

Project:  
Location:  
Contract:  
Engineer:  
Filename: unbalance

**ETAP**  
**12.6.0H**  
  
Study Case: HA

Page: 1  
Date: 10-31-2017  
SN:  
Revision: Base  
Config.: Normal

**VTHD (Total Harmonic Distortion) Report**

Bus		Voltage Distortion	
ID	kV	Fund. %	VTHD %
Bus5	0.400	99.61	4.36
Bus8	0.400	99.70	4.51
Bus12	0.400	99.59	4.29
Bus14	0.400	99.56	4.42
Bus19	0.400	99.59	4.43
Bus20	0.400	99.22	4.46
Bus22	0.400	99.14	4.29
Bus25	0.400	99.61	4.48
Bus27	0.400	99.60	4.26
Bus30	0.400	99.63	4.47
Bus34	0.400	99.25	4.44
Bus37	0.400	99.57	4.42
Bus41	0.400	99.59	4.52
Bus46	0.400	98.80	4.19
Bus52	0.400	99.59	4.31
Bus56	0.400	99.56	4.31
Bus59	0.400	99.57	4.54
Bus62	0.400	98.87	4.39
Bus66	0.400	99.06	4.49
Bus68	0.400	99.50	4.52
Bus72	0.400	99.20	4.50
Bus75	0.400	99.57	4.55
Bus78	0.400	99.59	4.50
Bus81	0.400	99.34	4.45
Bus85	0.400	99.31	4.45
Bus89	0.400	99.32	4.46
Bus92	0.400	99.31	4.55
Bus95	0.400	99.51	4.52
Bus98	0.400	99.56	4.57
Bus101	0.400	99.29	4.61
Bus105	0.400	99.26	4.49
Bus108	0.400	99.08	4.46
Bus116	0.400	99.46	4.50
Bus119	0.400	99.60	4.51
Bus125	0.400	99.25	4.47
Bus129	0.400	99.55	4.48
Bus133	0.400	99.45	4.47
Bus139	0.400	98.84	4.41
Bus143	0.400	99.04	4.44
Bus148	0.400	99.07	4.42

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Page: 2  
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Bus		Voltage Distortion	
ID	kV	Fund. %	VTHD %
Bus150	0.400	99.74	4.47
Bus154	0.400	99.86	4.48
Bus157	0.400	99.74	4.48
Bus162	0.400	99.12	4.43
Bus165	0.400	99.54	4.48
Bus170	0.400	99.58	4.37
Bus175	0.400	98.71	4.25
Bus178	0.400	99.00	4.30
Bus183	0.400	99.28	4.50
Bus184	33.000	99.89	2.50
Bus185	33.000	99.89	2.51
Bus188	0.400	99.70	4.55
Bus189	33.000	99.89	2.51
Bus191	0.400	99.74	4.56
Bus192	33.000	99.89	2.51
Bus193	33.000	99.89	2.51
Bus197	33.000	99.89	2.50
Bus198	33.000	99.89	2.50
Bus200	0.400	99.04	4.55
Bus201	33.000	99.89	2.51
Bus203	0.400	99.70	4.55
Bus204	33.000	99.89	2.51
Bus205	33.000	99.89	2.51
Bus206	33.000	99.89	2.51
Bus208	0.400	99.55	4.58
Bus209	33.000	99.89	2.51
Bus211	0.400	99.34	4.57
Bus212	0.400	99.79	6.17

Indicates buses with THD (Total Harmonic Distortion) exceeding the limit