



SYNCHRONOUS MOTOR POLARIZATION INDEX (PI) TEST - ARMATURE



OWNER Example Owner PAGE 1
 PLANT Example Plant AMBIENT TEMP. _____ °F DATE 10/13/2014
 SUBSTATION ROTATING MACHINERY HUMIDITY _____ % JOB # OTATING MACHINER
 POSITION AUTOMATED ASSET ID _____

NAMEPLATE DATA

MANUFACTURER _____ SERIAL NO. _____ TYPE _____
 FRAME _____ HORSEPOWER _____ VOLTAGE _____
 PHASE _____ FREQUENCY _____ HZ FULL LOAD CURRENT _____ AMPS
 LOCKED ROTOR CURRENT _____ AMPS RPM _____ POWER FACTOR _____
 SERVICE FACTOR _____ TEMPERATURE RISE _____ °C INSULATION CLASS _____
 DATE MANUFACTURED _____ NEMA DESIGN _____ WEIGHT _____
 SHAFT DIAMETER _____ LISTING UL CSA OTHER THERMALLY PROTECTED _____
 OTHER INFORMATION _____

FIELD INFORMATION

TYPE _____ SERIAL NO. _____ VOLTAGE _____ VDC
 CURRENT RATING _____ AMPS TEMPERATURE RISE _____ °C POWER FACTOR _____
 OTHER _____

CONNECTED EQUIPMENT _____ MOTOR TEMPERATURE _____ °C
 TEST VOLTAGE: _____ kVDC Enter TCF Manually: TEMPERATURE CORRECTION FACTOR TO 20°C, TCF _____
 Use Instrument PI Value:

MINUTES	ARMATURE WINDING TO GROUND		
	READING (megohms)	TEMP. CORR. FACTOR	20°C
0.25			
0.50			
0.75			
1.00			
2.00			
3.00			
4.00			
5.00			
6.00			
7.00			
8.00			
9.00			
10.00			
P. I.			

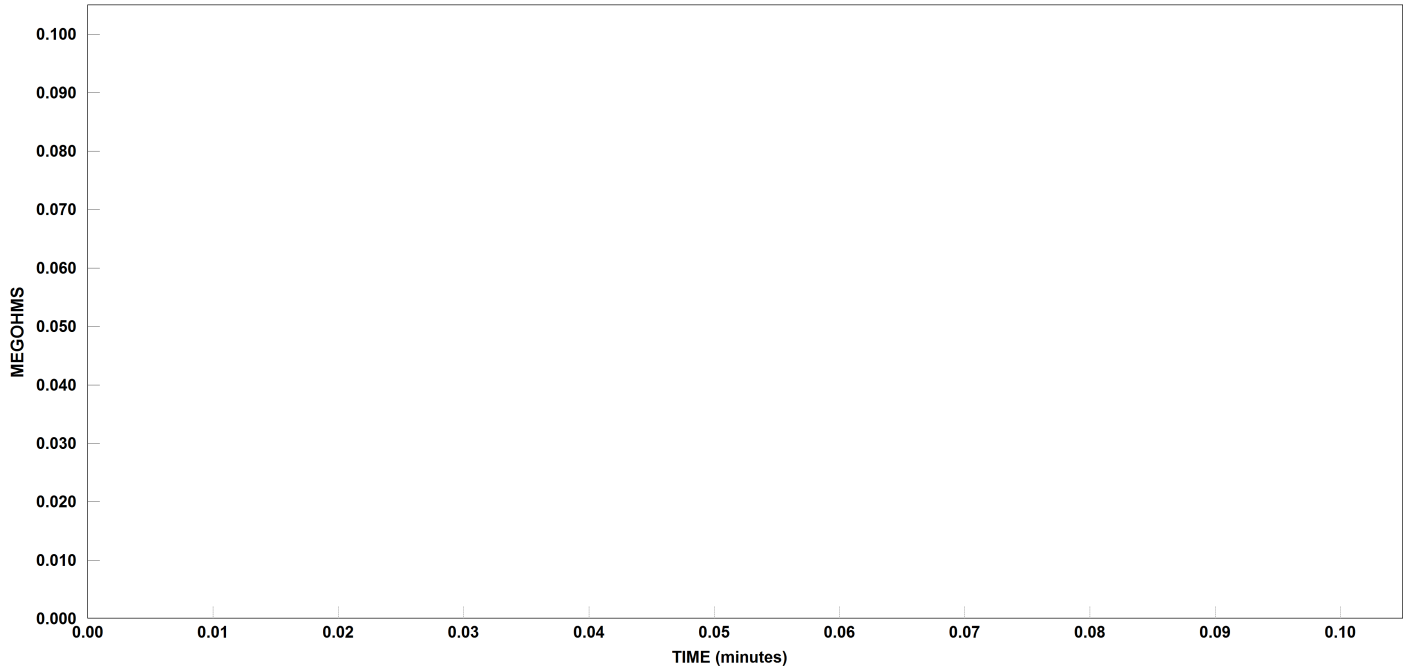
TEST EQUIPMENT USED: _____ TESTED BY: Default Administrator



SYNCHRONOUS MOTOR POLARIZATION INDEX (PI) TEST - ARMATURE



POLARIZATION CURVE



Armature: Red Square

COMMENTS:
DEFICIENCIES:



