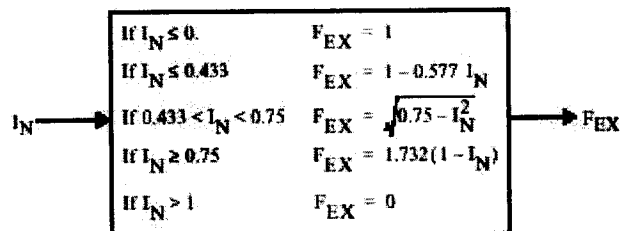
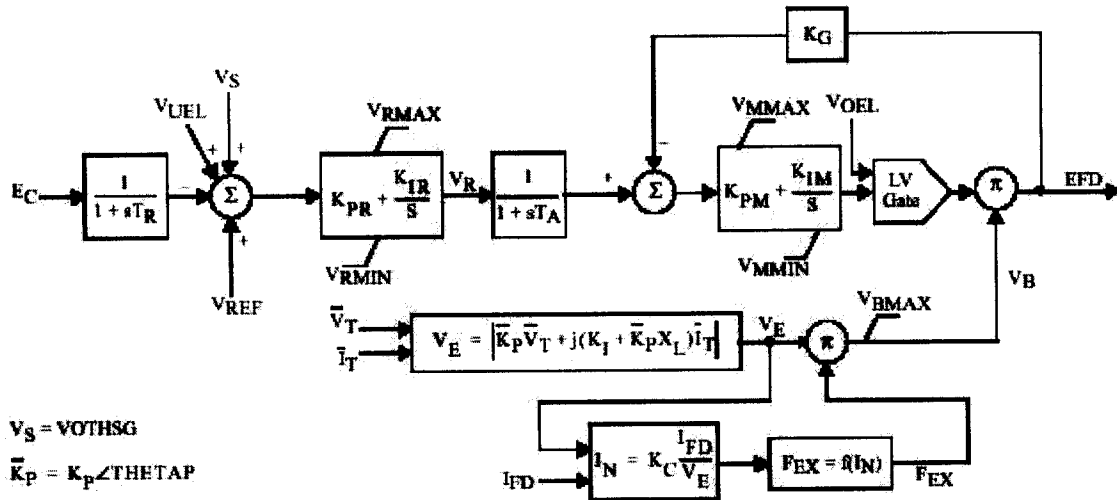


Brighton Beach Power Gas Turbine Generator Models

GENROU: Round Rotor Generator Model				
Description	Cons	Parameter	Value	Units
D-Axis O.C. Transient Time Constant	J	T'do (>0)	7	sec
D-Axis O.C. Sub-Transient Time Constant	J+1	T"do (>0)	0.04	sec
Q-Axis O.C. Transient Time Constant	J+2	T'qo (>0)	0.58	sec
Q-Axis O.C. Sub-Transient Time Constant	J+3	T"qo (>0)	0.078	sec
Inertia	J+4	H	4.844	pu
Speed Damping	J+5	D	0	pu
D-Axis Synchronous Reactance	J+6	Xd	2.11	pu
Q-Axis Synchronous Reactance	J+7	Xq	1.99	pu
D-Axis Transient Reactance	J+8	X'd	0.265	pu
Q-Axis Transient Reactance	J+9	X'q	0.465	pu
D-Axis/Q-Axis Sub-Transient Reactance	J+10	X"d = X"q	0.195	pu
Leakage Reactance	J+11	Xl	0.15	pu
Open Circuit Saturation factor	J+12	S(1.0)	0.068	
Open Circuit Saturation factor	J+13	S(1.2)	0.581	

