

### Definitions

Reluctance = R; Force = F; Flux =  $\phi$ ; Flux Density = B; Induct = L;  
 Electromotor Force = EMF; Current = I; Flux Linkage =  $\lambda$ ; Turns = N; Field  
 intensity = H; field energy = wf; coenergy = wf'; Torque = T; short circuit  
 ratio = SCR; unsat synchronous reactance = Xus; sat synch react = Xss;  
 Line Voltage open circuit characteristic = Voc; Armature current short  
 circuit test = lasc; open circuit field current = AFNL; short circuit field  
 current = AFSC; unsat -> unsat motor region; sat -> saturated motor  
 region..

### Chapter 1 Equations

R	$\text{len}/(\mu\epsilon\text{ua}\text{A})$	F	$N\text{*I}$
I	$F_{\text{tot}}/N$	F	$H\text{*coreLen}$
ua	$1.26\text{*}10^{-6}\text{Hm}^{-1}$	F	$\phi\text{*R}$
L	$N^2/R_{\text{eq}}$	B	$\phi/A \text{ [T]}$
L	$\lambda/i$	Perm	$1/R_{\text{tot}}$
L	$N^2(\mu_0)(Ag)/g$		



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