ROTATING MACHINERY INSULATION TEST STEP VOLTAGE TEST



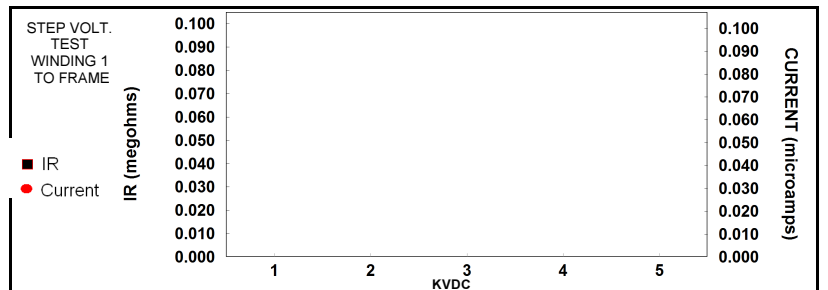
OWNER Example Owner
 PLANT Example Plant
 SUBSTATION ROTATING MACHINERY
 POSITION AUTOMATED

PAGE 3
 AMBIENT TEMP. _____ °F
 HUMIDITY _____ %
 DATE 10/13/2014
 JOB # OTATING MACHINER
 ASSET ID _____

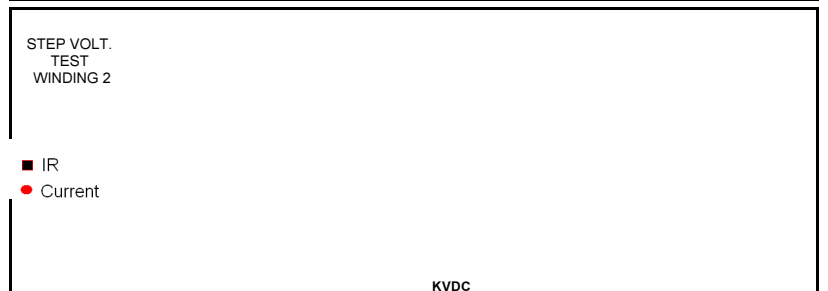
SERIAL NO.	_____	MACHINE	_____	EXCITER MFR	_____
SPECIAL ID	_____	TYPE	_____	EXCITER S/N	_____
CIRCUIT	_____	INS TYPE	_____	EXCITER DESIGN	_____
MFR	_____	COOLING	_____	EXCITER VOLTS	_____
MFR YEAR	_____	INS NAME	_____	EXCITER AMPS	_____
REASON	_____	KVA 1	_____	EXCITER kW	_____
WEATHER	_____	KVA 2	_____	EXCITER DRWG	_____
TANK TEMP	_____ °C	hp/kw	_____	EXCITER rpm	_____
YR RWND	_____	SPEED/rpm	_____	EXCITER TYPE	_____
YR SERVICE	_____	PWR FACTOR	_____	RES S/N	_____
STATOR KV	<u>8</u>	CREW SIZE	_____	SEMI-CON COAT	_____
FREQ Hz	_____	STA AMP 1	_____	VOLT GRADING APPLIED	_____
TYPE	_____	STA AMP 2	_____	GLOBAL VPI	_____
VOLTS	_____	POLES	_____	H2 PRESS	_____
AMPS	_____			H2 PRESS	_____
CONFIGURATION	_____				

TEMPERATURE _____ °C Enter TCF Manually: TEMP. CORR. FACTOR (TCF) TO 20°C _____ MAX. TEST VOLTAGE _____ KVDC
 TEST TIME _____ minutes

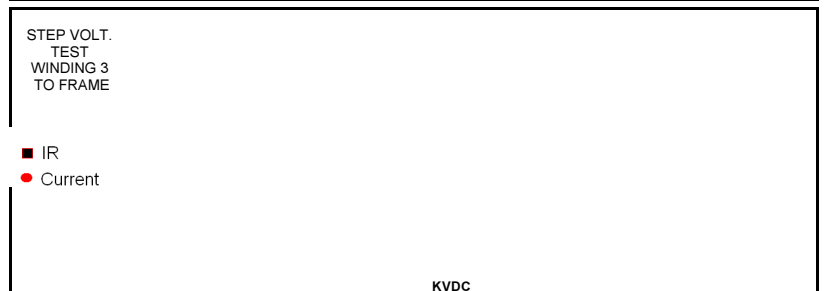
TIME (minutes)	STEP VOLT. (KVDC)	IR (megohms)	IR 20°C (megohms)	CURRENT (microamps)
1.0	1.00			
2.0	2.00			
3.0	3.00			
4.0	4.00			
5.0	5.00			



TIME (minutes)	STEP VOLT. (KVDC)	IR (megohms)	IR 20°C (megohms)	CURRENT (microamps)
1.0	1.00			
2.0	2.00			
3.0	3.00			
4.0	4.00			
5.0	5.00			



TIME (minutes)	STEP VOLT. (KVDC)	IR (megohms)	IR 20°C (megohms)	CURRENT (microamps)
1.0	1.00			
2.0	2.00			
3.0	3.00			
4.0	4.00			
5.0	5.00			



