



湖南三一工业职业技术学院
HUNAN SANY POLYTECHNIC COLLEGE

旋转磁场的产生

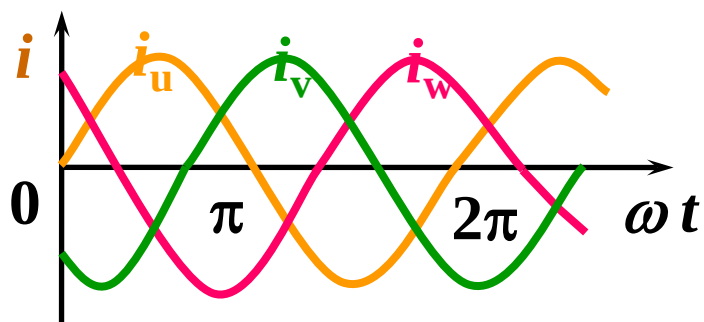




旋转磁场

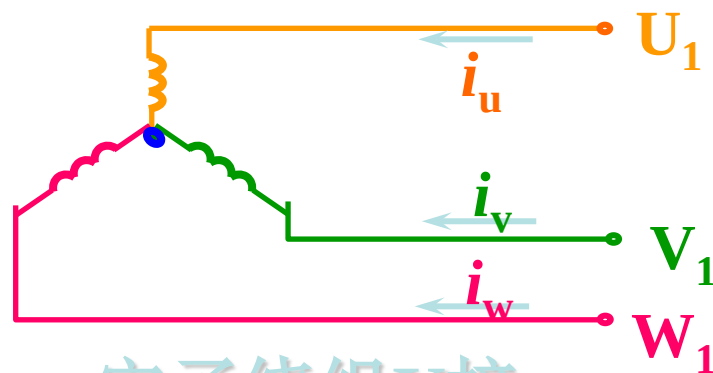
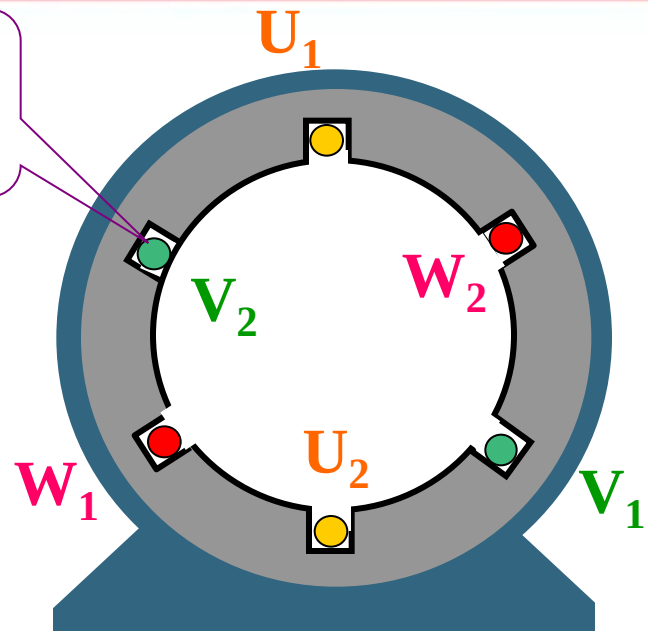
旋转磁场的产生

三相异步电动机的定子铁心中放入三相定子绕组。
接入三相对称电源。



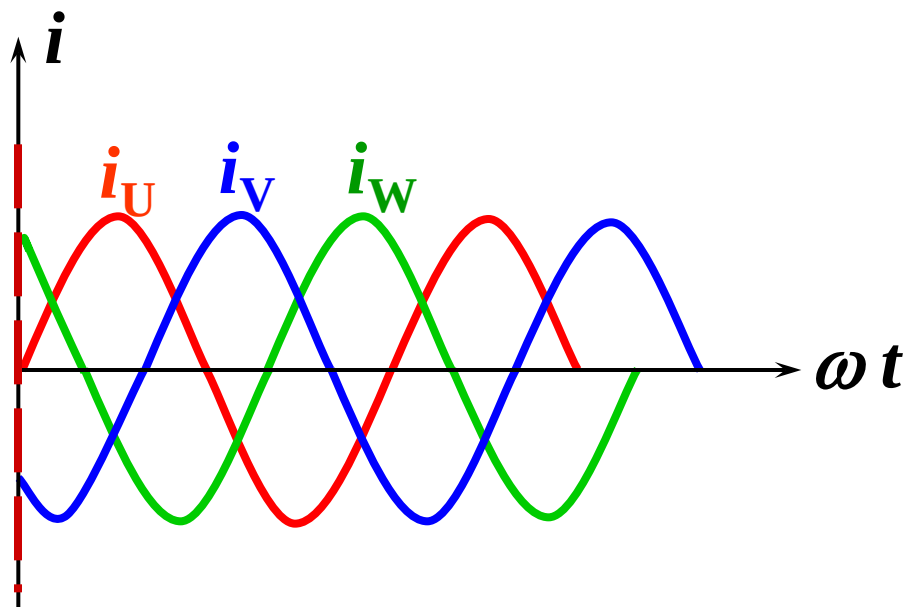
$$\begin{aligned}i_u &= I_m \sin \omega t \\i_v &= I_m \sin(\omega t - 120^\circ) \\i_w &= I_m \sin(\omega t + 120^\circ)\end{aligned}$$

