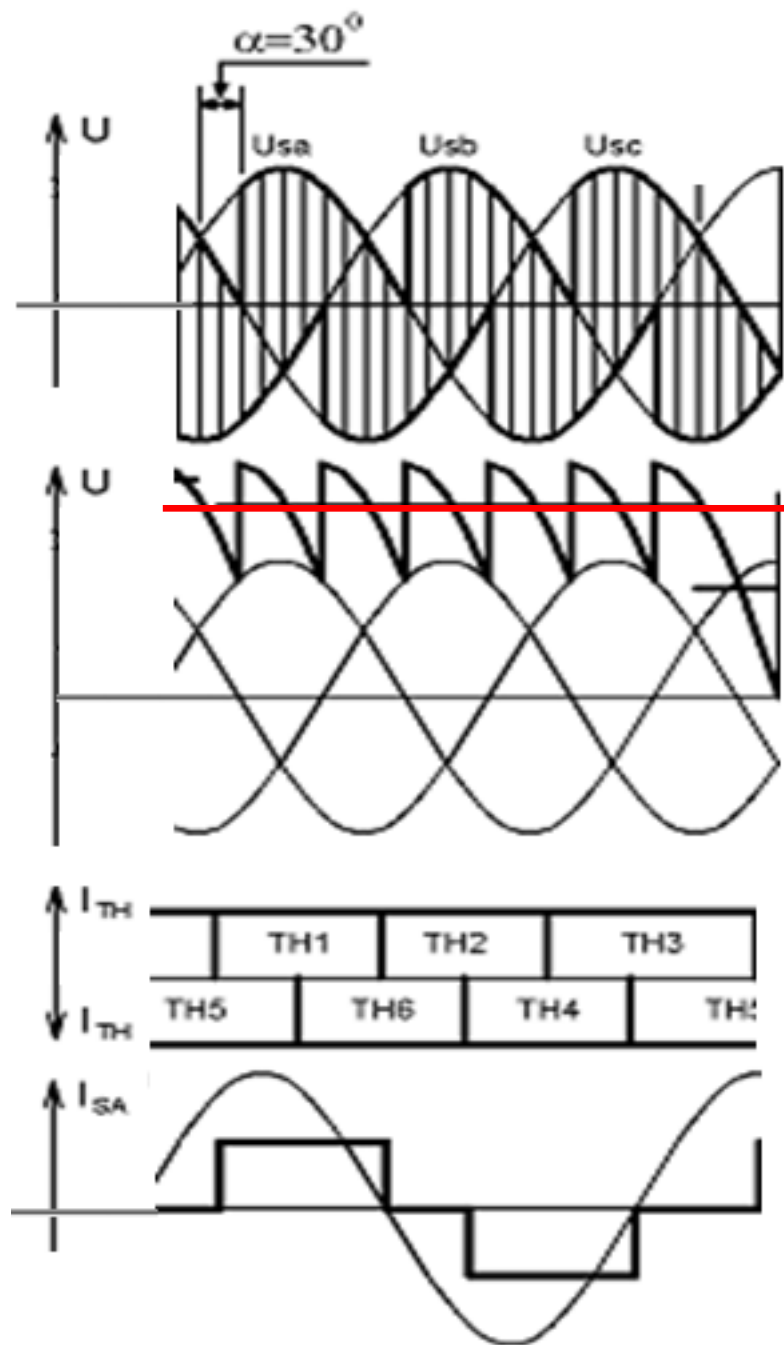


Karakteristični talasni oblici i
srednja vrednost napona na opterećenju
ugao upravljanja $\alpha=30^\circ$ (ugao vođenja
tiristora 120°)