COMMENTS: _____
 DEFICIENCIES: _____

TEST EQUIPMENT USED: _____ TESTED BY: Default Administrator



SYNCHRONOUS MOTOR POLARIZATION INDEX (PI) TEST



OWNER Example Owner PAGE 4
 PLANT Example Plant AMBIENT TEMP. _____ °F DATE 10/13/2014
 SUBSTATION ROTATING MACHINERY HUMIDITY _____ % JOB # OTATING MACHINER
 POSITION AUTOMATED ASSET ID _____

NAMEPLATE DATA

MANUFACTURER _____ SERIAL NO. _____ TYPE _____
 FRAME _____ HORSEPOWER _____ VOLTAGE _____
 PHASE _____ FREQUENCY _____ HZ FULL LOAD CURRENT _____ AMPS
 LOCKED ROTOR CURRENT _____ AMPS RPM _____ POWER FACTOR _____
 SERVICE FACTOR _____ TEMPERATURE RISE _____ °C INSULATION CLASS _____
 DATE MANUFACTURED _____ NEMA DESIGN _____ WEIGHT _____
 SHAFT DIAMETER _____ LISTING UL CSA OTHER THERMALLY PROTECTED _____
 OTHER INFORMATION _____

FIELD INFORMATION

TYPE _____ SERIAL NO. _____ VOLTAGE _____ VDC
 CURRENT RATING _____ AMPS TEMPERATURE RISE _____ °C POWER FACTOR _____
 OTHER _____

CONNECTED EQUIPMENT _____ MOTOR TEMPERATURE _____ °C
 TEST VOLTAGE: STATOR _____ KVDC Enter TCF Manually: TEMPERATURE CORRECTION FACTOR TO 20 °C _____
 ROTOR _____ KVDC Use Instrument PI Value:

MINUTES	STATOR TO FRAME - ROTOR GUARDED			ROTOR TO FRAME - STATOR GUARDED		
	READING (megohms)	TEMP. CORR. FACTOR	20°C READING (megohms)	READING (megohms)	TEMP. CORR. FACTOR	20°C READING (megohms)
0.25						
0.50						
0.75						
1.00						
2.00						
3.00						
4.00						
5.00						
6.00						
7.00						
8.00						
9.00						
10.00						
P. I.						

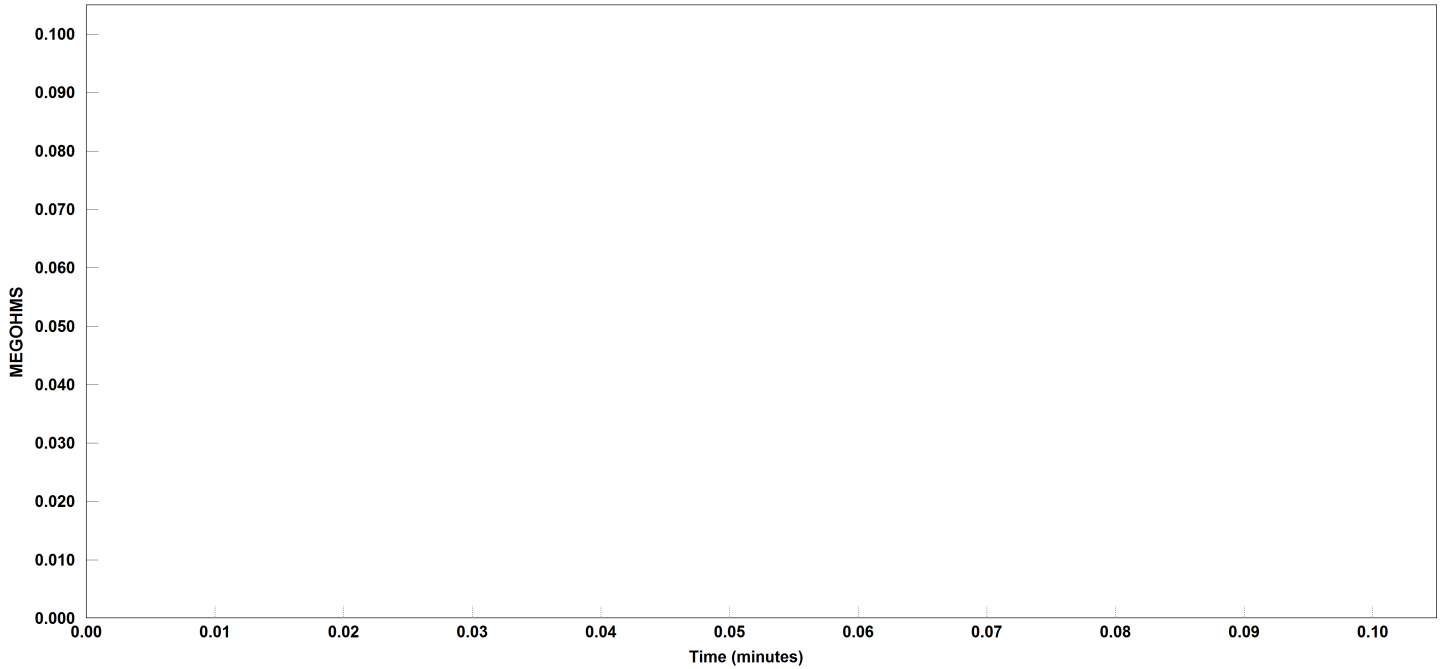
TEST EQUIPMENT USED: _____ TESTED BY: Default Administrator