定子绕组



定子绕组Y接

旋转磁场的产生



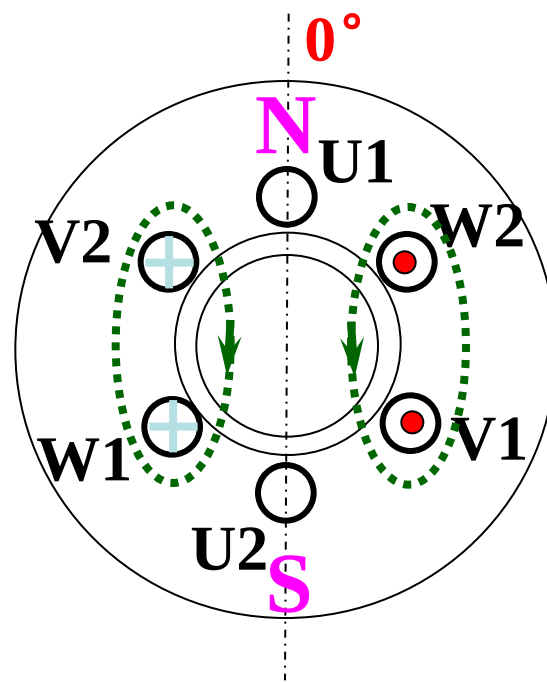
$\omega t = 0^\circ$ 时

设：电流的流入端用 $\oplus$ 表示
电流的流出端用 $\odot$ 表示

$$i_U = 0$$

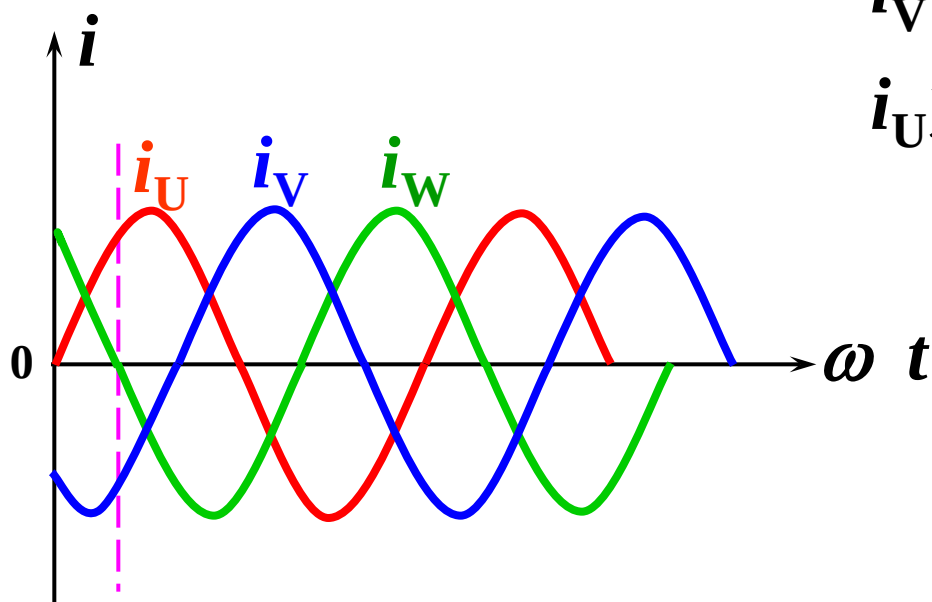