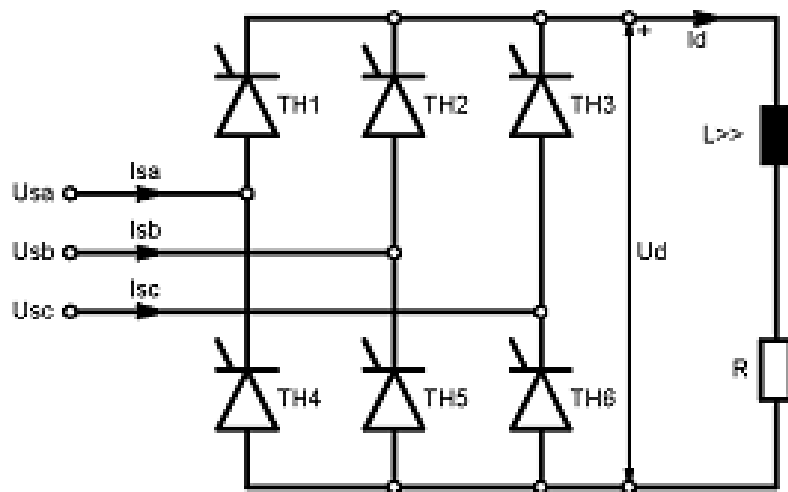


U_s-efektivna vrednost mrežnog linijskog (međufaznog)
napona

$$U_{sr} = 1.35 U_s \cos 30^\circ = 1.17 U_s$$

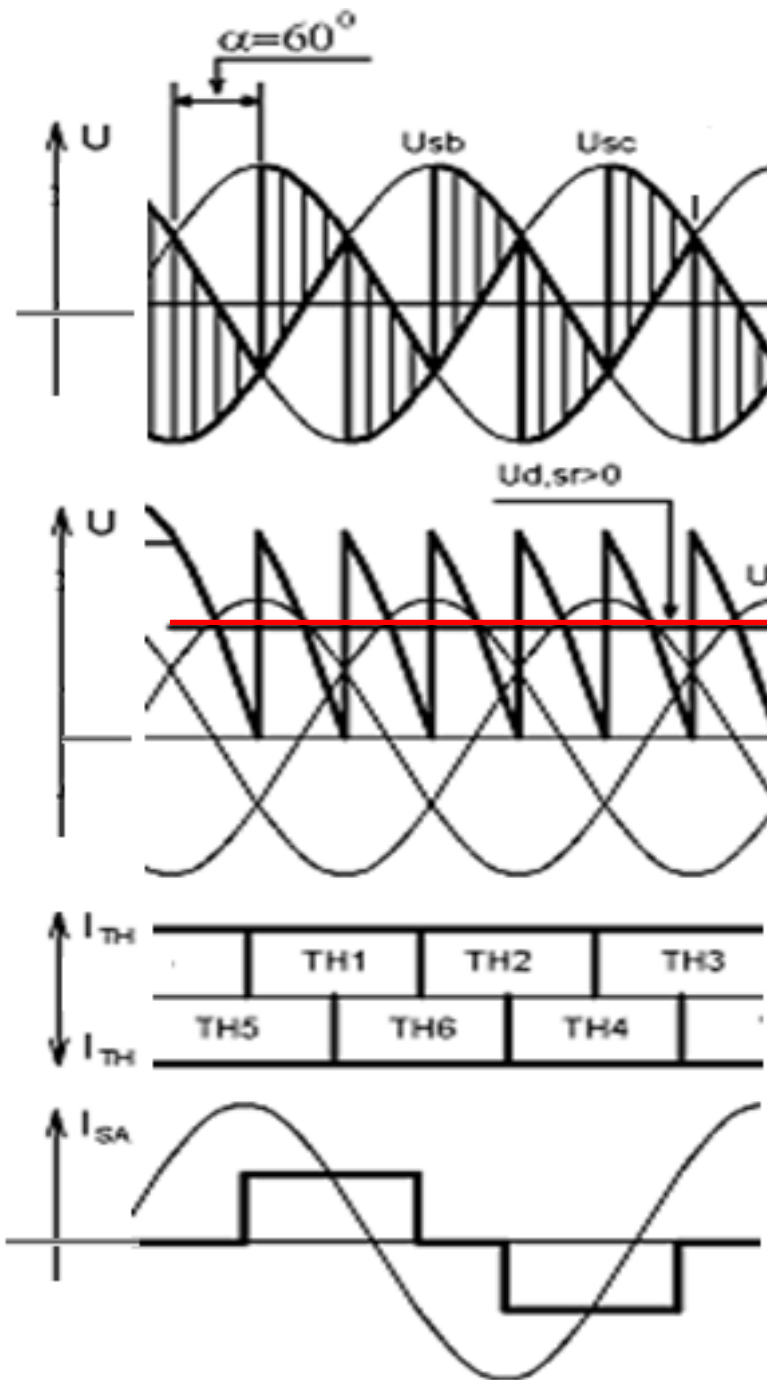


Karakteristični talasni oblici i
srednja vrednost napona na opterećenju
ugao upravljanja $\alpha=60^\circ$ (ugao vođenja
tiristora 120°)