SYNCHRONOUS MOTOR POLARIZATION INDEX (PI) TEST



POLARIZATION CURVE



Stator: Red Square

Rotor: Blue Circle

COMMENTS:

DEFICIENCIES:



STATOR COIL TIP UP TEST



OWNER Example Owner PAGE 6
 PLANT Example Plant AMBIENT TEMP. _____ °F DATE 10/13/2014
 SUBSTATION ROTATING MACHINERY HUMIDITY _____ % JOB # OTATING MACHINER
 POSITION AUTOMATED ASSET ID _____

SERIAL NO.	_____	MACHINE	_____	EXCITER MFR	_____
SPECIAL ID	_____	TYPE	_____	EXCITER S/N	_____
CIRCUIT	_____	INS TYPE	_____	EXCITER DESIGN	_____
MFR	_____	COOLING	_____	EXCITER VOLTS	_____
MFR YEAR	_____	INS NAME	_____	EXCITER AMPS	_____
REASON	_____	KVA 1	_____	EXCITER kW	_____
WEATHER	_____	KVA 2	_____	EXCITER DRWG	_____
TANK TEMP	_____ °C	hp/kw	_____	EXCITER rpm	_____
YR RWND	_____	SPEED/rpm	_____	EXCITER TYPE	_____
YR SERVICE	_____	PWR FACTOR	_____	RES S/N	_____
STATOR KV	<u>8</u>	CREW SIZE	_____	SEMI-CON COAT	_____
FREQ Hz	_____	STA AMP 1	_____	VOLT GRADING APPLIED	_____
TYPE	_____	STA AMP 2	_____	GLOBAL VPI	_____
VOLTS	_____	POLES	_____	H2 PRESS	_____
AMPS	_____			H2 PRESS	_____
CONFIGURATION	_____				

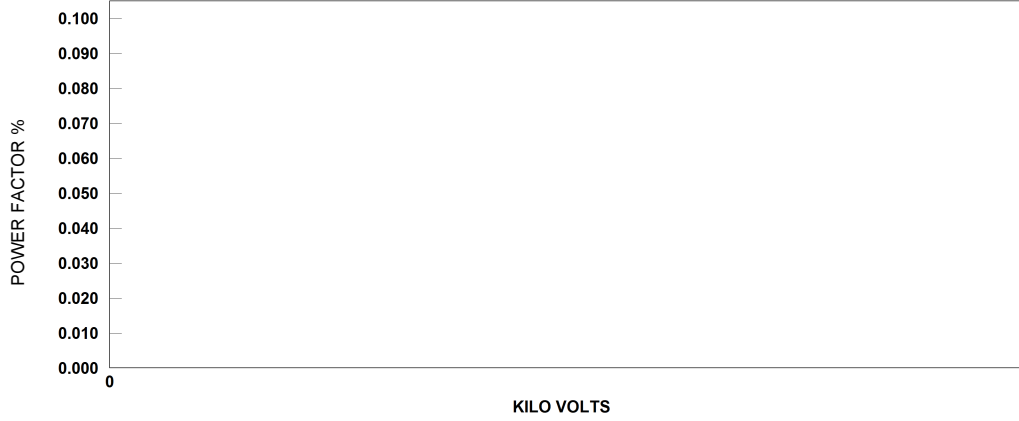
TEST FREQUENCY: 60

COIL ID	STEP NUMBER	TEST TYPE	kV %	TEST kV	Capacitance C (pF)	P.F. %		DIRECT		% TIP UP
						MEAS.		mA	WATTS	
1	1	UST-B	25	2						
	2	UST-B	50	4						
	3	UST-B	75	6						
	4	UST-B	100	8						

TEST EQUIPMENT USED: _____ TESTED BY: Default Administrator
 Serial Number: _____ Firmware Information: _____ Calibration Date: _____



STATOR COIL TIP UP TEST



1-Blue Circle



STATOR COIL TIP UP TEST



MULTIPLE QUICK TESTS

TEST NO	INSULATION TESTED	TEST MODE	SUPPRESS.	TEST kV	Test Freq	L(H) CAP.(pF)	POWER FACTOR %			DIRECT		%VDF	IR
							MEAS.	@ 20°C	CORR.	mA	WATTS		
1		UST-R	Off						1.000				

COMMENTS:

DEFICIENCIES:



MOTOR POLARIZATION INDEX (PI) TEST



OWNER Example Owner PAGE 9
 PLANT Example Plant AMBIENT TEMP. _____ °F DATE 10/13/2014
 SUBSTATION ROTATING MACHINERY HUMIDITY _____ % JOB # OTATING MACHINER
 POSITION AUTOMATED ASSET ID _____

