

## XXXXXXXXXXXXXXXXXXXX COIL MANUFACTURING - REPORTS

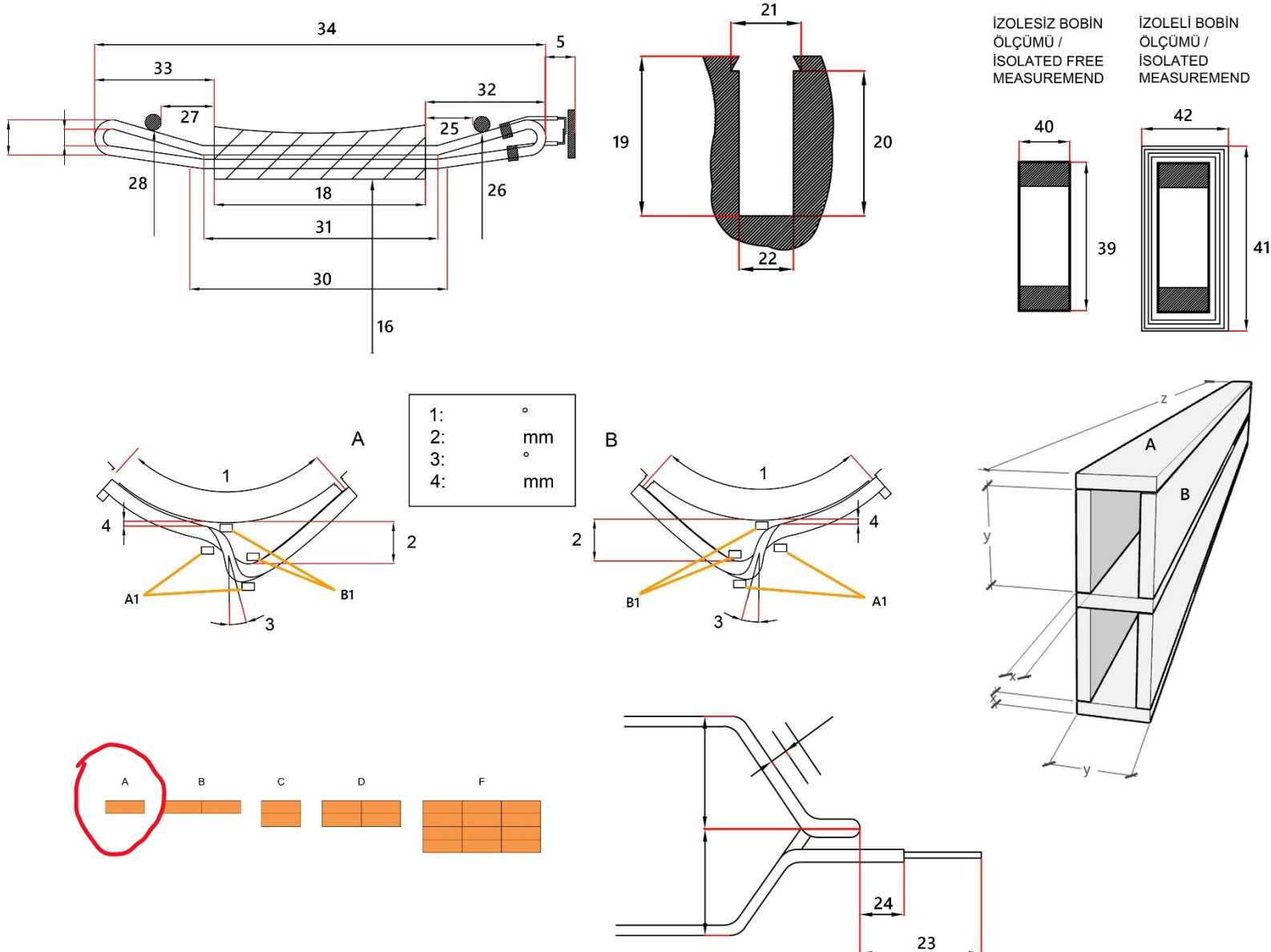


ORTA GERİLİM BOBİN PROJE FORMU  
HIGH VOLTAGE COIL PROJECT FORM

FORM NO: 040

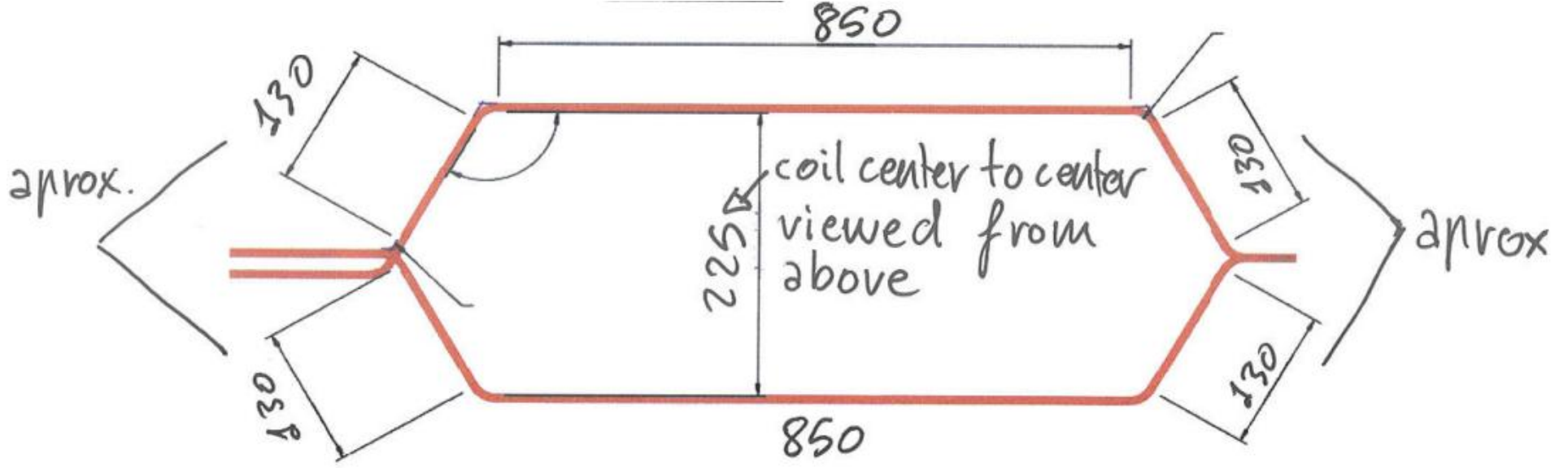
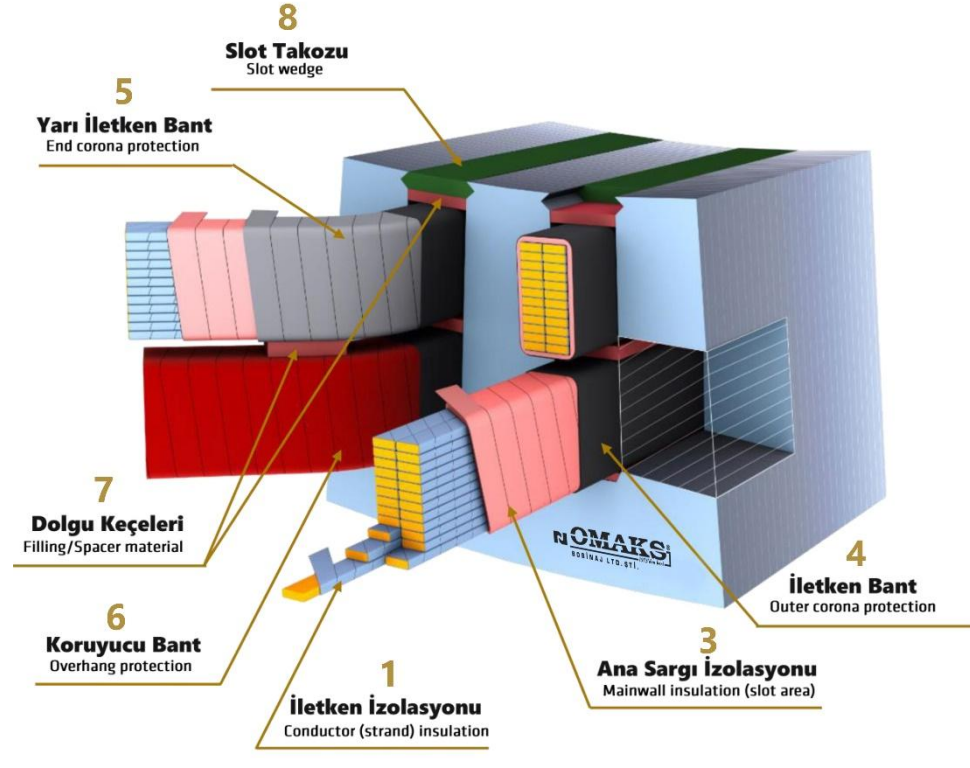
<b>FİRMA / BİRİM ADI</b> COMAPNY NAME	: xxxxx	<b>E-Posta</b> Email	: xxxxx
<b>İLGİLİ KİŞİNİN ADI / SOYADI</b> CONTACT PERSON	: xxxxx	<b>TARİH</b> DATE	:
<b>AÇIKLAMA</b> COMMENT			

<b>1. Marka</b> Manufacturer	: Westinghouse	<b>16. Sac Paket İç Çapı</b> Core Inner Diam	: 515 mm	<b>31. Düz Bobin Boyu Alt</b> Coil Slot Lng. Bottom	: 850 mm
<b>2. Tip / Boyut</b> Frame No	: 500	<b>17. Sac Paket Dış Çapı</b> Core Outside Diam	: 800 mm	<b>32. Ön Taraf B. Çıkıntısı</b> Conn' Coil Projection	: 185 mm
<b>3. Seri No</b> Serial No	: 44917	<b>18. Sac Paket Uzunluğu</b> Core Length	: 785 / 795 mm	<b>33. Ark. Taraf B. Çıkıntısı</b> Back end Coil Project.	: 185 mm
<b>4. Bağlantı</b> Winding Connection	: Y	<b>19. Topl. Ankoş Derinliği</b> Depth Under Wedge	: 71 mm	<b>34. Bobin Boyu + Uç Boyu</b> Overall Coil Length + Connection	: 1155 + 50 mm
<b>5. Verimlilik Sınıfı</b> Efficiency	: 94,7	<b>20. Ankoş Kanal Altı Derinliği</b> Depth under Wedge	: 67 mm	<b>35. Sipir</b> Turns / Coil	: 10
<b>6. İzolasyon Sınıfı</b> Insulation	: F	<b>21. Ankoş Kanal Genişliği</b> Tooth Width	: 9,5 mm	<b>36. Tel Ölçüsü</b> Bare Wire Size	: 5 x 2,5
<b>7. Güç (kW)</b> Power (kW)	: 883 KW	<b>22. Ankoş Genişliği</b> Sloth Width	: 9.1 mm	<b>37. Bobin Pozisyonu</b> Lead Position	A : <input checked="" type="checkbox"/> B : <input type="checkbox"/>
<b>8. Gerilim (V)</b> Machine Voltage	: 6000 V	<b>23. Bobin Uç Boyu</b> Coil Tip Length	: 80 mm	<b>38. Tel Kombinasyonu</b> One Turn Composition	A1 : <input checked="" type="checkbox"/> B1 : <input type="checkbox"/>
<b>9. Akım (A)</b> Machine Amps	: 105 A	<b>24. Bobin Uç İzolasyon Boyu</b> Coil Tip Insulation Length	: 25 mm	<b>39. Bobin Yüksekliği</b> Coil Height	:
<b>10. Devir (d/d)</b> Rpm	: 980	<b>25. Bobin Çember Derinliği</b> Connection End Extension	: 145 mm	<b>40. Bobin Eni</b> Coil Width	:
<b>11. Frekans (Hz)</b> Frequency (Hz)	: 50 Hz	<b>26. Bobin Çember Çapı</b> Connection End Diameter	: 720 mm	<b>41. İzoleli Bobin Yüksekliği</b> Insulated Coil Height	: 31,38 mm
<b>12. Güç Faktörü</b> Cosφ	: 0,855	<b>27. Arka Çember Derinliği</b> Back End Extension	: 145 mm	<b>42. İzoleli Bobin Eni</b> Insulated Coil Width	: 8,5 mm
<b>13. Kutup Sayısı</b> Number of Poles	: 6	<b>28. Arka Çember Çapı</b> Back End Diameter	: 720 mm	<b>43. A Pres Kalıp Ölçüsü</b> Mold size for press - A	:
<b>14. Ankoş Sayısı</b> Number of Slots	: 90	<b>29. Bobin Adımı</b> Coil Pitch	: 1-13	<b>44. B Pres Kalıp Ölçüsü</b> Mold size for press - B	:
<b>15. Bobin Sayısı</b> Number of Coils	: 90 + 5	<b>30. Düz Bobin Boyu Üst</b> Coil Slot Length Top	: 850 mm	<b>44. Bobin Ağırlığı</b> Coil Weight	: ~ 3 KG