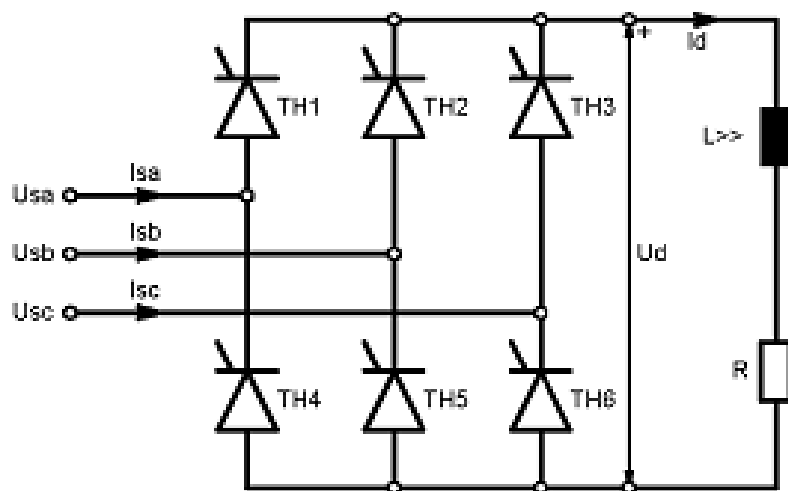


U_s-efektivna vrednost mrežnog linijskog (međufaznog)
napona

$$U_{sr} = 1.35 U_s \cos 60^\circ = 0.675 U_s$$

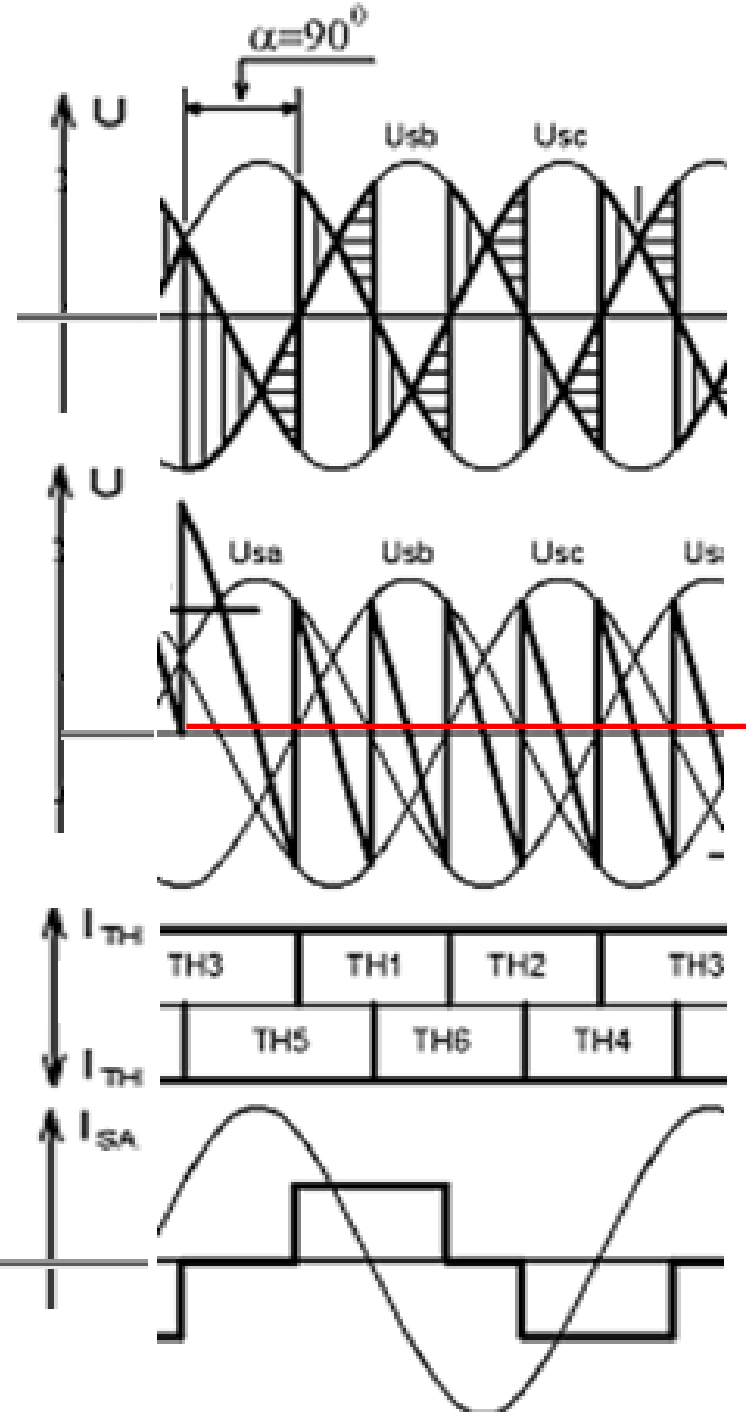


Karakteristični talasni oblici i
srednja vrednost napona na opterećenju
ugao upravljanja $\alpha=90^\circ$ (ugao vođenja
tiristora 120°)