NAMEPLATE DATA

MANUFACTURER _____ SERIAL NO. _____ TYPE _____
 FRAME _____ HORSEPOWER _____ VOLTAGE _____
 PHASE _____ FREQUENCY _____ HZ FULL LOAD CURRENT _____ AMPS
 LOCKED ROTOR CURRENT _____ AMPS RPM _____ POWER FACTOR _____
 SERVICE FACTOR _____ TEMPERATURE RISE _____ °C INSULATION CLASS _____
 DATE MANUFACTURED _____ NEMA DESIGN _____ WEIGHT _____
 SHAFT DIAMETER _____ LISTING UL CSA OTHER THERMALLY PROTECTED _____
 OTHER INFORMATION _____

CONNECTED EQUIPMENT _____ MOTOR TEMPERATURE _____ °C
 TEST VOLTAGE _____ kVDC Enter TCF Manually: TEMPERATURE CORRECTION FACTOR TO 20°C, TCF _____
 Use Instrument PI Value:

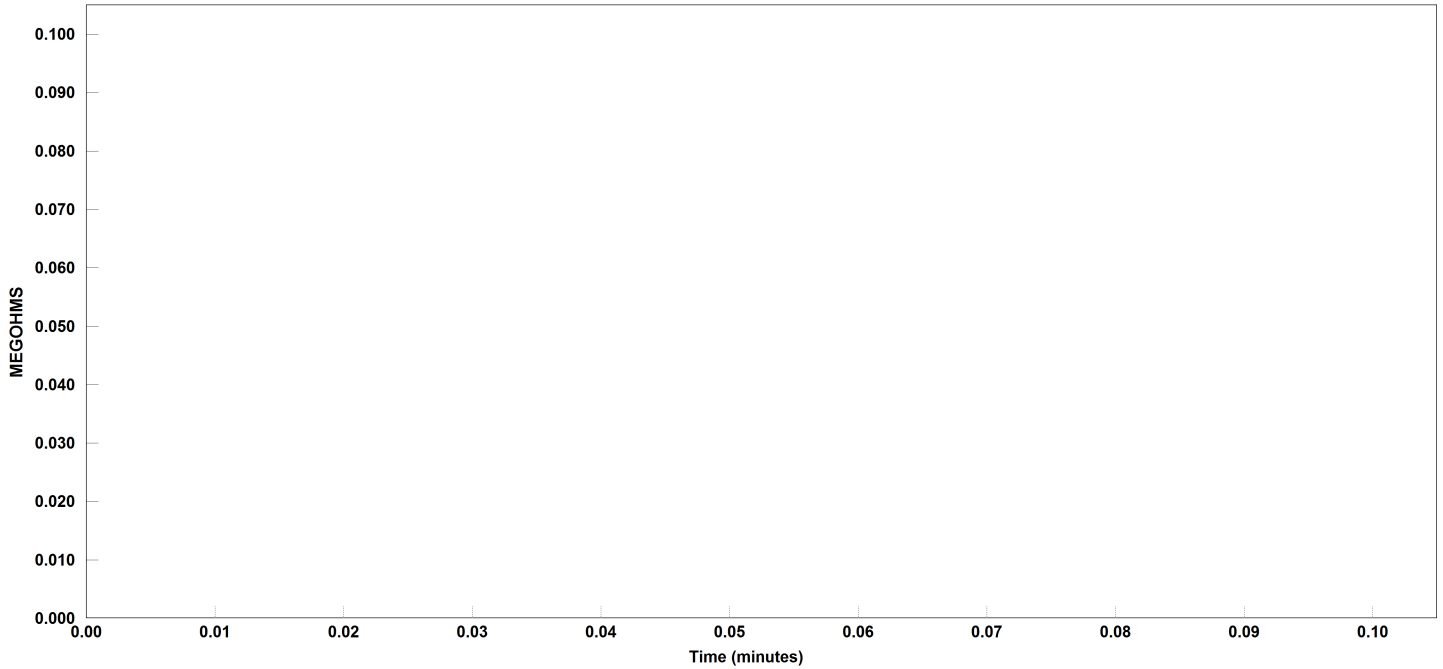
MINUTES	WINDING 1 TO FRAME - MEGOHMS			WINDING 2 TO FRAME - MEGOHMS			WINDING 3 TO FRAME - MEGOHMS		
	READING (megohms)	TEMP. CORR. FACTOR	20°C READING (megohms)	READING (megohms)	TEMP. CORR. FACTOR	20°C READING (megohms)	READING (megohms)	TEMP. CORR. FACTOR	20°C READING (megohms)
0.25									
0.50									
0.75									
1.00									
1.25									
1.50									
1.75									
2.00									
2.50									
3.00									
4.00									
5.00									
6.00									
7.00									
8.00									
9.00									
10.00									
P.I. NO.*									

* POLARIZATION INDEX = 10 MINUTE READING / 1 MINUTE READING

TEST EQUIPMENT USED: _____ TESTED BY: Default Administrator



POLARIZATION CURVE



Winding 1: Red Square

Winding 2: Blue Circle

Winding 3: Green Triangle

COMMENTS:

DEFICIENCIES:



ROTATING MACHINES TIP UP TEST



OWNER Example Owner PAGE 11
 PLANT Example Plant AMBIENT TEMP. _____ °F DATE 10/13/2014
 SUBSTATION ROTATING MACHINERY HUMIDITY _____ % JOB # OTATING MACHINER
 POSITION AUTOMATED ASSET ID _____