## İZOLASYON SİSTEMİ ISOLATION SYSTEM



	İzolasyon Bölümü Insulation Part	Kullanılan Malzeme Adı Material Name	Malzeme Kalınlığı Nominal Thickness	Malzeme Genişliği Tape Width	Katman Şekli ve Sayısı Taping Straight Part	Kullanılan Toplam Makara Sayısı Total of Reels Used
1	İletken İzolasyonu Conductor Insulation	ISOVOLTA CONDUCTOFOL® 2009 (Folyo + Mica)	0.06 mm	10 mm	1 x %50 lapped taping	
2	Yığın Ayırıcı (Tel Sıraları Arasında) Stack Separator (Between Strand Rows)					
3	Ana Sargı İzolasyonu (Ankoş) Mainwall Insulation (Slot)	ISOVOLTA CALMICAGLAS® 409	0.18 mm	20 mm	6 x %50 lapped taping	
3.1	Ana Sargı İzolasyonu (Ankoş dışı) Mainwall Insulation (Slot outer area)	ISOVOLTA CALMICA-FLEX® 0421	0.13 mm	20 mm	4 x %50 lapped taping	
4	Dış Korona Koruması - İletken Bant Outer Corona Protection (OCP)	ISOVOLTA CONTAFEL® H 0865	0.12 mm	20 mm	1 x %50 lapped taping	
5	Son Korona Koruması - Yarı İletken Bant End Corona Protection (ECP, Stress Grading)	ISOVOLTA EGSB® 2969	0.15 mm	20 mm	1 x %50 lapped taping, U <sub>1</sub> /3 cm	
6	Koruyucu Bant Sealing	ISOVOLTA ISOSEAL® P 0713	0.18 mm	20 mm	1 x %50 lapped taping	
7	Dolgu Keçeleri Supporters In The Overhang					
8	Slot Takozu Slot Wedges					
9	Kalıp Ayırıcı Mold release	ISOVOLTA VOTAFILM® 2645				



**BOBİN ÜRETİMİ**  
Coils Manufacturing



**Açıklamalar**  
Comments

**Montaj / Demontaj Operatörü**

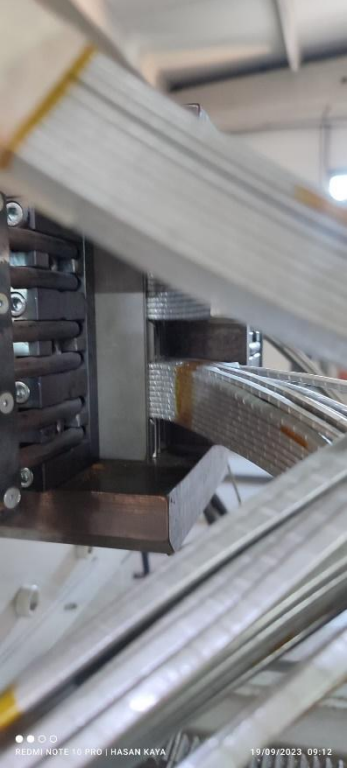
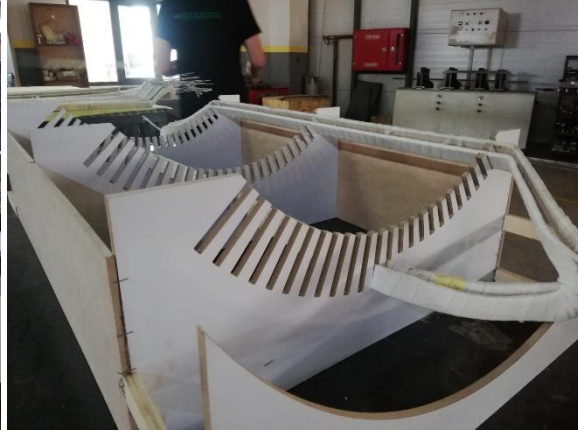
**Test ve Kontrol Sorumlusu**

**Genel Müdür**

Elektrik ve Elektronik  
Yüksek Mühendisi  
**Coşkun ARSLAN**

**Numan OMURCA**







**STATİK TESTLER**  
STATIC TESTS

**Coil HiPot Test Results**

Bobin No	Test Gerilimi	Süre (sn)	Alt Bacak	Üst Bacak
<i>Coil Number</i>	<i>Test Voltage</i>	<i>Time (s)</i>	<i>Coil Bottom</i>	<i>Coil Top</i>
1	22 kV	30	460 GΩ	362 GΩ
2	22 kV	30	260 GΩ	290 GΩ
3	22 kV	30	364 GΩ	276 GΩ
4	22 kV	30	409 GΩ	422 GΩ
5	22 kV	30	250 GΩ	229 GΩ
6	22 kV	30	239 GΩ	346 GΩ
7	22 kV	30	386 GΩ	157 GΩ
8	22 kV	30	133 GΩ	267 GΩ
9	22 kV	30	166 GΩ	280 GΩ
10	22 kV	30	291 GΩ	410 GΩ
11	22 kV	30	337 GΩ	401 GΩ
12	22 kV	30	145 GΩ	484 GΩ
13	22 kV	30	371 GΩ	194 GΩ
14	22 kV	30	163 GΩ	431 GΩ
15	22 kV	30	479 GΩ	312 GΩ
16	22 kV	30	484 GΩ	359 GΩ
17	22 kV	30	239 GΩ	156 GΩ
18	22 kV	30	321 GΩ	213 GΩ
19	22 kV	30	274 GΩ	388 GΩ
20	22 kV	30	166 GΩ	180 GΩ
21	22 kV	30	293 GΩ	146 GΩ
22	22 kV	30	308 GΩ	491 GΩ
23	22 kV	30	472 GΩ	130 GΩ
24	22 kV	30	310 GΩ	440 GΩ
25	22 kV	30	347 GΩ	356 GΩ
26	22 kV	30	282 GΩ	406 GΩ
27	22 kV	30	231 GΩ	142 GΩ
28	22 kV	30	199 GΩ	298 GΩ
29	22 kV	30	332 GΩ	256 GΩ
30	22 kV	30	316 GΩ	211 GΩ
31	22 kV	30	336 GΩ	387 GΩ
32	22 kV	30	407 GΩ	371 GΩ
33	22 kV	30	274 GΩ	132 GΩ
34	22 kV	30	192 GΩ	375 GΩ
35	22 kV	30	397 GΩ	465 GΩ
36	22 kV	30	246 GΩ	365 GΩ
37	22 kV	30	350 GΩ	166 GΩ
38	22 kV	30	248 GΩ	391 GΩ
39	22 kV	30	135 GΩ	380 GΩ
40	22 kV	30	284 GΩ	164 GΩ
41	22 kV	30	392 GΩ	335 GΩ
42	22 kV	30	311 GΩ	226 GΩ
43	22 kV	30	159 GΩ	342 GΩ
44	22 kV	30	375 GΩ	135 GΩ
45	22 kV	30	157 GΩ	396 GΩ
46	22 kV	30	308 GΩ	230 GΩ
47	22 kV	30	464 GΩ	363 GΩ
48	22 kV	30	427 GΩ	144 GΩ
49	22 kV	30	352 GΩ	180 GΩ
50	22 kV	30	323 GΩ	349 GΩ
51	22 kV	30	257 GΩ	263 GΩ
52	22 kV	30	295 GΩ	304 GΩ
53	22 kV	30	434 GΩ	425 GΩ
54	22 kV	30	299 GΩ	367 GΩ
55	22 kV	30	388 GΩ	225 GΩ

56	22 kV	30	235 GΩ	165 GΩ
57	22 kV	30	157 GΩ	308 GΩ
58	22 kV	30	186 GΩ	259 GΩ
59	22 kV	30	406 GΩ	162 GΩ
60	22 kV	30	212 GΩ	224 GΩ
61	22 kV	30	126 GΩ	313 GΩ
62	22 kV	30	360 GΩ	135 GΩ
63	22 kV	30	204 GΩ	365 GΩ
64	22 kV	30	469 GΩ	413 GΩ
65	22 kV	30	252 GΩ	348 GΩ
66	22 kV	30	455 GΩ	478 GΩ
67	22 kV	30	406 GΩ	301 GΩ
68	22 kV	30	411 GΩ	376 GΩ
69	22 kV	30	140 GΩ	236 GΩ
70	22 kV	30	321 GΩ	357 GΩ
71	22 kV	30	275 GΩ	430 GΩ
72	22 kV	30	441 GΩ	285 GΩ
73	22 kV	30	490 GΩ	204 GΩ
74	22 kV	30	208 GΩ	165 GΩ
75	22 kV	30	174 GΩ	420 GΩ
76	22 kV	30	218 GΩ	245 GΩ
77	22 kV	30	279 GΩ	444 GΩ
78	22 kV	30	241 GΩ	169 GΩ
79	22 kV	30	352 GΩ	429 GΩ
80	22 kV	30	164 GΩ	198 GΩ
81	22 kV	30	425 GΩ	465 GΩ
82	22 kV	30	230 GΩ	183 GΩ
83	22 kV	30	207 GΩ	408 GΩ
84	22 kV	30	198 GΩ	252 GΩ
85	22 kV	30	477 GΩ	168 GΩ
86	22 kV	30	280 GΩ	139 GΩ
87	22 kV	30	495 GΩ	223 GΩ
88	22 kV	30	413 GΩ	339 GΩ
89	22 kV	30	479 GΩ	167 GΩ
90	22 kV	30	297 GΩ	222 GΩ
91	22 kV	30	388 GΩ	322 GΩ
92	22 kV	30	200 GΩ	442 GΩ
93	22 kV	30	227 GΩ	198 GΩ
94	22 kV	30	223 GΩ	399 GΩ
95	22 kV	30	207 GΩ	260 GΩ
96	22 kV	30	308 GΩ	430 GΩ
test (discard)	35 kV	30	41 GΩ	59 GΩ
test (discard)	42 kV	600	19 GΩ	19 GΩ

## Coil Low Voltage Results

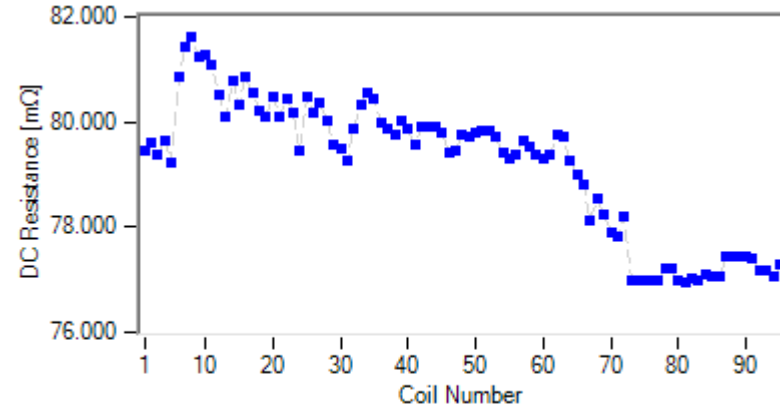
MOTRONIC\883KWCOILS\09/27/2023 11:02:09 AM

Tester Type:Dx Serial Number:12265 Firmware version:1.2.2.0 Configuration:DXHost

Coil 96 Frequency 50.0 [Hz]

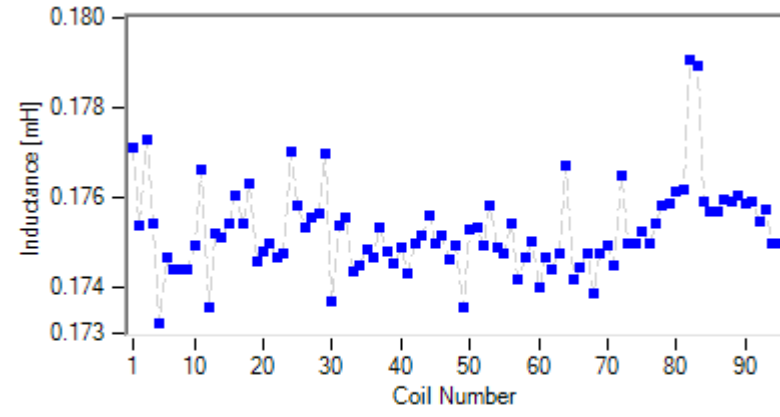
### Resistance [ $\Omega$ ]

