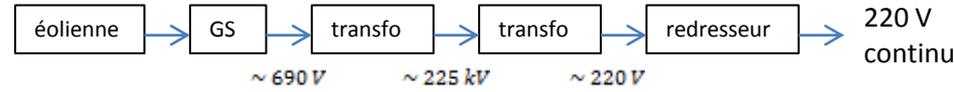
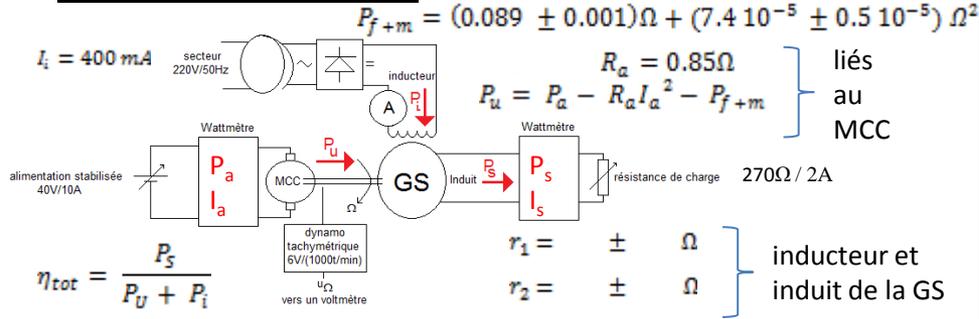


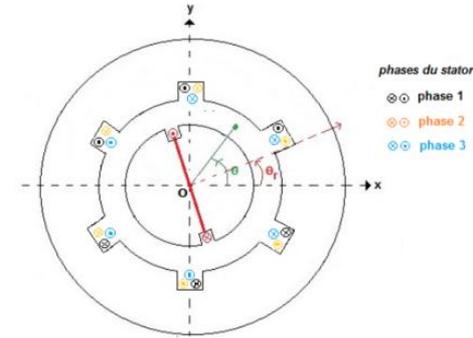
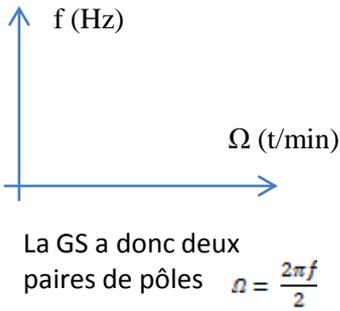
A) Un exemple introductif : l'éolienne



B) La génératrice synchrone

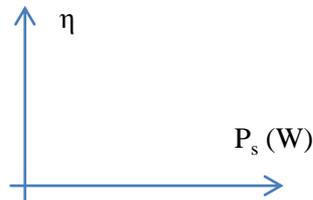
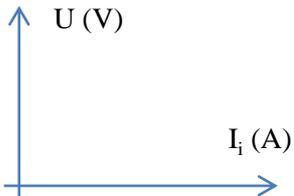


a) Etude de l'alternateur à vide



b) Etude de l'alternateur en charge

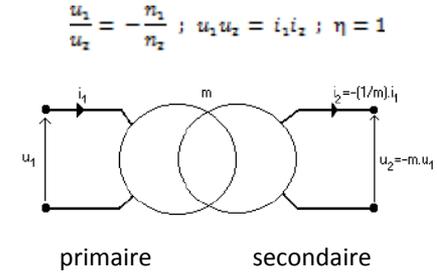
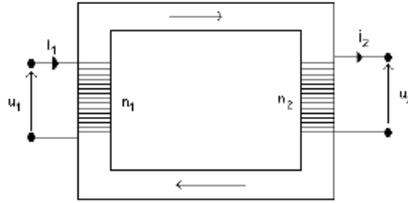
On relève P_s, I_s, I_i, P_a, I_a pour $\Omega = 1000$ t/min et $\Omega = 500$ t/min tout en faisant varier la résistance de charge, on en déduit le rendement en fonction de P_s



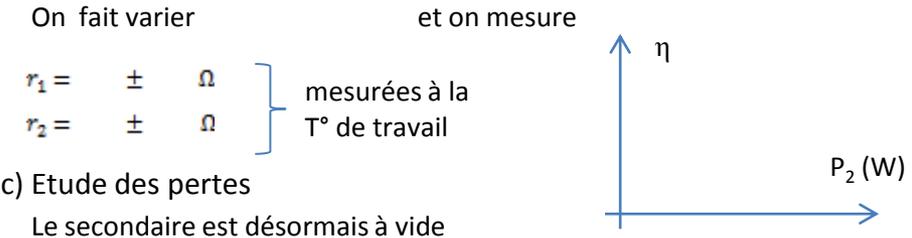
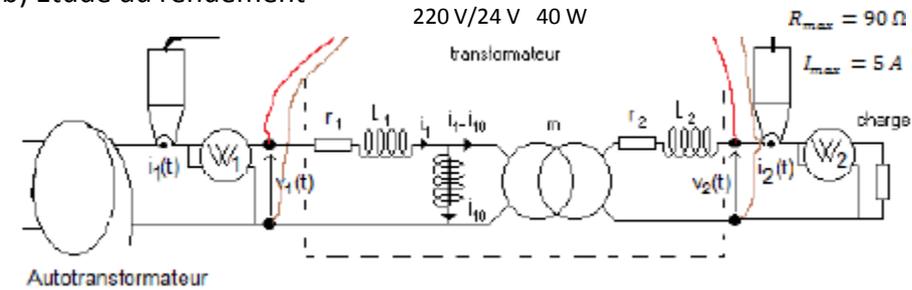
On retrouve la saturation du milieu magnétique

C) Transformateur

a) Modélisation du transformateur



b) Etude du rendement



c) Etude des pertes

Le secondaire est désormais à vide

On connaît $P_{tot} = P_1 - P_2$ en charge et on mesure $P_1 = P_j + P_{fer}$ à vide

$P_{fer} = P_H + P_F \propto B_{max}^2 \propto U_{1eff}^2; P_{fer} = \pm W \text{ à } 220V; P_j = r_1 i_1^2$