SERIAL NO.	_____	MACHINE	_____	EXCITER MFR	_____
SPECIAL ID	_____	TYPE	_____	EXCITER S/N	_____
CIRCUIT	_____	INS TYPE	_____	EXCITER DESIGN	_____
MFR	_____	COOLING	_____	EXCITER VOLTS	_____
MFR YEAR	_____	INS NAME	_____	EXCITER AMPS	_____
REASON	_____	kVA 1	_____	EXCITER kW	_____
WEATHER	_____	kVA 2	_____	EXCITER DRWG	_____
TANK TEMP	_____ °C	hp/kw	_____	EXCITER rpm	_____
YR RWND	_____	SPEED/rpm	_____	EXCITER TYPE	_____
YR SERVICE	_____	PWR FACTOR	_____	RES S/N	_____
STATOR kV	_____	CREW SIZE	_____	SEMI-CON COAT	_____
FREQ Hz	_____	STA AMP 1	_____	VOLT GRADING APPLIED	_____
TYPE	_____	STA AMP 2	_____	GLOBAL VPI	_____
VOLTS	_____	POLES	_____	H2 PRESS	_____
AMPS	_____			H2 PRESS	_____
CONFIGURATION	_____				

TEST FREQUENCY: 60

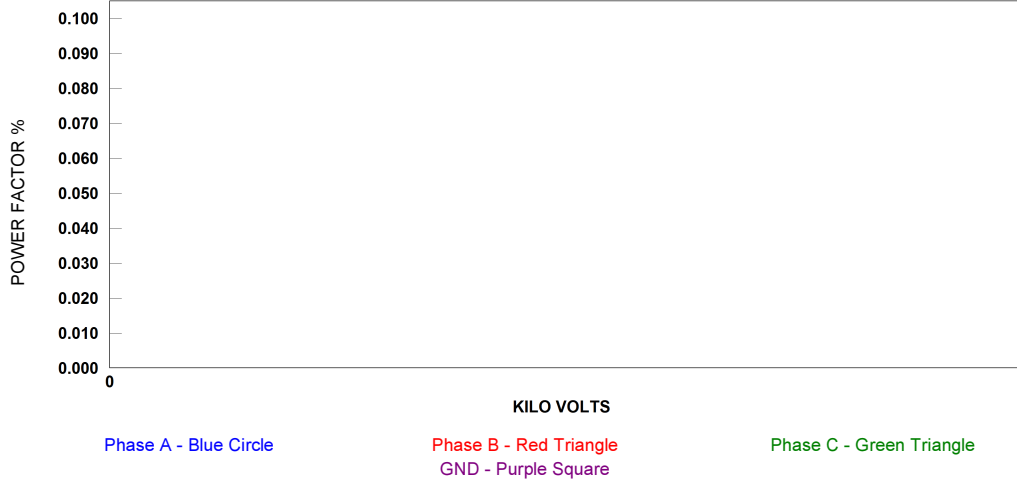
GROUNDED TIP UP TEST

PHASE	TEST ID	CIRCUIT DESCRIPTION	kV %	TEST kV	Capacitance C (pF)	P.F. %		DIRECT		% TIP UP
						MEAS.		mA	WATTS	
A	1	T1 GND T2, T3	25	2						
	2	T1 GND T2, T3	50	4						
	3	T1 GND T2, T3	75	6						
	4	T1 GND T2, T3	100	8						
B	5	T2 GND T3, T1	25	2						
	6	T2 GND T3, T1	50	4						
	7	T2 GND T3, T1	75	6						
	8	T2 GND T3, T1	100	8						
C	9	T3 GND T1, T2	25	2						
	10	T3 GND T1, T2	50	4						
	11	T3 GND T1, T2	75	6						
	12	T3 GND T1, T2	100	8						

TEST EQUIPMENT USED: _____ TESTED BY: Default Administrator
 Serial Number: _____ Firmware Information: _____ Calibration Date: _____



