

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T				
1	Generator Calculated and Measured Data Analysis																							
2																								
3	$E_{G_{rms}} = 0.707 * N * A * P * B * Z$					(Based on Faraday's law)																		
4																								
5	Turbine Generator Parameter Set							Nominal	2	3														
6	P - Number of Magnetic poles -- 4magnets = 4-poles)							4	4															
7	B - Average Magnetic pole strength of all magnets(Tesla)							0.12	0.12															
8	N - Number of loops of wire = coil1+ coil2+coil3 + coil4							800	800															
9	A - The 4-Coil average area enclosed by coil loops (m ²)							0.001	0.0012															
10	Coil-Magnet Coupling Factor (magnet-coil spacing)							1.0	0.9															
11	Z - Rotational velocity of magnets - rev. per sec (rps) converted to RPM (1/60)							0.017	0.017															
12	KE Generator Conversion Factor -volts-rms /RPM							0.00452	0.00489															
13								$E_{G_{rms}} = KE * RPM$																
14																								
15			Measured			Calculated																		
16	RPM Target	Hz Target	RPM Actual	Freq. Hz	E _G	RPM rev/min	E _{G1}	E _{G2}	E _{G3}															
17	120	4	122	4.1	0.452	120	0.552	0.596																
18	180	6	185	6.2	0.737	180	0.814	0.880																
19	240	8	239	8.0	0.981	240	1.086	1.173																
20	300	10	305	10.2	1.280	300	1.357	1.466																
21	360	12	358	11.9	1.520	360	1.629	1.759																
22	450	15	455	15.2	1.959	450	2.036	2.199																
23																								
24																								