Minimum 0.077 Average 0.079 Maximum 0.082



### Inductance [mH]

Minimum 0.173 Average 0.175 Maximum 0.179





## Coil Low Voltage Results

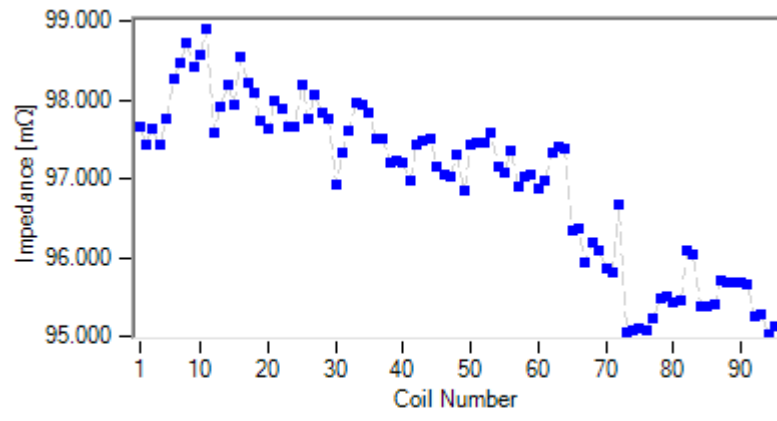
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Tester Type:Dx Serial Number:12265 Firmware version:1.2.2.0 Configuration:DXHost

Coil 96 Frequency 50.0 [Hz]

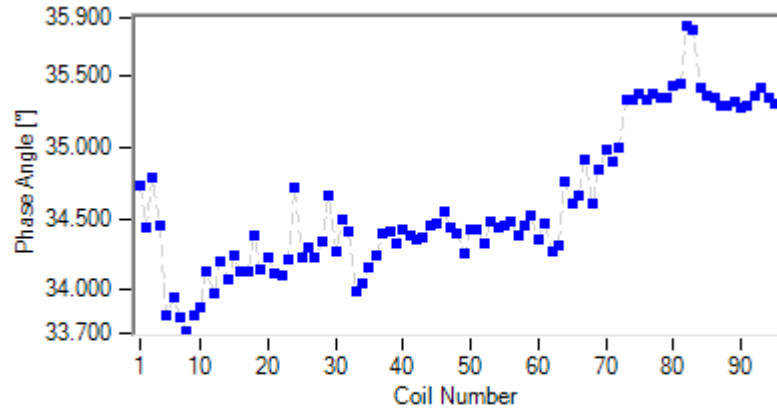
### Impedance [mΩ]

Minimum 95.020 Average 96.944 Maximum 98.899



### Phase Angle [°]

Minimum 33.709 Average 34.616 Maximum 35.842



Coil Surge Test Results

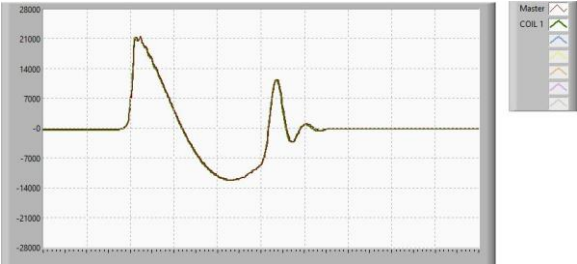
Test Parameters		Date: 9/26/2023 Time: 12:16 PM	
Surge Test Voltage (V)	% Error Pass Limit	Time Base	Volts/Division
21900 V	10 %	4 us	7000 Volts/Division

Test Result Summary						
COIL No	REF. ID	% ERROR	TEST VOLT (V)	RISE TIME	SHOTS	STATUS
COIL 1		1.5 %	21900 V	105.6 nS	9	PASS
COIL 2		0.9 %	22200 V	101.8 nS	8	PASS
COIL 3		3.1 %	21700 V	108.0 nS	13	PASS
COIL 4		2.7 %	21800 V	105.4 nS	8	PASS
COIL 5		0.0 %	21300 V	104.6 nS	7	PASS
COIL 6		5.5 %	21600 V	107.1 nS	11	PASS
COIL 7		0.1 %	21600 V	105.8 nS	7	PASS
COIL 8		0.1 %	21600 V	105.8 nS	7	PASS
COIL 9		0.4 %	21700 V	105.9 nS	3	PASS
COIL 10		1.1 %	22300 V	107.2 nS	6	PASS
COIL 11		0.5 %	21500 V	101.8 nS	3	PASS
COIL 12		1.3 %	22400 V	104.5 nS	10	PASS
COIL 13		0.0 %	21300 V	104.6 nS	7	PASS
COIL 14		0.3 %	21800 V	109.1 nS	5	PASS
COIL 15		2.5 %	22100 V	101.5 nS	6	PASS
COIL 16		3.4 %	22100 V	106.7 nS	4	PASS
COIL 17		3.4 %	22100 V	106.7 nS	4	PASS
COIL 18		2.6 %	22600 V	107.6 nS	9	PASS
COIL 19		3.4 %	22300 V	101.2 nS	4	PASS
COIL 20		2.5 %	22000 V	103.3 nS	4	PASS
COIL 21		3.0 %	22000 V	101.4 nS	5	PASS
COIL 22		3.2 %	22100 V	107.8 nS	5	PASS
COIL 23		2.8 %	21800 V	102.7 nS	5	PASS
COIL 24		3.3 %	22600 V	100.2 nS	5	PASS
COIL 25		2.8 %	22200 V	107.4 nS	5	PASS
COIL 26		2.5 %	21900 V	106.5 nS	4	PASS
COIL 27		2.5 %	21900 V	109.6 nS	5	PASS
COIL 28		2.5 %	21900 V	109.6 nS	5	PASS
COIL 29		3.0 %	22500 V	101.9 nS	6	PASS
COIL 30		2.1 %	22000 V	107.1 nS	4	PASS
COIL 31		2.3 %	22400 V	107.9 nS	5	PASS
COIL 32		2.3 %	22400 V	107.9 nS	5	PASS
COIL 33		2.1 %	22500 V	105.2 nS	5	PASS
COIL 34		2.0 %	21900 V	103.8 nS	5	PASS
COIL 35		2.0 %	21900 V	103.8 nS	5	PASS
COIL 36		2.8 %	22400 V	109.0 nS	4	PASS
COIL 37		2.7 %	22700 V	104.8 nS	4	PASS
COIL 38		2.7 %	22700 V	104.8 nS	4	PASS
COIL 39		2.8 %	22000 V	103.6 nS	5	PASS
COIL 40		2.8 %	22000 V	103.6 nS	5	PASS
COIL 41		2.9 %	22000 V	103.6 nS	7	PASS
COIL 42		2.9 %	22000 V	103.6 nS	7	PASS
COIL 43		2.9 %	22000 V	103.6 nS	7	PASS
COIL 44		3.0 %	22100 V	106.7 nS	3	PASS
COIL 45		3.2 %	23000 V	102.6 nS	4	PASS
COIL 46		2.3 %	22400 V	102.5 nS	5	PASS
COIL 47		3.6 %	22700 V	109.4 nS	4	PASS
COIL 48		3.6 %	22700 V	109.4 nS	4	PASS
COIL 49		3.1 %	22300 V	103.8 nS	8	PASS
COIL 50		3.1 %	23000 V	100.5 nS	3	PASS
COIL 51		3.5 %	22900 V	105.4 nS	3	PASS
COIL 52		3.8 %	22900 V	105.3 nS	3	PASS
COIL 53		3.1 %	23000 V	105.5 nS	4	PASS
COIL 54		3.1 %	23000 V	105.5 nS	4	PASS
COIL 55		3.1 %	23000 V	105.5 nS	4	PASS
COIL 56		3.0 %	22800 V	108.5 nS	4	PASS
COIL 57		2.8 %	22800 V	106.7 nS	4	PASS
COIL 58		3.3 %	22600 V	106.8 nS	3	PASS
COIL 59		2.4 %	22500 V	107.5 nS	2	PASS
COIL 60		2.4 %	22500 V	107.5 nS	2	PASS
COIL 61		2.4 %	22000 V	105.8 nS	6	PASS
COIL 62		2.4 %	22000 V	105.8 nS	6	PASS

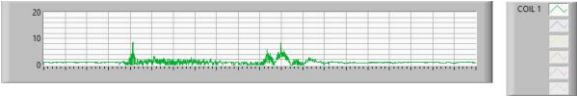


COIL 63		2.0 %	21700 V	103.4 nS	5	PASS
COIL 64		2.6 %	22700 V	108.2 nS	3	PASS
COIL 65		2.6 %	22700 V	108.2 nS	3	PASS
COIL 66		3.0 %	22600 V	109.8 nS	5	PASS
COIL 67		2.4 %	21800 V	101.1 nS	6	PASS
COIL 68		2.4 %	21800 V	101.1 nS	6	PASS
COIL 69		2.8 %	22100 V	104.8 nS	4	PASS
COIL 70		3.6 %	22800 V	109.3 nS	4	PASS
COIL 71		3.2 %	23100 V	110.0 nS	5	PASS
COIL 72		2.2 %	22500 V	106.5 nS	7	PASS
COIL 73		2.0 %	22300 V	104.2 nS	7	PASS
COIL 74		2.6 %	22100 V	103.9 nS	4	PASS
COIL 75		1.9 %	22000 V	102.1 nS	4	PASS
COIL 76		1.5 %	22200 V	100.8 nS	5	PASS
COIL 77		2.2 %	22700 V	108.4 nS	5	PASS
COIL 78		2.4 %	22300 V	109.6 nS	7	PASS
COIL 79		0.8 %	22100 V	106.3 nS	5	PASS
COIL 80		0.6 %	21500 V	109.7 nS	7	PASS
COIL 81		1.3 %	22400 V	108.1 nS	6	PASS
COIL 82		1.2 %	22100 V	109.3 nS	5	PASS
COIL 83		1.7 %	22300 V	102.2 nS	5	PASS
COIL 84		2.0 %	22600 V	103.2 nS	5	PASS
COIL 85		1.1 %	21900 V	104.3 nS	6	PASS
COIL 86		1.0 %	22200 V	109.0 nS	6	PASS
COIL 87		1.5 %	22100 V	109.9 nS	6	PASS
COIL 88		1.3 %	22100 V	110.0 nS	5	PASS
COIL 89		0.5 %	21800 V	103.6 nS	5	PASS
COIL 90		1.1 %	22200 V	103.1 nS	5	PASS
COIL 91		1.8 %	22700 V	108.3 nS	8	PASS
COIL 92		1.5 %	23200 V	109.6 nS	5	PASS
COIL 93		0.4 %	22400 V	105.7 nS	6	PASS
COIL 94		1.4 %	22500 V	106.7 nS	5	PASS
COIL 95		1.1 %	22900 V	105.6 nS	6	PASS
COIL 96		1.3 %	22900 V	100.8 nS	3	PASS
COIL 97		1.3 %	22600 V	104.1 nS	6	PASS