ROTATING MACHINES TIP UP TEST

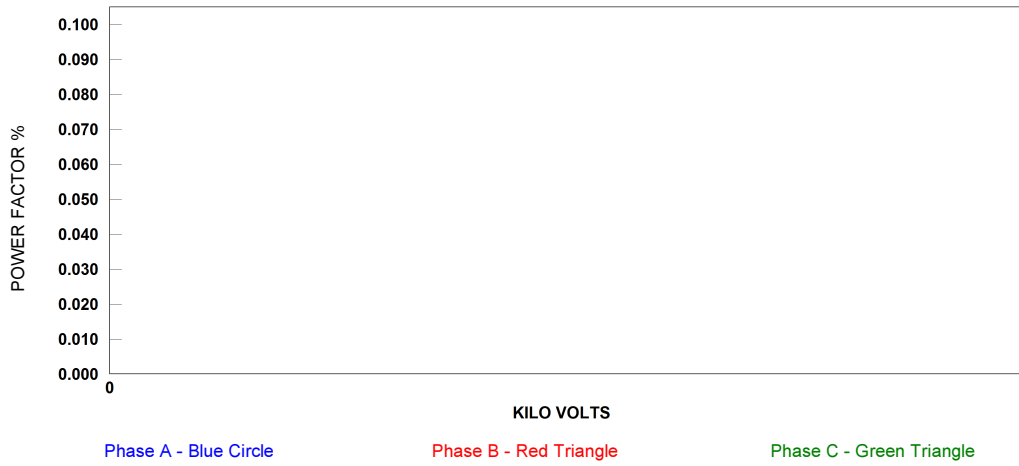


UNGROUND TIP UP TEST

PHASE	TEST ID	CIRCUIT DESCRIPTION	kV %	TEST kV	Capacitance C (pF)	P.F. %		DIRECT		% TIP UP
						MEAS.		mA	WATTS	
A	1	T1 MES T2 GND T3	25	2						
	2	T1 MES T2 GND T3	50	4						
	3	T1 MES T2 GND T3	75	6						
	4	T1 MES T2 GND T3	100	8						
B	5	T2 MES T3 GND T1	25	2						
	6	T2 MES T3 GND T1	50	4						
	7	T2 MES T3 GND T1	75	6						
	8	T2 MES T3 GND T1	100	8						
C	9	T3 MES T1 GND T2	25	2						
	10	T3 MES T1 GND T2	50	4						
	11	T3 MES T1 GND T2	75	6						
	12	T3 MES T1 GND T2	100	8						



ROTATING MACHINES TIP UP TEST





ROTATING MACHINES TIP UP TEST



MULTIPLE QUICK TESTS

TEST NO	INSULATION TESTED	TEST MODE	SUPPRESS.	TEST kV	Test Freq	L(H) CAP.(pF)	POWER FACTOR %			DIRECT		%VDF	IR
							MEAS.	@ 20°C	CORR.	mA	WATTS		
1		UST-R	Off						1.000				

COMMENTS:

DEFICIENCIES:



ROTATING MACHINERY POLARIZATION INDEX (PI) TEST



OWNER Example Owner PAGE 15
 PLANT Example Plant AMBIENT TEMP. _____ °F DATE 10/13/2014
 SUBSTATION ROTATING MACHINERY HUMIDITY _____ % JOB # OTATING MACHINER
 POSITION AUTOMATED ASSET ID _____

SERIAL NO. _____	MACHINE _____	EXCITER MFR _____
SPECIAL ID _____	TYPE _____	EXCITER S/N _____
CIRCUIT _____	INS TYPE _____	EXCITER DESIGN _____
MFR _____	COOLING _____	EXCITER VOLTS _____
MFR YEAR _____	INS NAME _____	EXCITER AMPS _____
REASON _____	KVA 1 _____	EXCITER KW _____
WEATHER _____	KVA 2 _____	EXCITER DRWG _____
TANK TEMP _____ °C	hp/kw _____	EXCITER rpm _____
YR RWND _____	SPEED/rpm _____	EXCITER TYPE _____
YR SERVICE _____	PWR FACTOR _____	RES S/N _____
STATOR kV _____	CREW SIZE _____	SEMI-CON COAT _____
FREQ Hz _____	STA AMP 1 _____	VOLT GRADING APPLIED _____
TYPE _____	STA AMP 2 _____	GLOBAL VPI _____
VOLTS _____	POLES _____	H2 PRESS _____
AMPS _____		H2 PRESS _____
CONFIGURATION _____		

CONNECTED EQUIPMENT _____ TEST VOLTAGE _____ KVDC
 MOTOR TEMPERATURE _____ °C Enter TCF Manually: TEMPERATURE CORRECTION FACTOR TO 20°C, TCF _____
 Use Instrument PI / DAR Value:

MINUTES	...CLICK HERE TO SELECT DEVICE					
	A		B		C	
	READING (megohms)	CORR. VALUE (megohms)	READING (megohms)	CORR. VALUE (megohms)	READING (megohms)	CORR. VALUE (megohms)
0.25						
0.50						
0.75						
1.00						
2.00						
3.00						
4.00						
5.00						
6.00						
7.00						
8.00						
9.00						
10.00						
P. I.						
D. A. R.						

INSULATION CONDITION	DAR 60/30 SEC	POLARIZATION INDEX (PI)
POOR	< 1	< 1
QUESTIONABLE	1.0 - 1.25	1.0 - 2
GOOD	1.4 - 1.6	2 - 4
EXCELLENT	> 1.6	> 4

TEST EQUIPMENT USED: _____ TESTED BY: Default Administrator
 Serial Number: _____ Firmware Information: _____ Calibration Date: _____