i_V 为负值

i_W 为正值





旋转磁场的产生

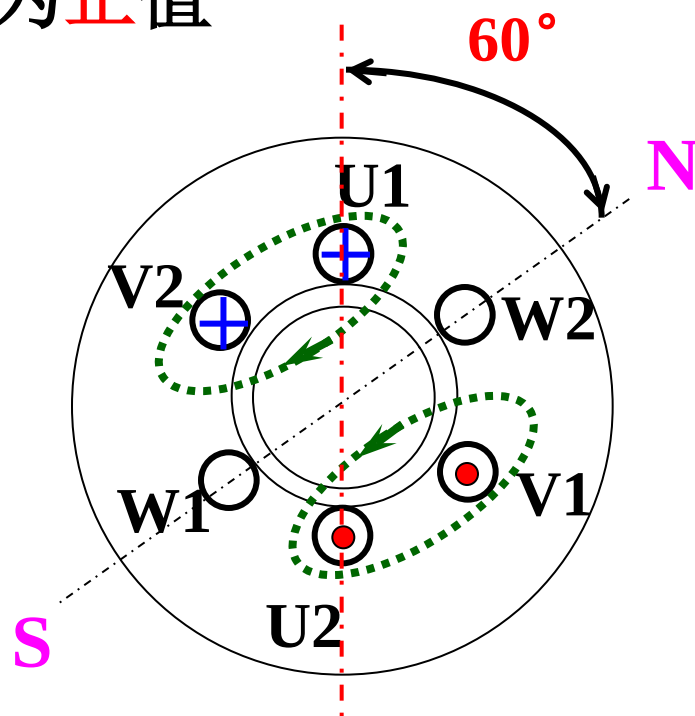


$\omega t = 60^\circ$ 时

$$i_W = 0$$

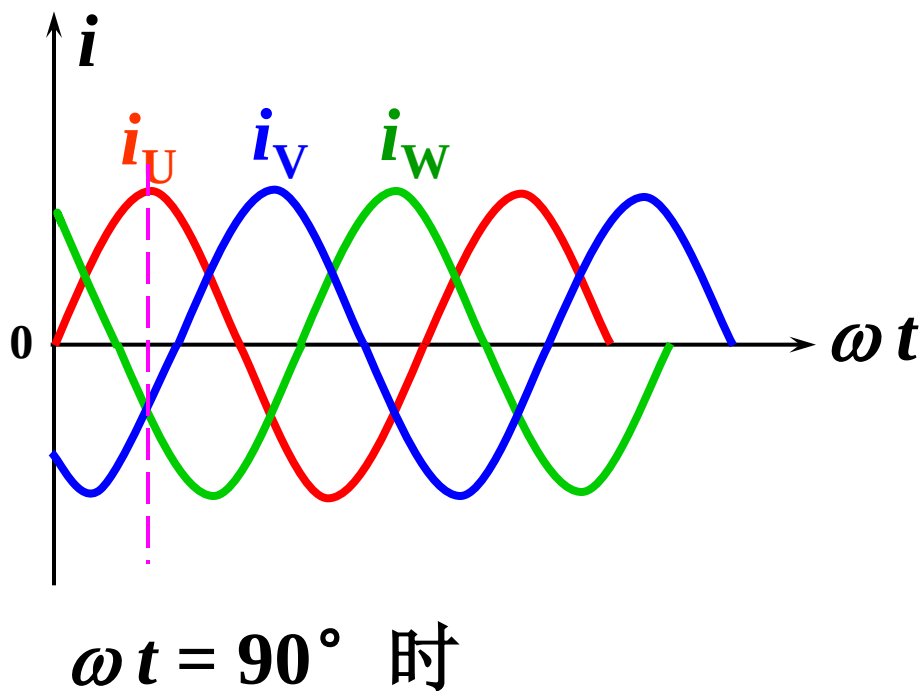
i_V 为负值

i_U 为正值