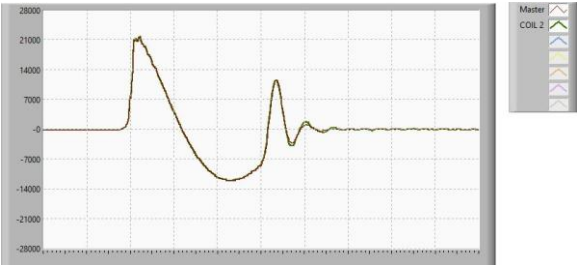
SURGE TEST WAVEFORM - COIL 1



% ERROR VARIATION - COIL 1



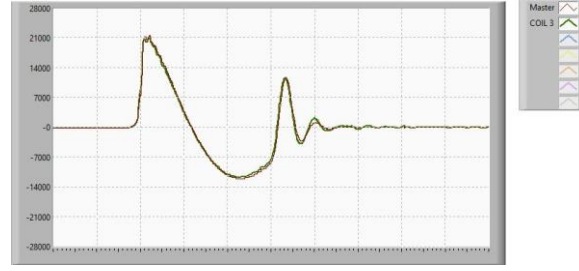
SURGE TEST WAVEFORM - COIL 2



% ERROR VARIATION - COIL 2



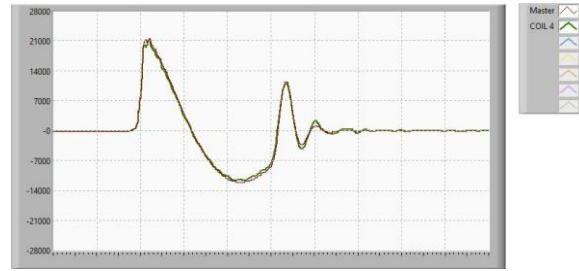
### SURGE TEST WAVEFORM - COIL 3



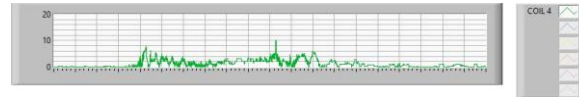
### % ERROR VARIATION - COIL 3



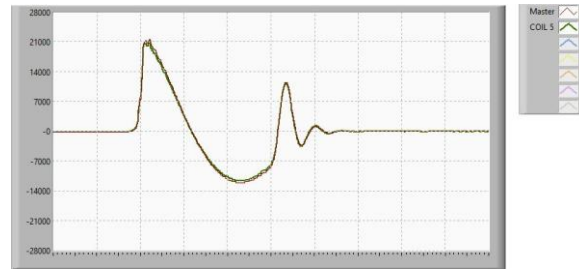
### SURGE TEST WAVEFORM - COIL 4



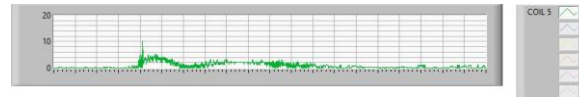
### % ERROR VARIATION - COIL 4



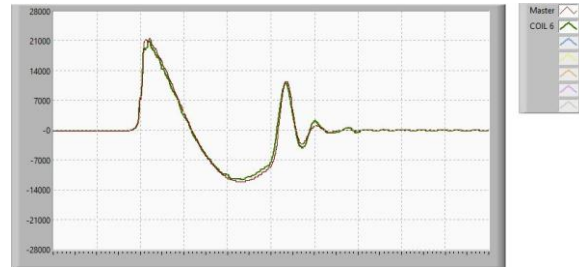
### SURGE TEST WAVEFORM - COIL 5



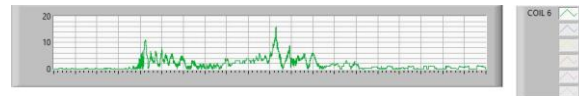
### % ERROR VARIATION - COIL 5



### SURGE TEST WAVEFORM - COIL 6



### % ERROR VARIATION - COIL 6

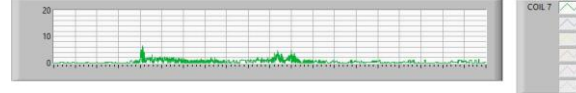




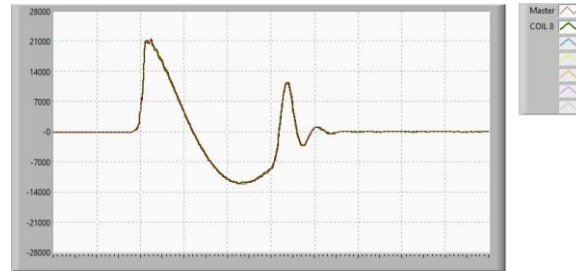
#### SURGE TEST WAVEFORM - COIL 7



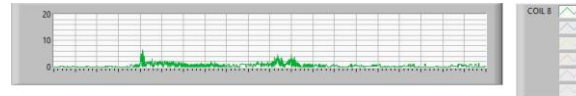
#### % ERROR VARIATION - COIL 7



#### SURGE TEST WAVEFORM - COIL 8



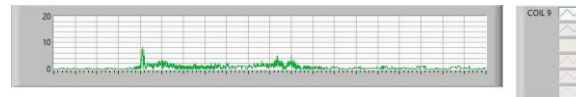
#### % ERROR VARIATION - COIL 8



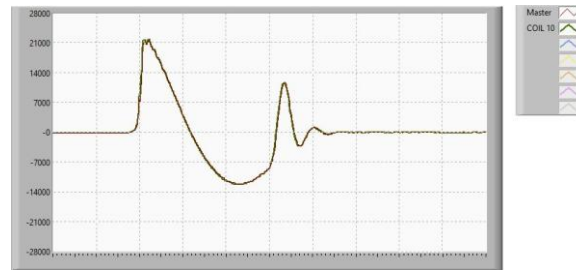
#### SURGE TEST WAVEFORM - COIL 9



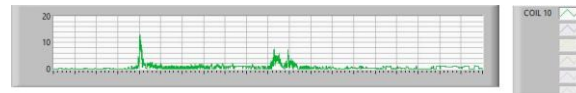
#### % ERROR VARIATION - COIL 9



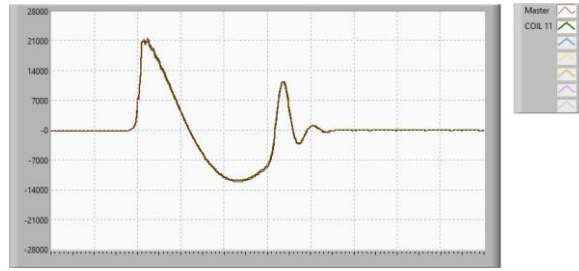
#### SURGE TEST WAVEFORM - COIL 10



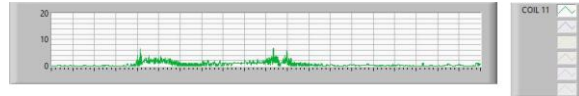
#### % ERROR VARIATION - COIL 10



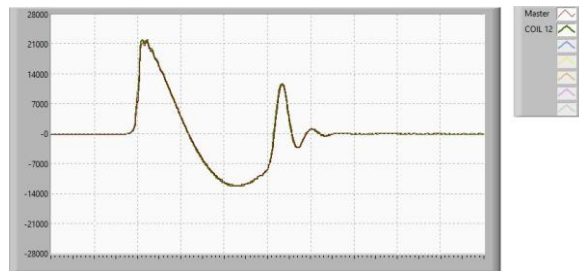
**SURGE TEST WAVEFORM - COIL 11**



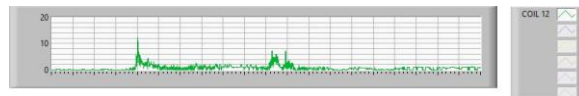
**% ERROR VARIATION - COIL 11**



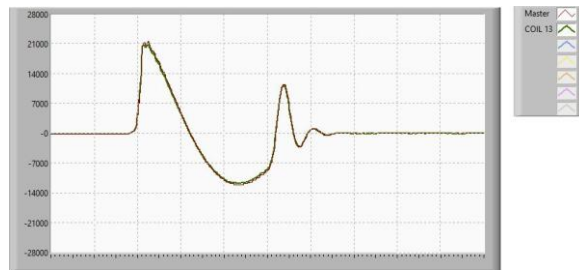
**SURGE TEST WAVEFORM - COIL 12**



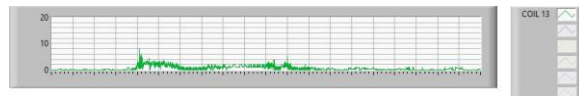
**% ERROR VARIATION - COIL 12**



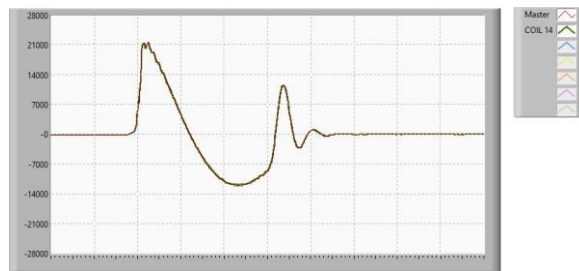
**SURGE TEST WAVEFORM - COIL 13**



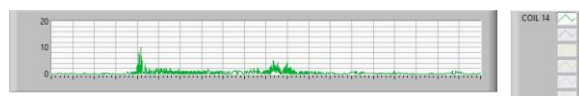
**% ERROR VARIATION - COIL 13**



**SURGE TEST WAVEFORM - COIL 14**

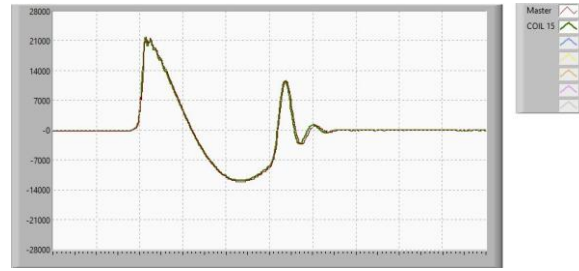


**% ERROR VARIATION - COIL 14**





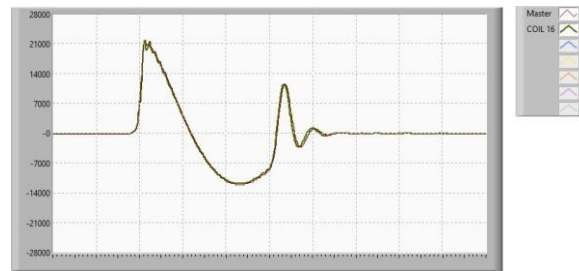
#### SURGE TEST WAVEFORM - COIL 15



#### % ERROR VARIATION - COIL 15



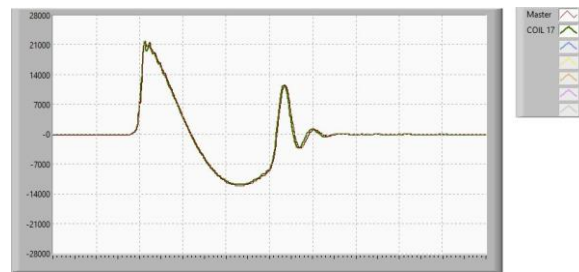
#### SURGE TEST WAVEFORM - COIL 16



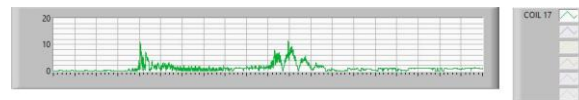
#### % ERROR VARIATION - COIL 16



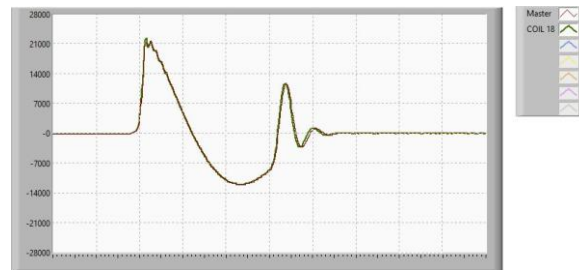
#### SURGE TEST WAVEFORM - COIL 17



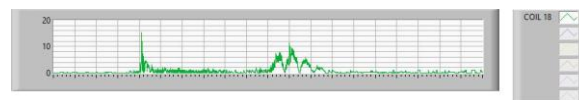
#### % ERROR VARIATION - COIL 17



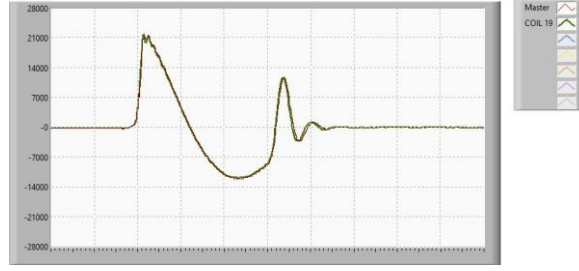
#### SURGE TEST WAVEFORM - COIL 18



#### % ERROR VARIATION - COIL 18



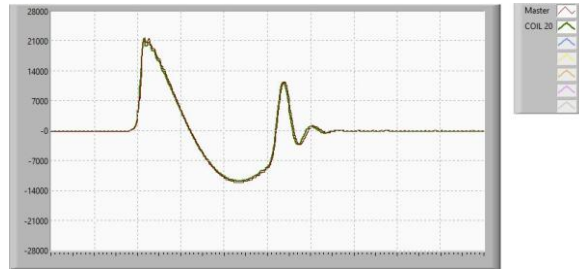