Brighton Beach Power Gas Turbine Generator Models

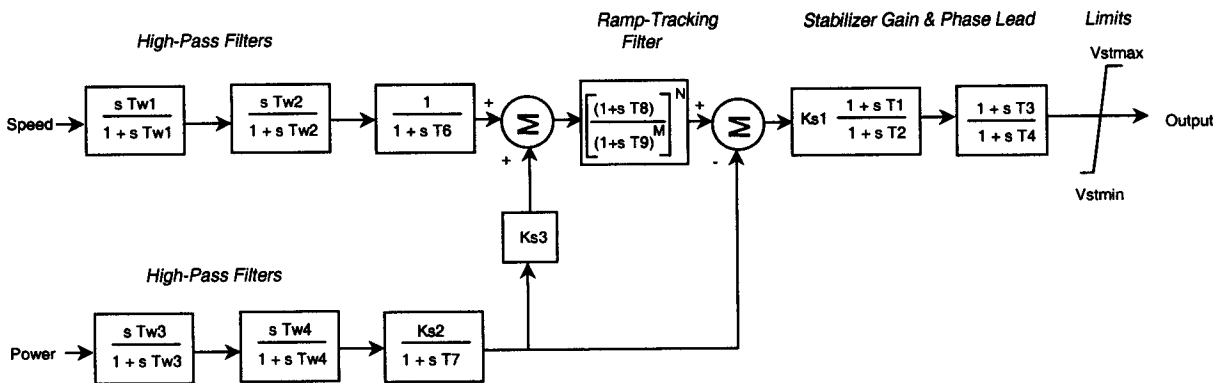
PSSE Type ESST4B Potential or Compound Source-Controlled Rectifier Exciter				
Description	CONs	Parameter	Value	Units
Terminal voltage transducer time const.	J	TR	0	sec
AVR proportional gain	J+1	KPR	28.7	
AVR integral gain	J+2	KIR	2.88	
AVR maximum output	J+3	VRMAX	1	
AVR minimum output	J+4	VRMIN	-0.87	
Exciter time constant	J+5	TA	0.01	sec
FVR proportional gain	J+6	KPM	1	
FVR integral gain	J+7	KIM	0	
FVR maximum output	J+8	VMMAX	1	
FVR minimum output	J+9	VMMIN	-0.87	
FVR feedback gain	J+10	KG	0	
Compound source V gain	J+11	KP	6.96	
Compound source I gain	J+12	KI	0	
Compound source maximum output	J+13	VBMAX	8.35	
Rectifier regulation factor	J+14	KC	0.053	
Compound source impedance	J+15	XL	0	
Compound source angle	J+16	THETAP	0	



Brighton Beach Power Gas Turbine Generator Models

IEEE TYPE PSS2A DUAL-INPUT STABILIZER MODEL				
Description	ICONS	Parameter	Value	Units
First stabilizer input code:	IC	ICS1	1	speed
First remote bus number	IC+1	REMBUS1		
First stabilizer input code:	IC+2	ICS2	3	power
Second remote bus number	IC+3	REMBUS2		
Ramp tracking filter order	IC+4	M	5	
Ramp tracking filter order	IC+5	N	1	

