

Rating	
Project Name	SNET - Os Marsillon-Lacq
Generator type	450H
Electrical Design Number	701158G1
KVA	530000 kVA
Power Factor Leading	0.95
Power Factor Lagging	0.85
KW	450500 kW
RPM	3000 RPM
Rated Voltage	18500 Volts
Line Current	16540 Amps
Cooling System (OV / TEWAC / H2)	TEWAC / Hydrogen
SCR	0.50
Site Altitude	331.36 Ft
Rated H2 Temp	40 C
Exciter (Design Amps / KW / Voltage)	2913 A / 2185 kW / 750 V
Exciter (IGNL / IFNL / IFFL)	805 / 870 / 2686
Rating (i.e., ANSI / IEC)	IEC
Temperature Class (i.e., B)	B
Coolant (Type / FF / Flow)	33% Ethylene Glycol / 0.0010 / 2500 GPM
Guaranteed I2 SQ.T (s)	7
TIF (L-L / L-N / Residual)	0. / 0. / 0.
Field Resistance @ 25 C	0.1716
Armature Resistance @ 25 C	0.000664
No-Load Saturation factor (S1.0 / S1.2)	0.0337 / 0.1951
Losses	
Fan & Wind	722
Core	404
Load	855
I2R Arm	692
I2R Field	1572
Misc	101
Exciter	85
Bearings	542
Total	4974
Efficiency	98.91%
Direct Axis Reactances (PU, Rounded)	
Synchronous (XD)	2.18
Transient Sat (X'DV)	0.280
Transient Unsat (X'DI)	0.320
Subtransient Sat (X''DV)	0.205
Subtransient Unsat (X''DI)	0.255
Negative Sequence Sat (X2V)	0.205
Negative Sequence Unsat (X2I)	0.256

Zero Sequence Sat (X0V)	0.139
Zero Sequence Unsat (X0I)	0.139
Armature Leakage Sat (XLV)	0.175
Armature Leakage Unsat (XLI)	0.196
Quaturature Axis Reactances (PU, Rounded)	
Synchronous (XQ)	2.09
Transient (X'Q)	0.51
Subtransient Sat (X''QV)	0.20
Subtransient Unsat (X''QI)	0.26
Hipots	
Armature / Field (Volts)	38000 / 5277
Resistances (Per Unit)	
Armature (DC) (RA)	0.001326
Positive Sequence (R1)	0.0029
Negative Sequence (R2)	0.0105
Zero Sequence (R0)	0.0048
Time Constants (Seconds)	
Direct:	
Transient, Open Circuit (T'DO)	6.805
Transient, 3 Phase (T'D3)	0.793
Transient, Line – Line (T'D2)	1.392
Transient, Line – Neutral (T'D1)	1.690
Subtransient (T''DO)	0.042
Subtransient (T''D)	0.031
Armature (TA2 = TA3)	0.577
Armature (TA1)	0.440
Quadrature:	
Transient (T'Q)	0.151
Transient, Open Circuit (T'Q0)	0.623
Subtransient (T''Q)	0.031
Subtransient (T''Q0)	0.076