#### SURGE TEST WAVEFORM - COIL 19



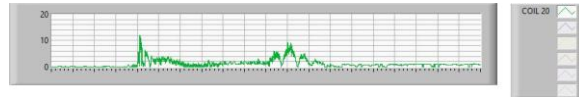
#### % ERROR VARIATION - COIL 19



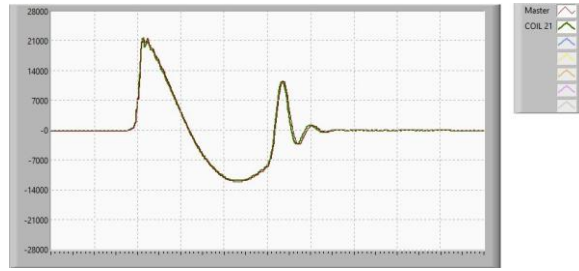
#### SURGE TEST WAVEFORM - COIL 20



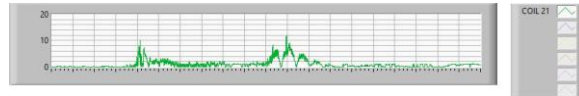
#### % ERROR VARIATION - COIL 20



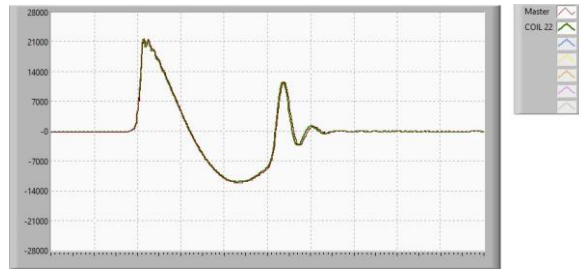
#### SURGE TEST WAVEFORM - COIL 21



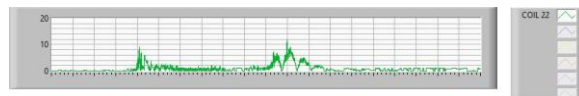
#### % ERROR VARIATION - COIL 21



#### SURGE TEST WAVEFORM - COIL 22



#### % ERROR VARIATION - COIL 22





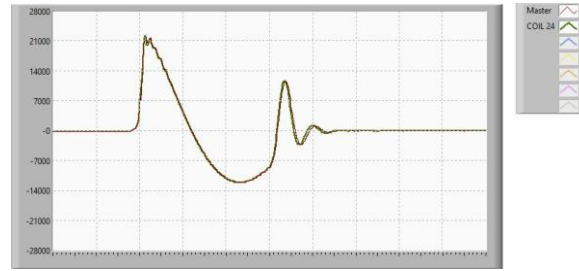
#### SURGE TEST WAVEFORM - COIL 23



#### % ERROR VARIATION - COIL 23



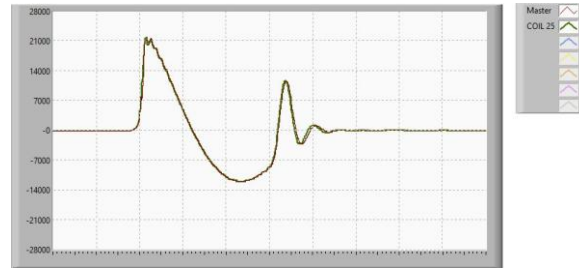
#### SURGE TEST WAVEFORM - COIL 24



#### % ERROR VARIATION - COIL 24



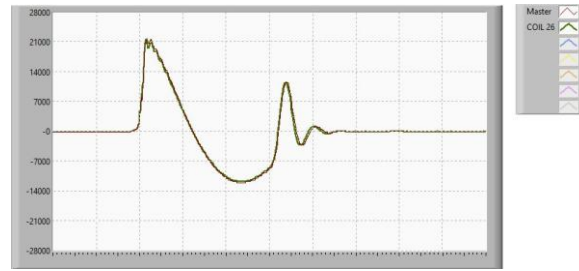
#### SURGE TEST WAVEFORM - COIL 25



#### % ERROR VARIATION - COIL 25



#### SURGE TEST WAVEFORM - COIL 26



#### % ERROR VARIATION - COIL 26



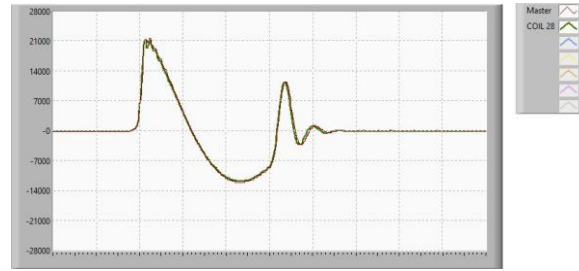
#### SURGE TEST WAVEFORM - COIL 27



#### % ERROR VARIATION - COIL 27



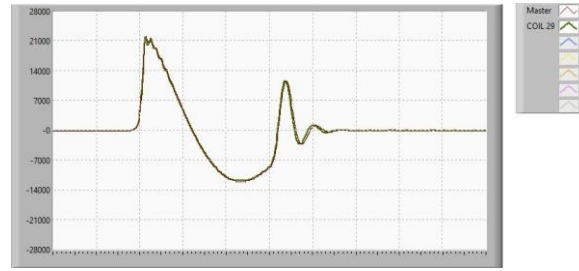
#### SURGE TEST WAVEFORM - COIL 28



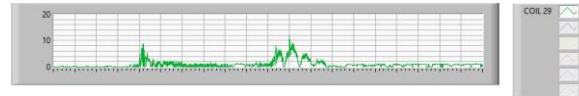
#### % ERROR VARIATION - COIL 28



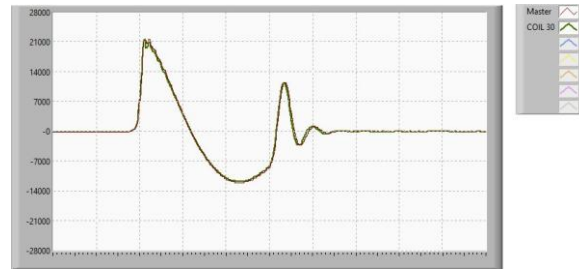
#### SURGE TEST WAVEFORM - COIL 29



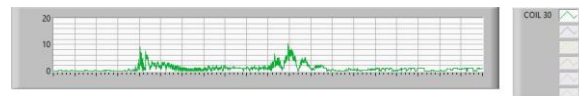
#### % ERROR VARIATION - COIL 29



#### SURGE TEST WAVEFORM - COIL 30



#### % ERROR VARIATION - COIL 30





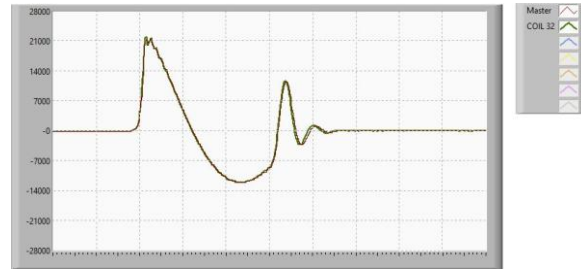
#### SURGE TEST WAVEFORM - COIL 31



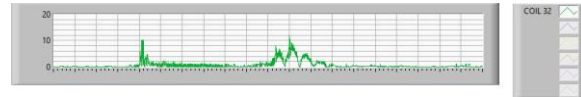
#### % ERROR VARIATION - COIL 31



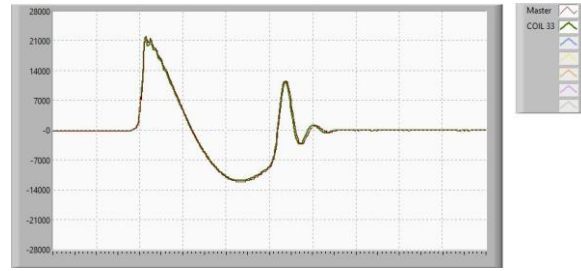
#### SURGE TEST WAVEFORM - COIL 32



#### % ERROR VARIATION - COIL 32



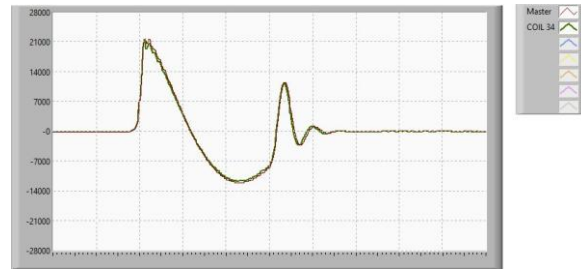
#### SURGE TEST WAVEFORM - COIL 33



#### % ERROR VARIATION - COIL 33



#### SURGE TEST WAVEFORM - COIL 34



#### % ERROR VARIATION - COIL 34



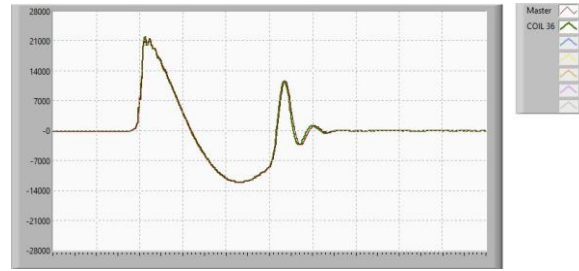
### SURGE TEST WAVEFORM - COIL 35



### % ERROR VARIATION - COIL 35



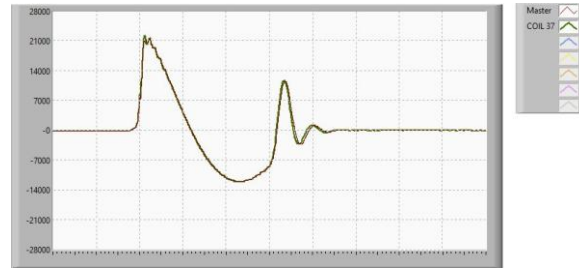
### SURGE TEST WAVEFORM - COIL 36



### % ERROR VARIATION - COIL 36



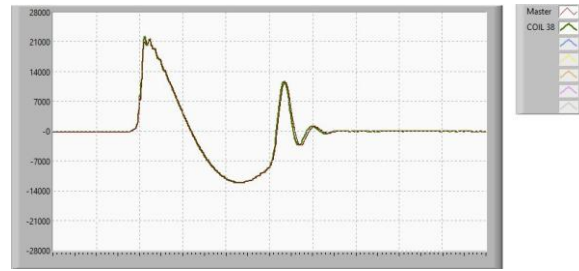
### SURGE TEST WAVEFORM - COIL 37



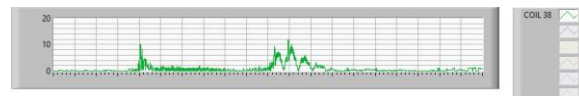
### % ERROR VARIATION - COIL 37



### SURGE TEST WAVEFORM - COIL 38

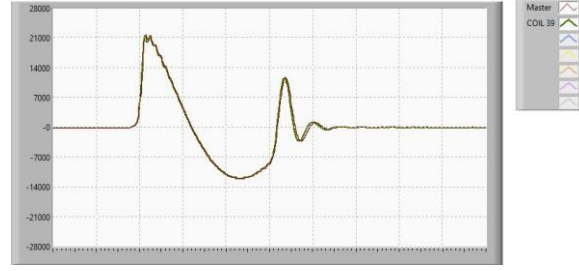


### % ERROR VARIATION - COIL 38





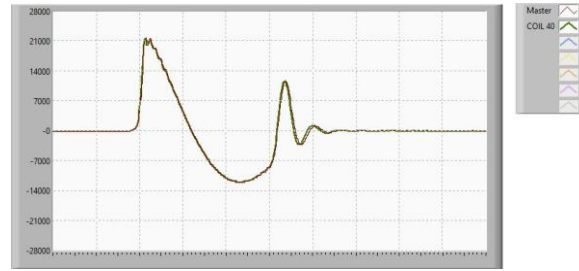
#### SURGE TEST WAVEFORM - COIL 39



#### % ERROR VARIATION - COIL 39



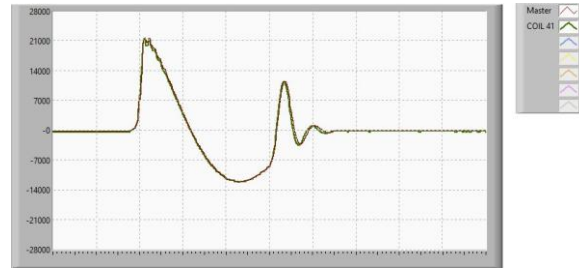