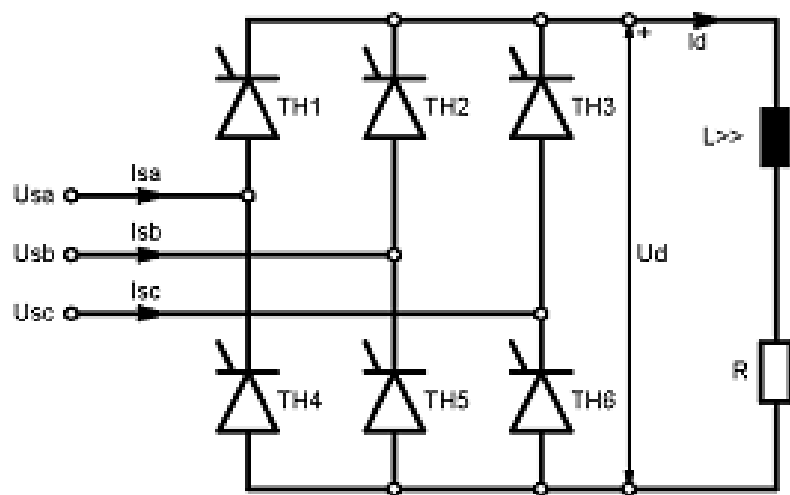


U_s-efektivna vrednost mrežnog linijskog (međufaznog)
napona

$$U_{sr} = 1.35 U_s \cos 90^\circ = 0$$

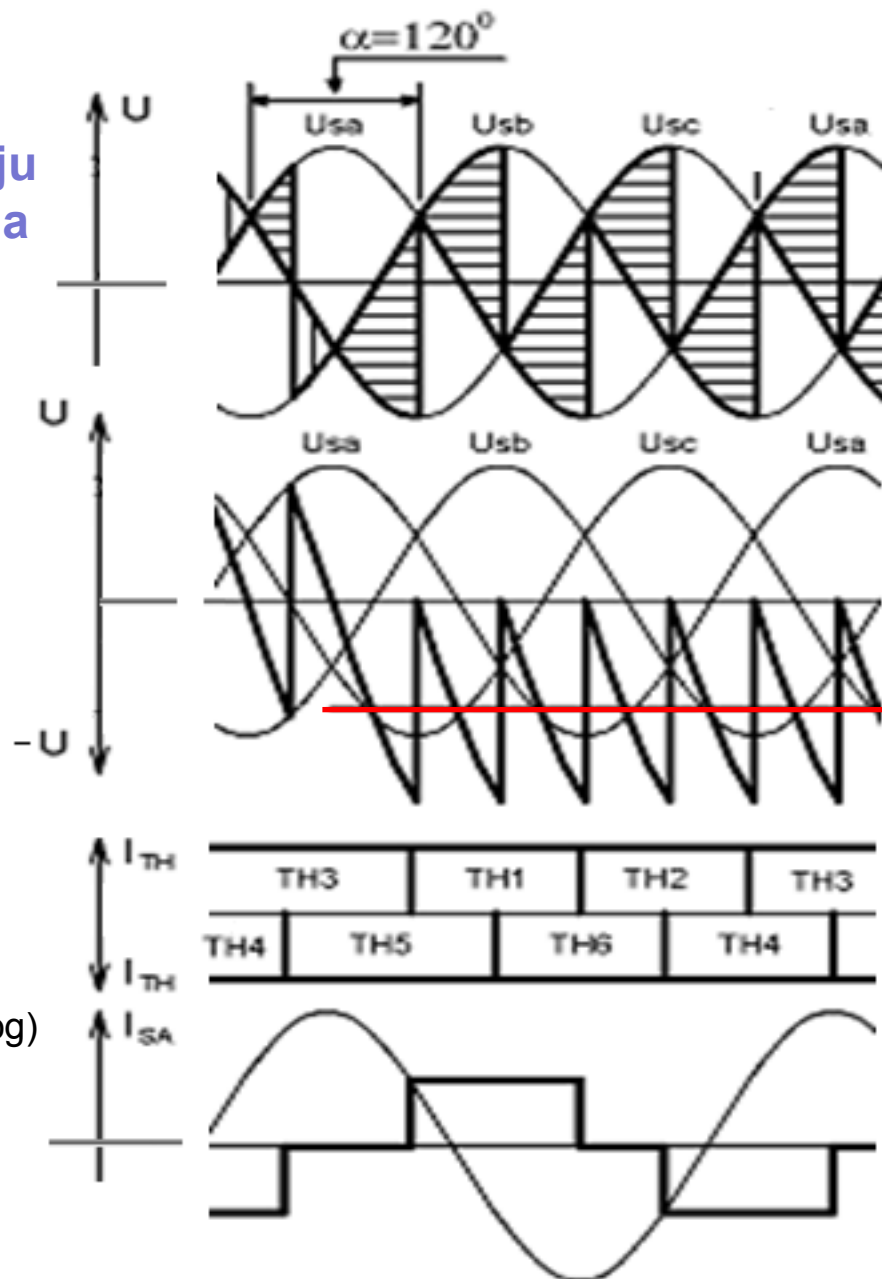


Karakteristični talasni oblici i
srednja vrednost napona na opterećenju
ugao upravljanja $\alpha=120^\circ$ (ugao vođenja
tiristora 120°)