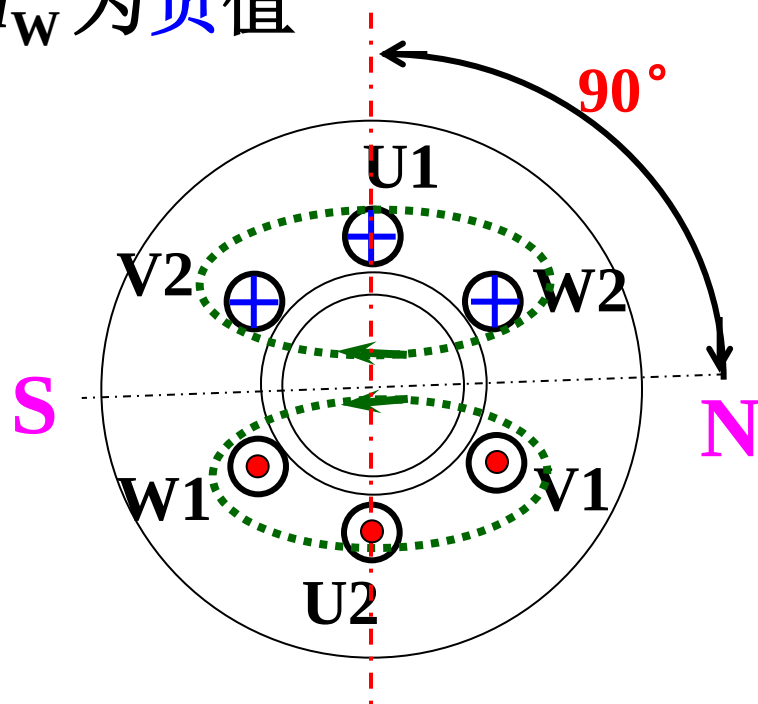
旋转磁场的产生



i_U 为正值

i_V 为负值

i_W 为负值



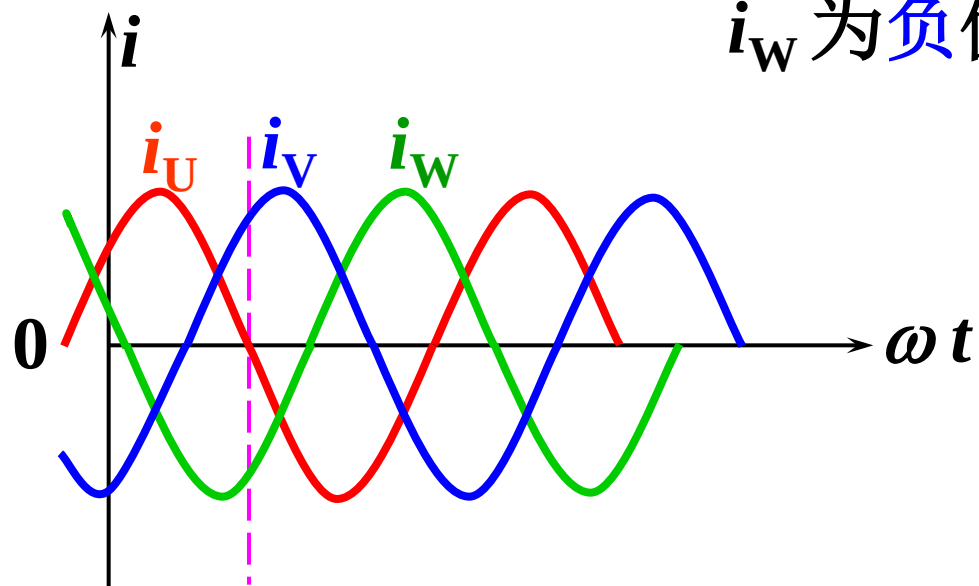


旋转磁场的产生

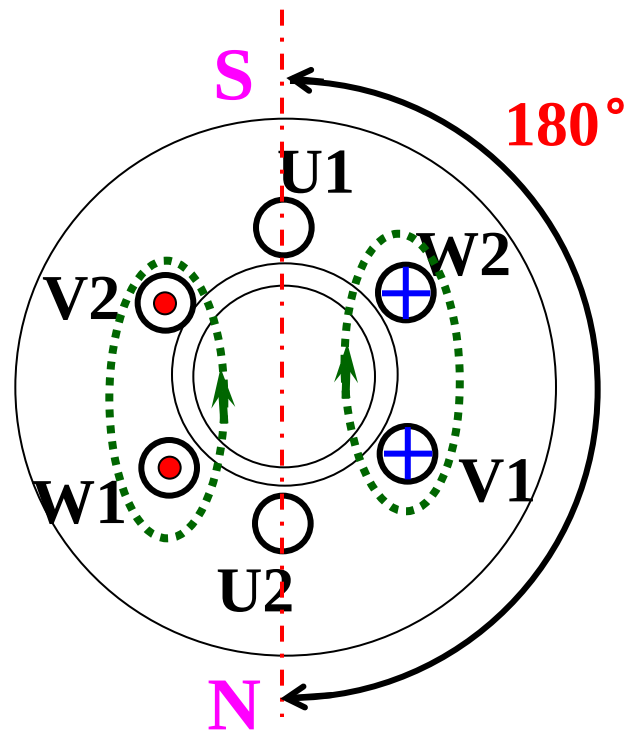