#### SURGE TEST WAVEFORM - COIL 40



#### % ERROR VARIATION - COIL 40



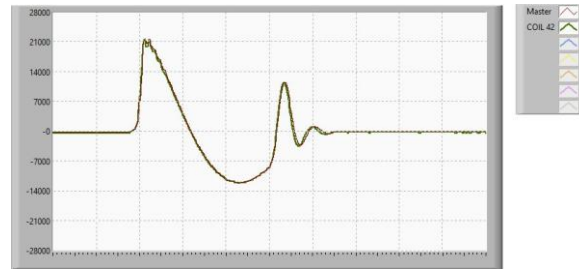
#### SURGE TEST WAVEFORM - COIL 41



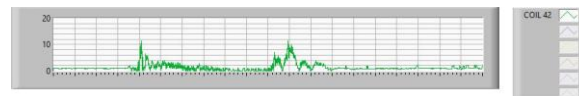
#### % ERROR VARIATION - COIL 41



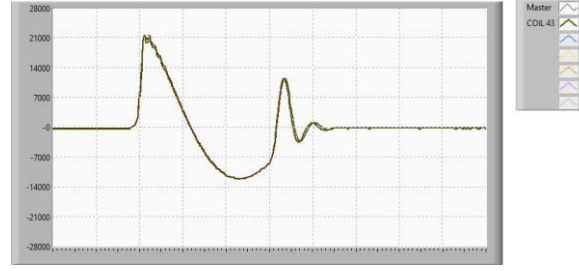
#### SURGE TEST WAVEFORM - COIL 42



#### % ERROR VARIATION - COIL 42



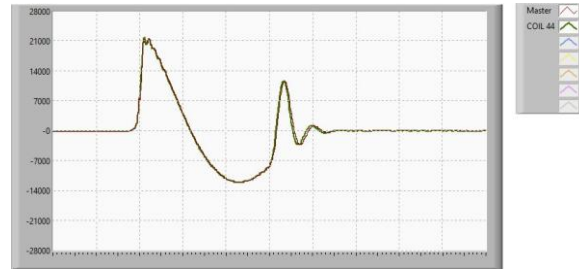
#### SURGE TEST WAVEFORM - COIL 43



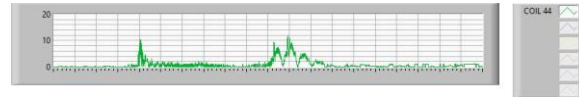
#### % ERROR VARIATION - COIL 43



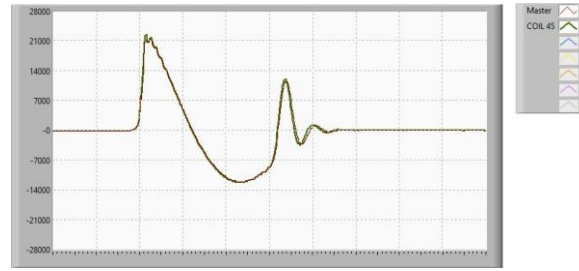
#### SURGE TEST WAVEFORM - COIL 44



#### % ERROR VARIATION - COIL 44



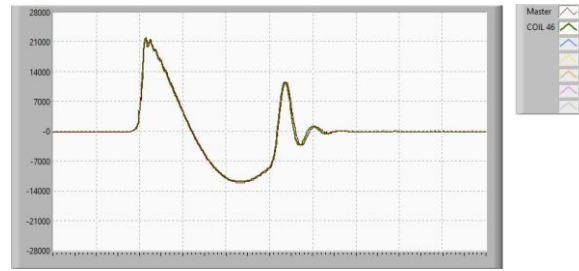
#### SURGE TEST WAVEFORM - COIL 45



#### % ERROR VARIATION - COIL 45



#### SURGE TEST WAVEFORM - COIL 46

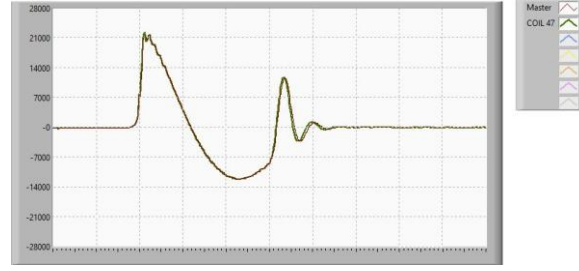


#### % ERROR VARIATION - COIL 46





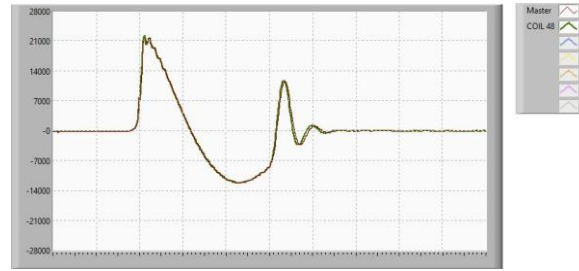
#### SURGE TEST WAVEFORM - COIL 47



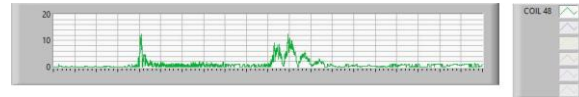
#### % ERROR VARIATION - COIL 47



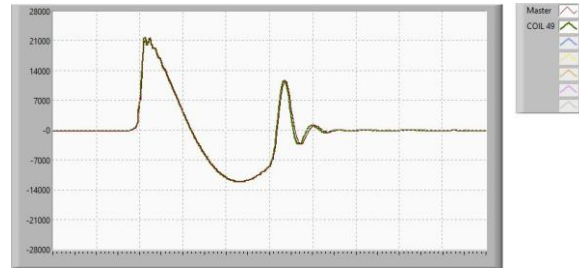
#### SURGE TEST WAVEFORM - COIL 48



#### % ERROR VARIATION - COIL 48



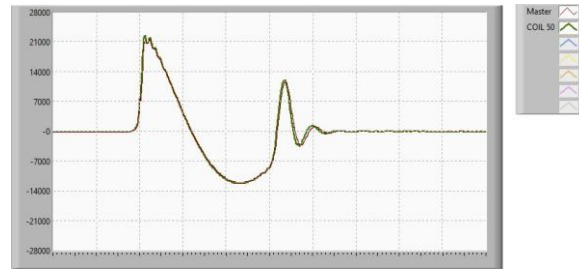
#### SURGE TEST WAVEFORM - COIL 49



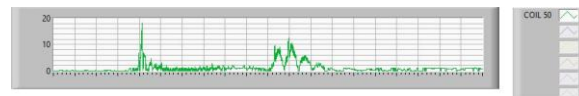
#### % ERROR VARIATION - COIL 49



#### SURGE TEST WAVEFORM - COIL 50



#### % ERROR VARIATION - COIL 50



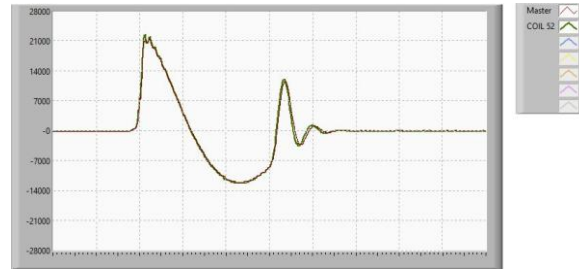
### SURGE TEST WAVEFORM - COIL 51



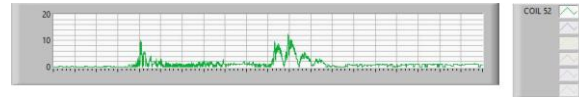
### % ERROR VARIATION - COIL 51



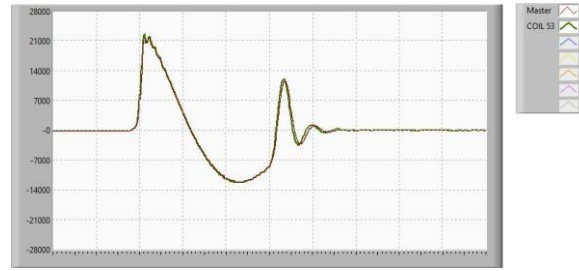
### SURGE TEST WAVEFORM - COIL 52



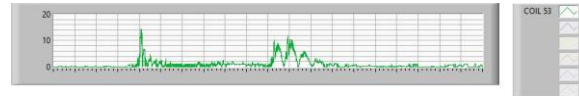
### % ERROR VARIATION - COIL 52



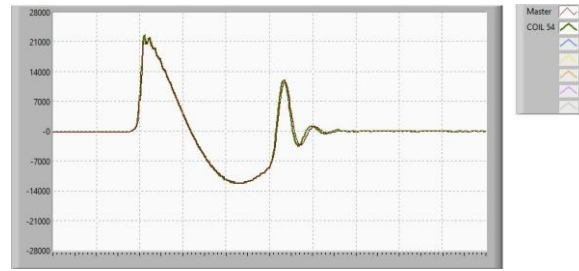
### SURGE TEST WAVEFORM - COIL 53



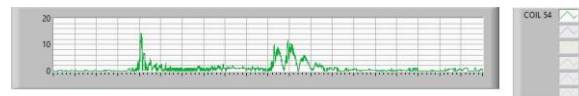
### % ERROR VARIATION - COIL 53



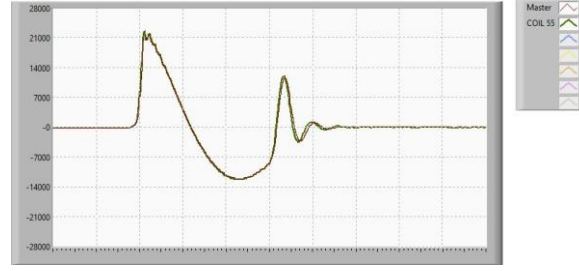
### SURGE TEST WAVEFORM - COIL 54



### % ERROR VARIATION - COIL 54



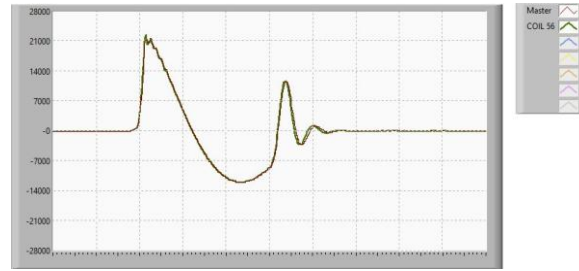
#### SURGE TEST WAVEFORM - COIL 55



#### % ERROR VARIATION - COIL 55



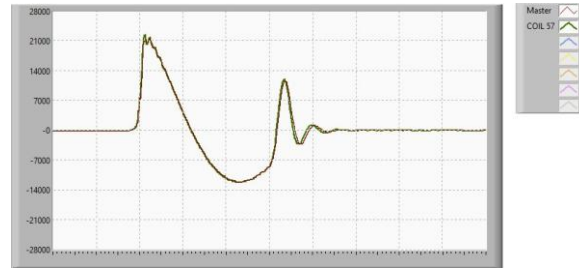
#### SURGE TEST WAVEFORM - COIL 56



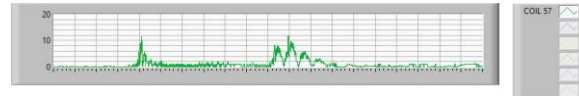
#### % ERROR VARIATION - COIL 56



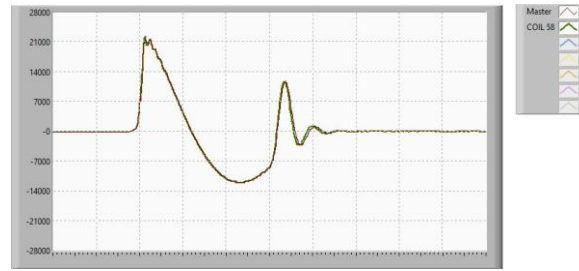
#### SURGE TEST WAVEFORM - COIL 57



#### % ERROR VARIATION - COIL 57



#### SURGE TEST WAVEFORM - COIL 58



#### % ERROR VARIATION - COIL 58





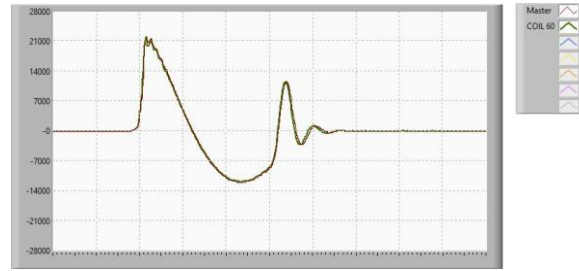
