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## Appendix A

Principal system data & machine operating point (pu values on machine rating)

<b>Synchronous Machine</b> 87.5 kVA, 415 V, 4-pole	$x_d$	1.758 pu	$R_a$	0.01450 pu	
	$x_q$	0.990 pu	$R_{kd}$	0.00422 pu	
	$x_{fd}$	1.761 pu	$R_{kq}$	0.01260 pu	
	$x_{kd}$	1.664 pu	$R_{fd}$	0.00268 pu	
	$x_{kq}$	0.955 pu	$H$	1.434 s	
	$x_{md}$	1.658 pu			
	$x_{mq}$	0.899 pu			
<b>Conventional Exciter</b>	$K_e$	1	$T_e$	0.472 s	
<b>Transformer</b>	$R_T$	0.03630 pu	$X_T$	0.0838 pu	
<b>Transmission line</b>	$R_L$	0.03744 pu	$X_L$	0.3903 pu	
$P_t$	$Q_t$	$u_t$	$u_{fd}$	$\delta$	$U_b$
0.8 pu	0.84 pu	1.29 pu	0.0043 pu	0.56 rad	0.97 pu