$$i_U = 0$$

i_V 为正值

i_W 为负值

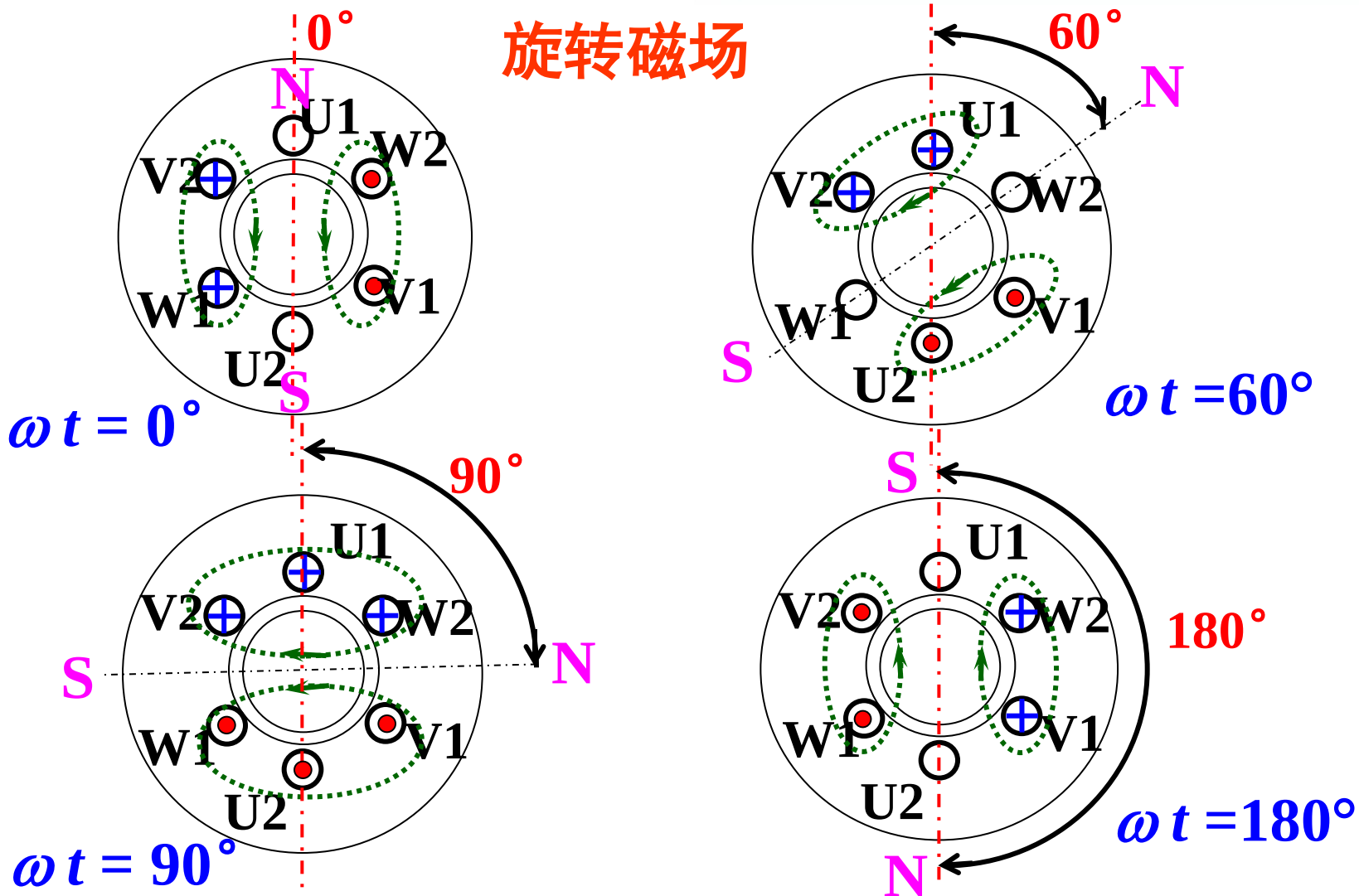


$\omega t = 180^\circ$ 时





旋转磁场





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品质改变世界

谢谢大家