

Modular Coil Final Test Summary

9/23/2008

COIL TEST	C1	C2	C3	C4	C5	C6		B1	B2	B3	B4	B5	B6
Coil Resistance [milli-ohms]	8.940	8.900	8.930	8.910	8.940	8.932		10.690	10.687	10.650	10.630	10.610	10.580
Insulation Resistance [KMeg-Ω] [Voltage Level- kv]	75.00 7.5	75.00 7.5	60.00 7.5	90.00 7.5	75.00 7.5	90.00 7.5		105.00 7.5	75.00 7.5	60.00 7.5	75.00 7.5	90.00 7.5	60.00 7.5
Hi-Pot [current leakage- μ amp.] [Voltage Level- kv]	0.10 5.0	0.10 5.0	0.10 5.0	0.10 5.0	0.10 5.0	0.10 5.0		0.10 5.0	0.10 5.0	0.10 5.0	0.10 5.0	0.10 5.0	0.10 5.0
PI Index	3.27	4.72	4.62	6.50	4.85	9.31		9.57	11.50	8.26	9.91	9.10	6.10
Inductance-parallel [μh]													
Frequency 1 kHz	748.20	746.90	744.80	743.70	744.00	738.20		1062.00	1056.00	1044.00	1065.00	1071.00	1060.00
Frequency 100 Hz	977.20	981.90	982.00	997.80	978.50	976.20		1373.00	1310.00	1344.00	1310.00	1362.00	1354.00
Inductance-series [μh]													
Frequency 1 kHz	738.90	737.30	734.30	733.90	734.30	728.80		1051.00	1066.00	1032.00	1055.00	1061.00	1050.00
Frequency 100 Hz	943.40	946.00	948.20	951.30	944.00	941.70		1322.00	1350.00	1306.00	1320.00	1324.00	1315.00
Capacitance-parallel [μF]													
Frequency 1 kHz	-33.85	-33.91	-34.01	-33.87	-34.05	-34.30		-23.83	-23.75	-24.24	-22.78	-23.63	-23.88
Frequency 100 Hz	-2592.00	-2579.00	-2580.00	-2538.00	-2588.00	-2594.00		-1844.00	-1875.00	-1877.00	-1875.00	-1858.00	-1869.00
Capacitance-series [μF]													
Frequency 1 kHz	-34.27	-34.35	-34.49	-34.35	-34.50	-34.30		-24.09	-23.97	-24.52	-23.99	-23.85	-24.11
Frequency 100 Hz	-2685.00	-2676.00	-2673.00	-2662.00	-2683.00	-2689.00		-1915.00	-1932.00	-1938.00	-1933.00	-1912.00	-1926.00

COIL TEST	A1	A2	A3	A4	A5	A6
Coil Resistance [milli-ohms]	10.95	10.82	10.87	10.90	10.89	10.90
Insulation Resistance [KMeg-Ω] [Voltage Level- kv]	90.00 7.5	75.00 7.5	60.00 7.5	75.00 7.5	75.00 7.5	60.00 7.5
Hi-Pot [current leakage- μ amp.] [Voltage Level- kv]	0.20 5.0	0.12 5.0	0.10 5.0	0.10 5.0	0.10 5.0	0.10 5.0
PI Index	8.50	6.96	6.21	7.99	8.54	9.40
Inductance-parallel [μh]						
Frequency 1 kHz	1325.00	1319.00	1303.00	1299.00	1301.00	1312.00
Frequency 100 Hz	1624.00	1610.00	1600.00	1600.00	1599.00	1605.00
Inductance-series [μh]						
Frequency 1 kHz	1317.00	1310.00	1294.00	1289.00	1292.00	1304.00
Frequency 100 Hz	1582.00	1570.00	1563.00	1563.00	1563.00	1569.00
Capacitance-parallel [μF]						
Frequency 1 kHz	-19.10	-19.19	-19.42	-19.49	-19.45	-19.29
Frequency 100 Hz	-1559.00	-1572.00	-1582.00	-1582.00	-1584.00	-1570.00
Capacitance-series [μF]						
Frequency 1 kHz	-19.30	-19.32	-19.57	-19.63	-19.59	-19.42
Frequency 100 Hz	-1601.00	-1608.00	-1620.00	-1619.00	-1620.00	-1612.00

Light Yellow - Coils tested to 7.5KV with Lead block chill plates at ground potential.

Modular Coil Test Plan

- 1) 7.5 KV Acceptance Test following VPI and removal from molc
- 2) 7.5 KV Test following rework of winding forms
- 3) 5.0 KV Test once a 3-pack has been assembled [prior to installation over V]
- 4) 5.0 KV Test after each FP has been assembled and prior to shipment to NCSX Test Ce
- 5) 5.0 KV Test all modular coils after machine has been assemble

Values in RED are latest test results