Récapitulation

Inductances:

$$L_{\sigma s} = N_s^2 \Lambda_{\sigma s}$$
$$L_{\sigma r} = N_r^2 \Lambda_{\sigma r}$$
$$L_{hs} = N_s^2 \Lambda_h$$
$$L_{hr} = N_r^2 \Lambda_h$$
$$L_{sr} = N_s N_r \Lambda_h$$

Réactances:

$$\omega L_{\sigma s} = X_{\sigma s}$$
$$\omega L_{hs} = X_h$$
$$\omega L_{\sigma r} = X_{\sigma r}$$

Grandeurs rapportées ($\underline{Z}'_r = R'_r + jX'_r$):

$$\underline{Z}'_r = \underline{Z}_r \left(\frac{N_s}{N_r}\right)^2$$

Thévenin:

$$\underline{\sigma}_s (R_s + jX_{\sigma s}) = R_e + jX_e$$

$$\underline{\sigma}_s = \frac{\underline{Z}_h}{R_s + jX_{\sigma s} + \underline{Z}_h}$$

Expression du couple (cas général):

$$M = \frac{3R'_r \sigma_s^2 U_s^2}{[(R_e + R'_r/s)^2 + X_{cc}^2]\, s\Omega_s}$$

avec:

$$X_e + X'_{\sigma r} = X_{cc}$$

Glissement au couple max:

$$s_K = \frac{\pm R'_r}{\sqrt{R_e^2 + X_{cc}^2}}$$

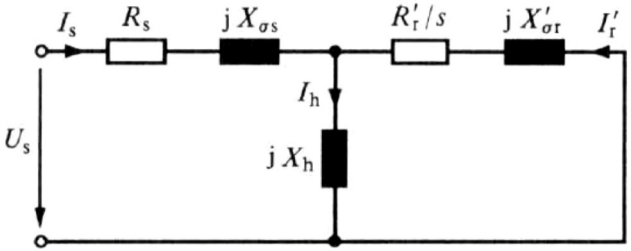

Fig. 15.4

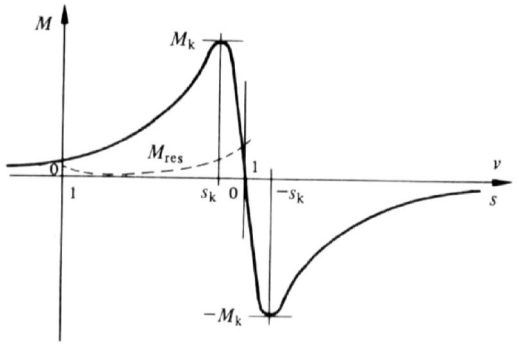

Fig. 15.9