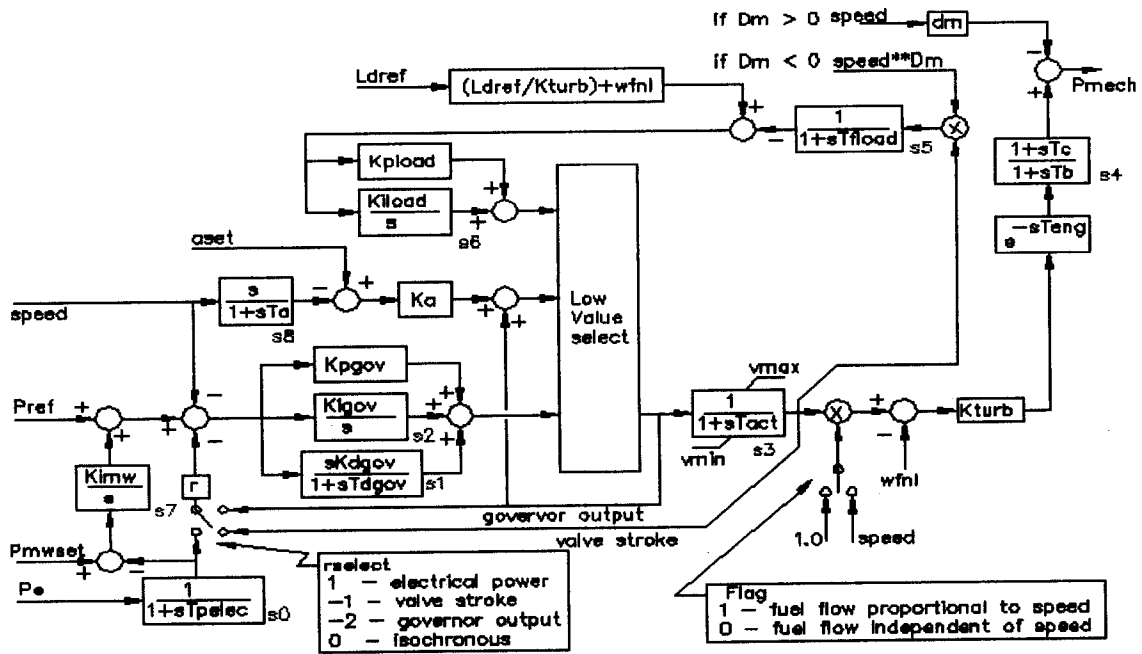
Description	CONs	Parameter	Value	Units
Washout time constant	J	Tw1 (>0)	5	sec
Washout time constant	J+1	Tw2	5	sec
Filter time constant	J+2	T6	0	sec
Washout time constant	J+3	Tw3 (>0)	5	sec
Filter time constant	J+4	Tw4	0	sec
Washout time constant	J+5	T7	5	sec
Gain	J+6	KS2 (= T7/2H)	0.516	
Gain	J+7	KS3	1	
Ramp-tracking filter time constant	J+8	T8	0.5	sec
Ramp-tracking filter time constant	J+9	T9 (>0)	0.1	sec
Stabilizer gain	J+10	KS1	5	
Phase lead time constant	J+11	T1	0.12	sec
Phase lag time constant	J+12	T2	0.03	sec
Phase lead time constant	J+13	T3	0.12	sec
Phase lag time constant	J+14	T4	0.03	sec
Output limits	J+15	VSTMAX	0.2	pu E _{ref}
Output limits	J+16	VSTMIN	-0.06	pu E _{ref}