#### SURGE TEST WAVEFORM - COIL 59



#### % ERROR VARIATION - COIL 59



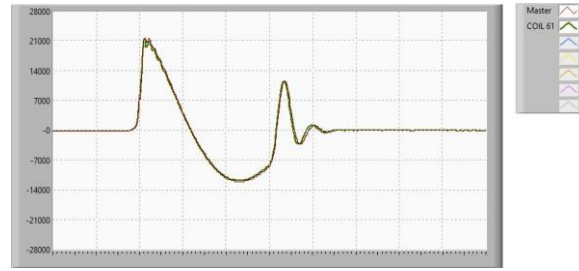
#### SURGE TEST WAVEFORM - COIL 60



#### % ERROR VARIATION - COIL 60



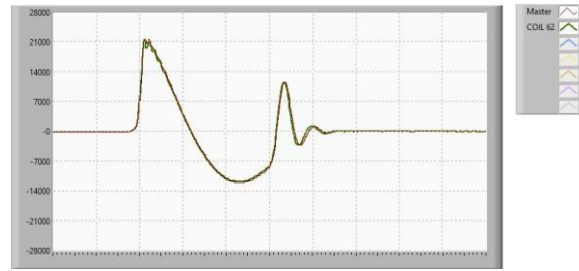
#### SURGE TEST WAVEFORM - COIL 61



#### % ERROR VARIATION - COIL 61



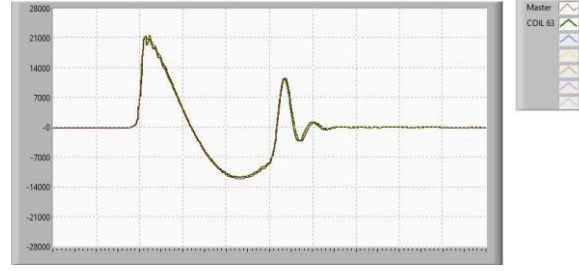
#### SURGE TEST WAVEFORM - COIL 62



#### % ERROR VARIATION - COIL 62



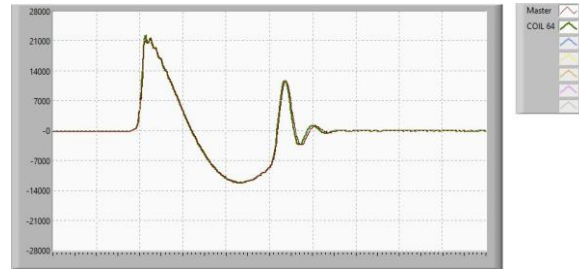
#### SURGE TEST WAVEFORM - COIL 63



#### % ERROR VARIATION - COIL 63



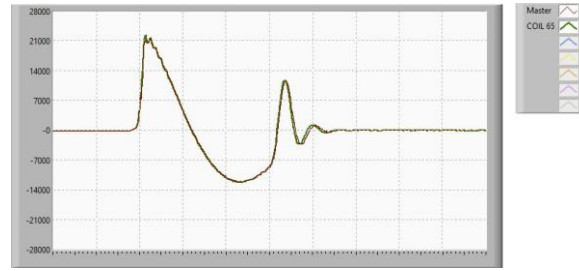
#### SURGE TEST WAVEFORM - COIL 64



#### % ERROR VARIATION - COIL 64



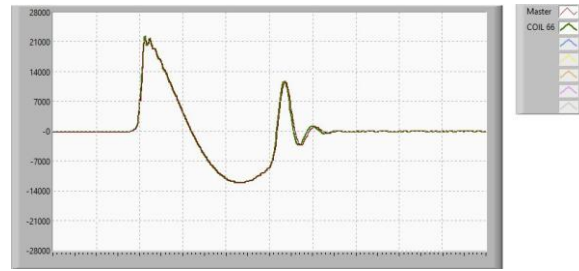
#### SURGE TEST WAVEFORM - COIL 65



#### % ERROR VARIATION - COIL 65



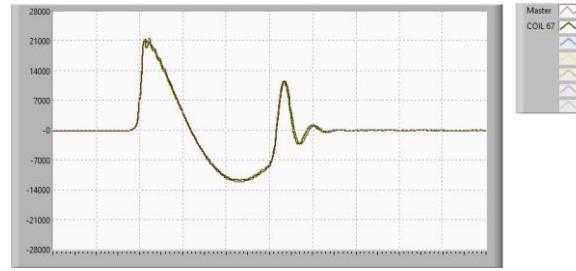
#### SURGE TEST WAVEFORM - COIL 66



#### % ERROR VARIATION - COIL 66



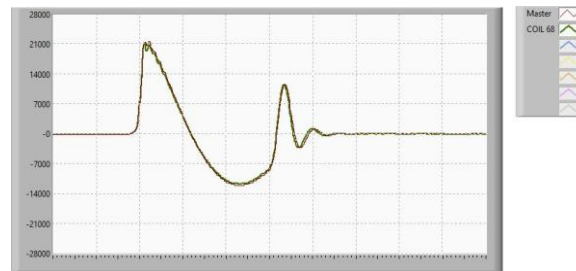
#### SURGE TEST WAVEFORM - COIL 67



#### % ERROR VARIATION - COIL 67



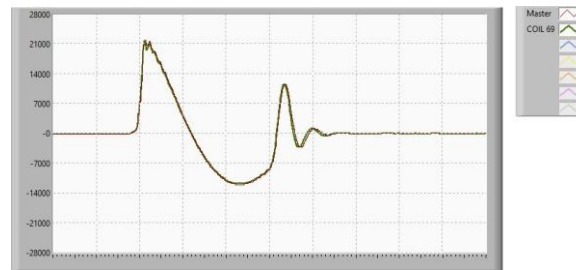
#### SURGE TEST WAVEFORM - COIL 68



#### % ERROR VARIATION - COIL 68



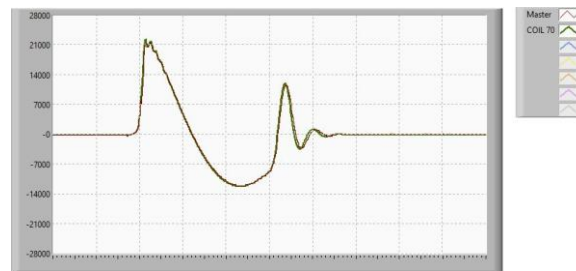
#### SURGE TEST WAVEFORM - COIL 69



#### % ERROR VARIATION - COIL 69



#### SURGE TEST WAVEFORM - COIL 70

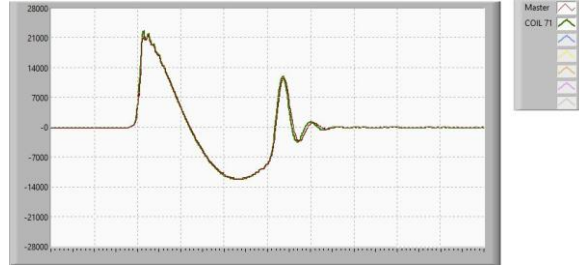


#### % ERROR VARIATION - COIL 70





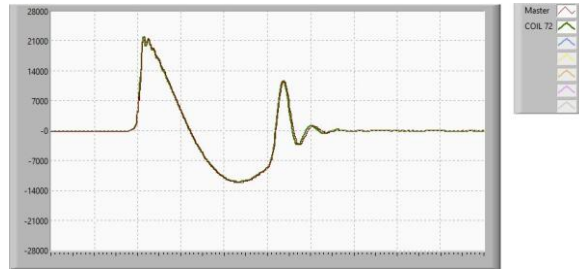
#### SURGE TEST WAVEFORM - COIL 71



#### % ERROR VARIATION - COIL 71



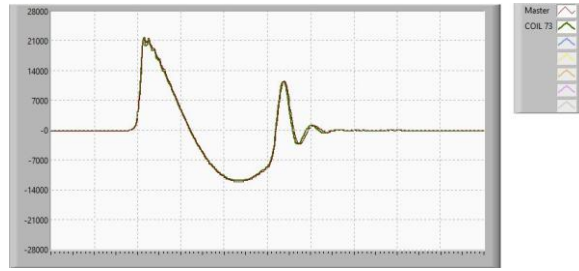
#### SURGE TEST WAVEFORM - COIL 72



#### % ERROR VARIATION - COIL 72



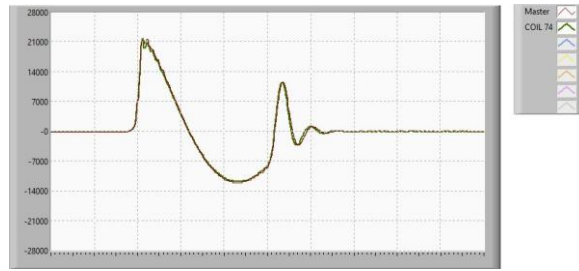
#### SURGE TEST WAVEFORM - COIL 73



#### % ERROR VARIATION - COIL 73



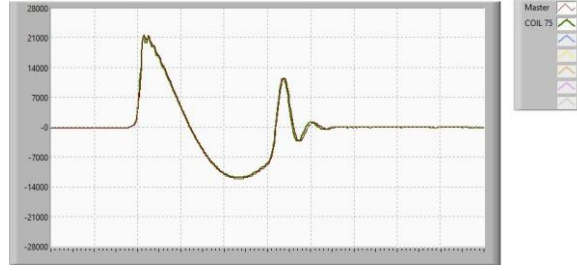
#### SURGE TEST WAVEFORM - COIL 74



#### % ERROR VARIATION - COIL 74



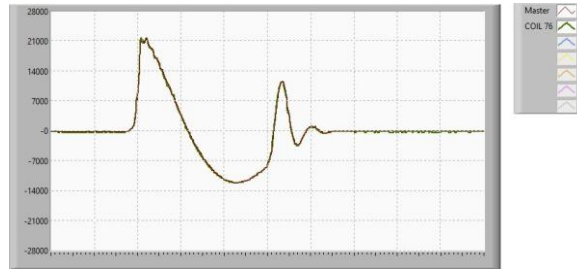
#### SURGE TEST WAVEFORM - COIL 75



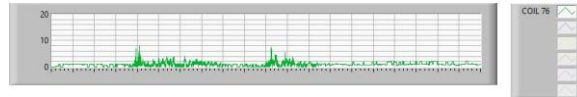
#### % ERROR VARIATION - COIL 75



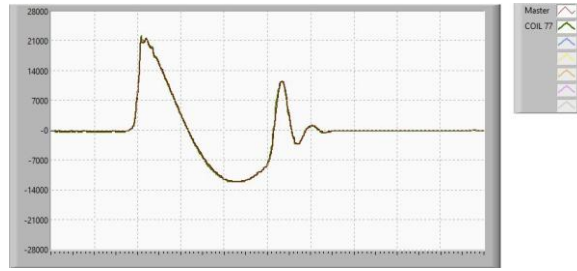
#### SURGE TEST WAVEFORM - COIL 76



#### % ERROR VARIATION - COIL 76



#### SURGE TEST WAVEFORM - COIL 77



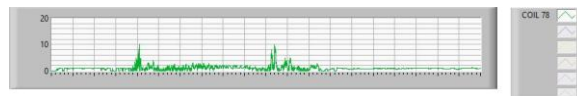
#### % ERROR VARIATION - COIL 77



#### SURGE TEST WAVEFORM - COIL 78



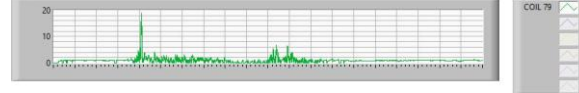
#### % ERROR VARIATION - COIL 78



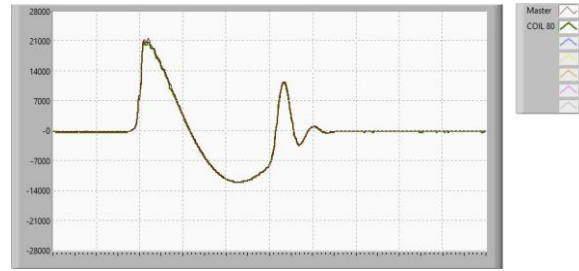
### SURGE TEST WAVEFORM - COIL 79



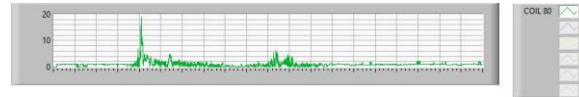
### % ERROR VARIATION - COIL 79



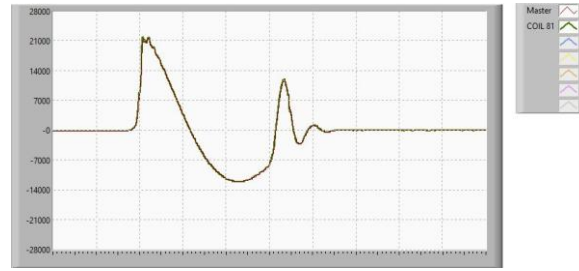