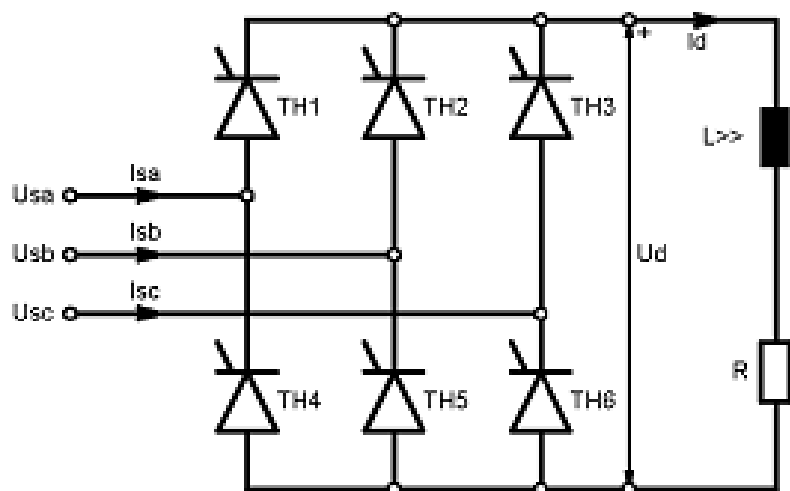


U_s-efektivna vrednost mrežnog linijskog (međufaznog)
napona

$$U_{sr} = 1.35 U_s \cos 120^\circ = -0.675 U_s$$

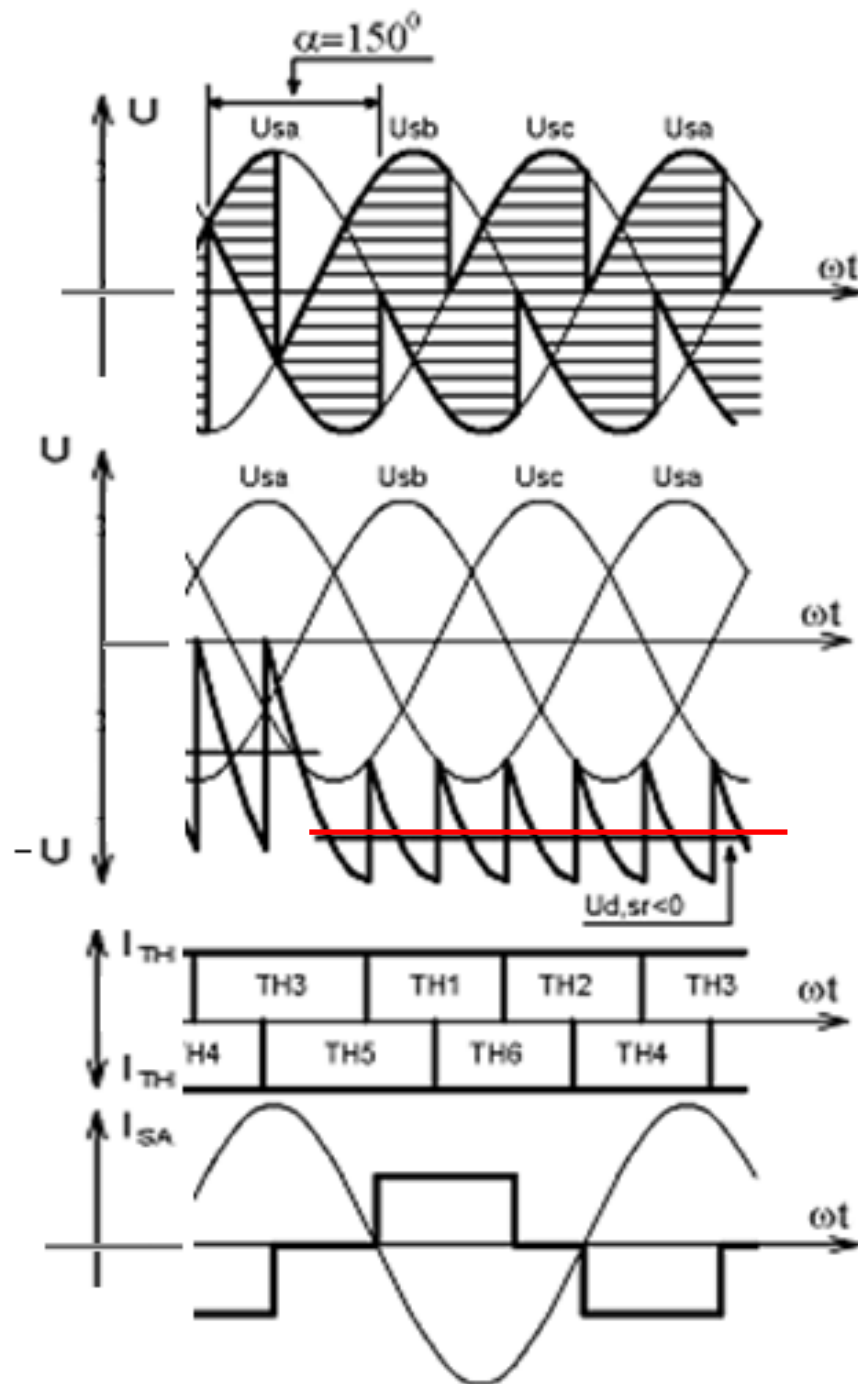


Karakteristični talasni oblici i
srednja vrednost napona na opterećenju
ugao upravljanja $\alpha=150^\circ$ (ugao vođenja
tiristora 120°)



U_s-efektivna vrednost mrežnog linijskog (međufaznog)
napona

$$U_{sr} = 1.35 U_s \cos 150^\circ = -0.117 U_s$$



Hvala na pažnji!!
Pitanja???



Novembar 2017