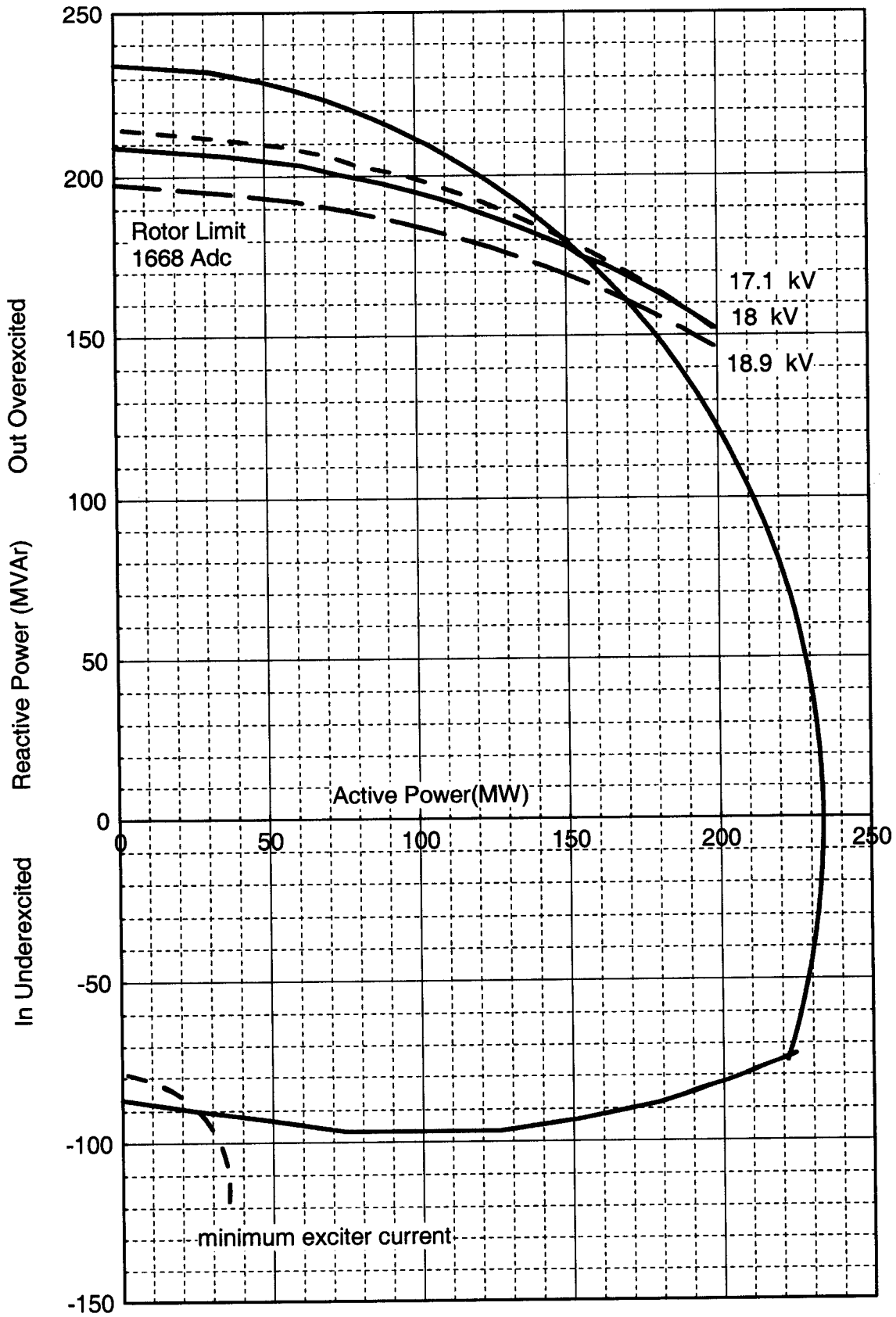
Brighton Beach Power Gas Turbine Generator Models

UGGOV1: General Gas Turbine-Governor Model				
Description	ICONS	Parameter	Value	Units
Droop Feedback (1=electrical power)	M	rselect	1	
Fuel characteristic (1=proportional to speed)	M+1	flag	1	
Description	CONS	Parameter	Value	Units
Permanent droop	J	r		
Electrical power transducer time constant	J+1	tpelec	1	sec
Maximum value for speed error signal	J+2	maxerr	0.05	
Minimum value for speed error signal	J+3	minerr	-0.05	
Governor proportional gain	J+4	kpgov	10	
Governor integral gain	J+5	kigov	2	
Governor derivative gain	J+6	kdgov	0	
Governor derivative controller time constant	J+7	tdgov	1	
Maximum valve position limit	J+8	VMAX	1	
Minimum valve position limit	J+9	VMIN	0.15	
Actuator time constant	J+10	tact	0.5	sec
Turbine gain	J+11	kturb	0.96	
No load fuel flow	J+12	wfnl	0.2	pu
Turbine lag time constant	J+13	tb	0.5	sec
Turbine lead time constant	J+14	tc	0	sec
Transport lag time constant for diesel engine	J+15	teng	0	sec
Load limiter time constant	J+16	tload	3	sec
Load limiter proportional gain for PI controller	J+17	kpload	1	
Load limiter integral gain for PI controller	J+18	kload	0.2	
Load limiter reference value	J+19	ldref	1	pu
Mechanical damping coefficient	J+20	dm	0	pu
Maximum valve opening rate	J+21	Ropen	1	pu/sec
Minimum valve closing rate	J+22	rclose	-1	pu/sec
Power controller reset gain	J+23	kimw	0	
Acceleration limiter setpoint	J+24	Aset	0.01	pu/sec
Acceleration limiter gain	J+25	Ka	10	
Acceleration limiter time constant	J+26	Ta	1	sec
Turbine rating	J+27	Trate	180	MW

Brighton Beach Power Gas Turbine Generator Models



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