### SURGE TEST WAVEFORM - COIL 80



### % ERROR VARIATION - COIL 80



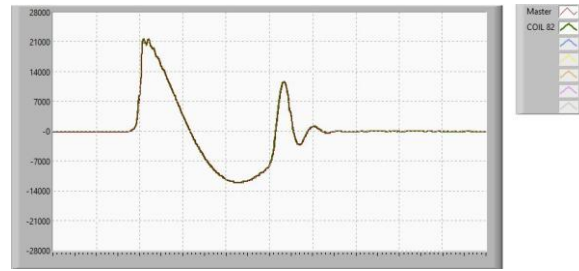
### SURGE TEST WAVEFORM - COIL 81



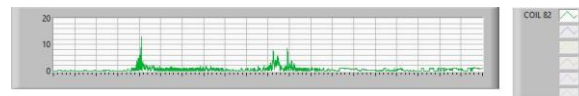
### % ERROR VARIATION - COIL 81



### SURGE TEST WAVEFORM - COIL 82

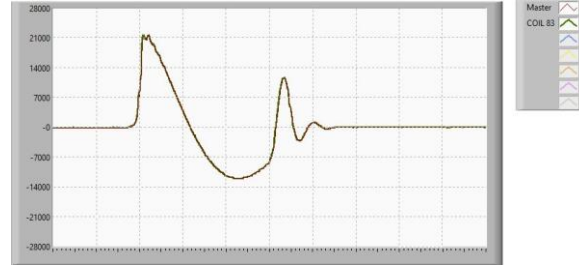


### % ERROR VARIATION - COIL 82

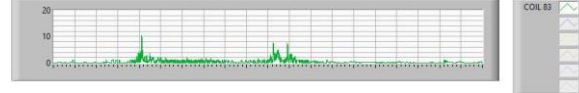




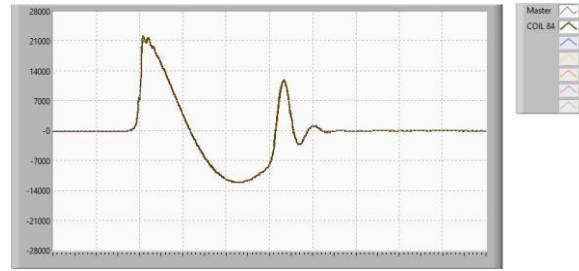
### SURGE TEST WAVEFORM - COIL 83



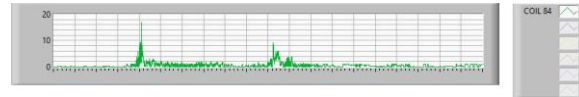
### % ERROR VARIATION - COIL 83



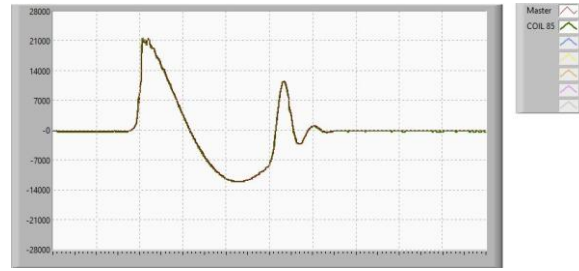
### SURGE TEST WAVEFORM - COIL 84



### % ERROR VARIATION - COIL 84



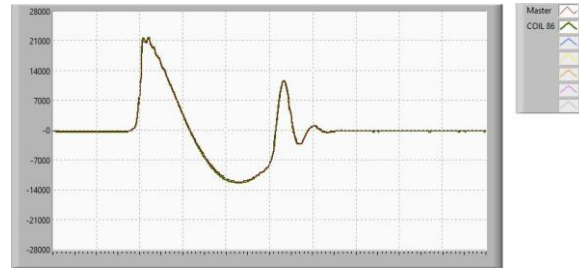
### SURGE TEST WAVEFORM - COIL 85



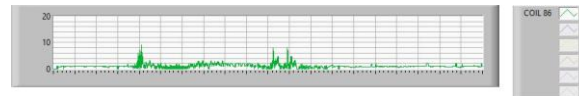
### % ERROR VARIATION - COIL 85



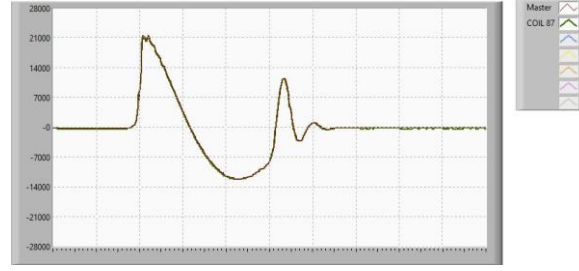
### SURGE TEST WAVEFORM - COIL 86



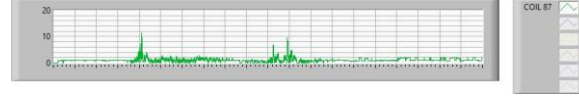
### % ERROR VARIATION - COIL 86



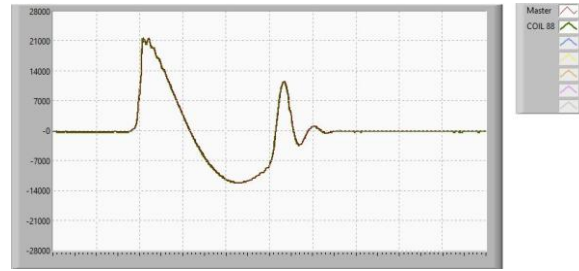
#### SURGE TEST WAVEFORM - COIL 87



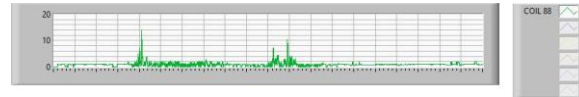
#### % ERROR VARIATION - COIL 87



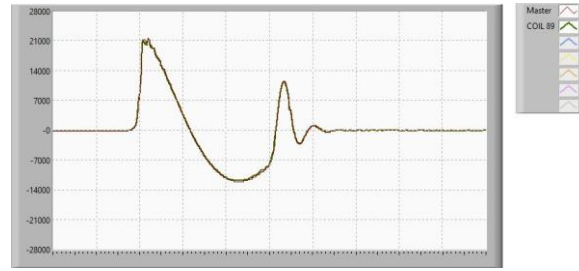
#### SURGE TEST WAVEFORM - COIL 88



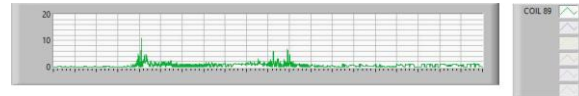
#### % ERROR VARIATION - COIL 88



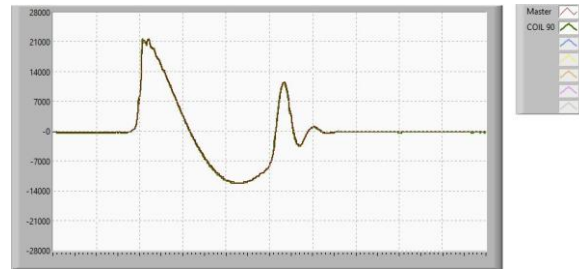
#### SURGE TEST WAVEFORM - COIL 89



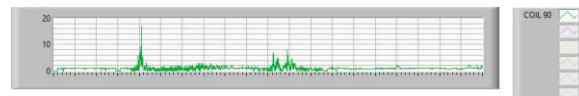
#### % ERROR VARIATION - COIL 89



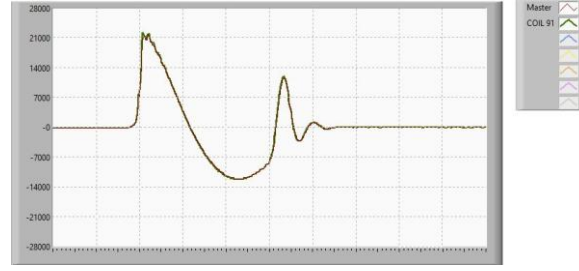
#### SURGE TEST WAVEFORM - COIL 90



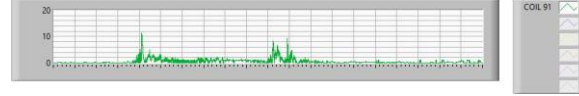
#### % ERROR VARIATION - COIL 90



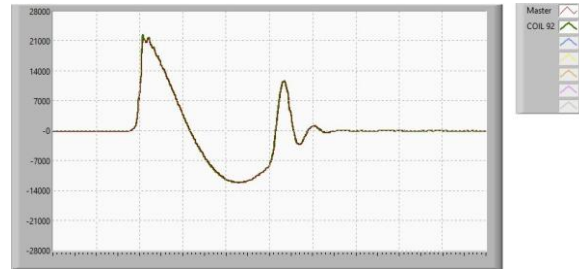
**SURGE TEST WAVEFORM - COIL 91**



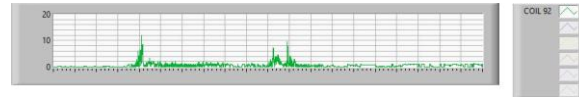
**% ERROR VARIATION - COIL 91**



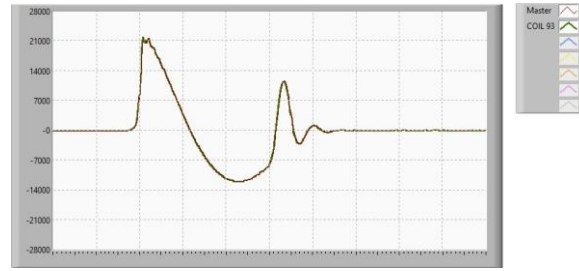
**SURGE TEST WAVEFORM - COIL 92**



**% ERROR VARIATION - COIL 92**



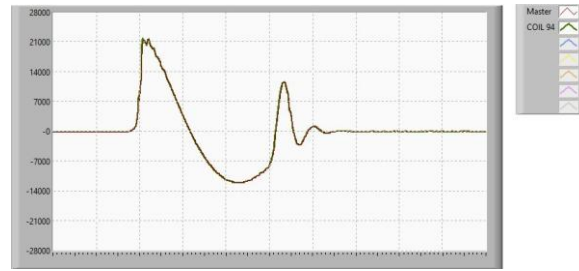
**SURGE TEST WAVEFORM - COIL 93**



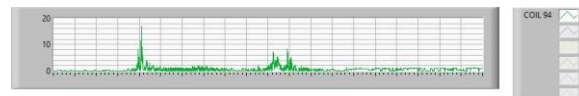
**% ERROR VARIATION - COIL 93**



**SURGE TEST WAVEFORM - COIL 94**

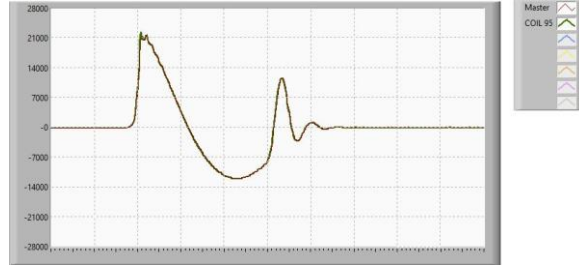


**% ERROR VARIATION - COIL 94**





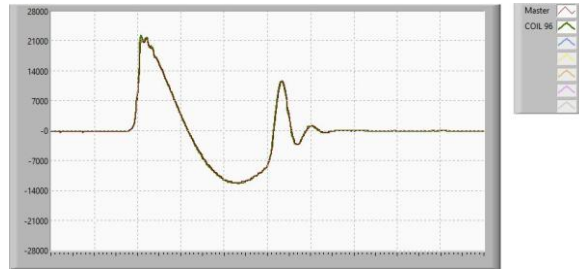
**SURGE TEST WAVEFORM - COIL 95**



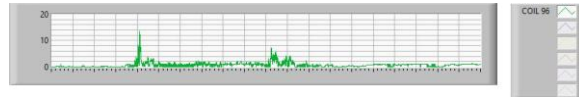
**% ERROR VARIATION - COIL 95**



**SURGE TEST WAVEFORM - COIL 96**



**% ERROR VARIATION - COIL 96**



**Açıklamalar**  
*Comments*

Montaj / Demontaj Operatörü	Test ve Kontrol Sorumlusu	Genel Müdür
	Elektrik ve Elektronik Yüksek Mühendisi <b>Coşkun ARSLAN</b>	<b>Numan OMURCA</b>