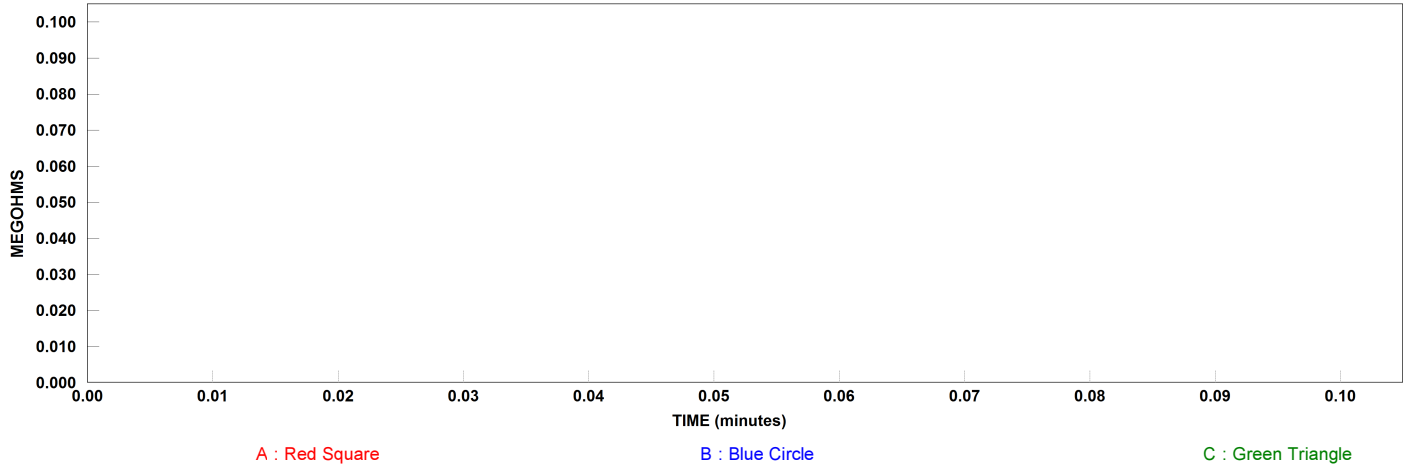
ROTATING MACHINERY POLARIZATION INDEX (PI) TEST



PAGE 16

DATE 10/13/2014 TEMPERATURE _____ °F HUMIDITY _____ % EQPT. LOCATION _____
SUBSTATION ROTATING MACHINERY POSITION AUTOMATED

POLARIZATION CURVE



COMMENTS: _____
DEFICIENCIES: _____



MOTOR HIGH POTENTIAL TEST



OWNER Example Owner
 PLANT Example Plant
 SUBSTATION ROTATING MACHINERY
 POSITION GENERAL

PAGE 17
 AMBIENT TEMP. _____ °F
 HUMIDITY _____ %
 DATE 10/13/2014
 JOB # OTATING MACHINER
 ASSET ID _____

NAMEPLATE DATA

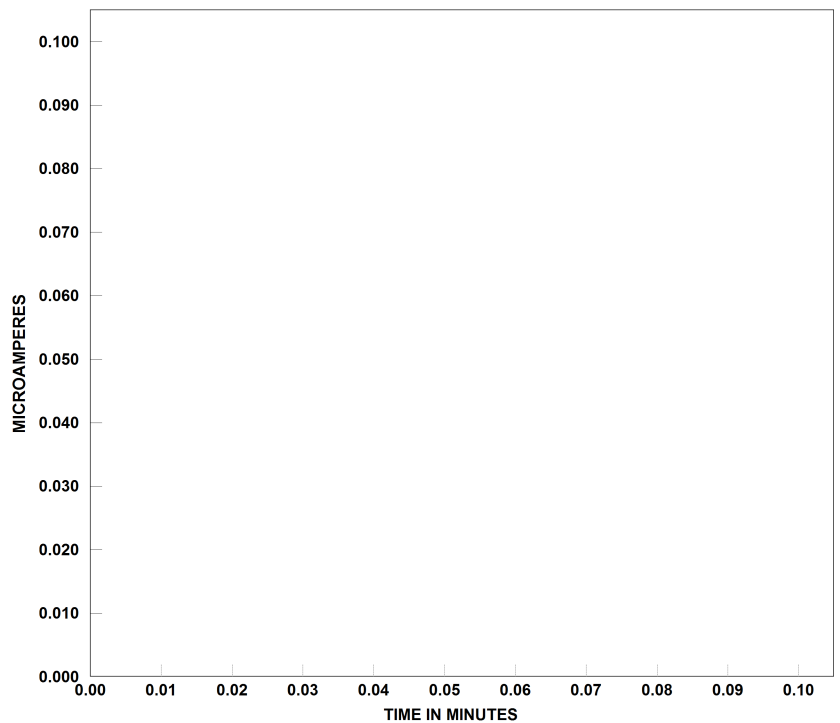
MANUFACTURER _____ SERIAL NO. _____ TYPE _____
 FRAME _____ HORSEPOWER _____ VOLTAGE _____
 PHASE _____ FREQUENCY _____ HZ FULL LOAD CURRENT _____ AMPS
 LOCKED ROTOR CURRENT _____ AMPS RPM _____ POWER FACTOR _____
 SERVICE FACTOR _____ TEMPERATURE RISE _____ °C INSULATION CLASS _____
 DATE MANUFACTURED _____ NEMA DESIGN _____ WEIGHT _____
 SHAFT DIAMETER _____ LISTING UL CSA OTHER THERMALLY PROTECTED _____
 OTHER INFORMATION _____

CONNECTED EQUIPMENT _____
 MOTOR TEMPERATURE _____ °C TEST VOLTAGE UTILIZED: DC AC, 60HZ AC, 180HZ

PHASE IDENTIFICATION

_____ Winding 1 _____ Winding 2 _____ Winding 3

TIME MINUTES	TEST VOLTAGE (volts)	WINDING 1	WINDING 2	WINDING 3
0.25				
0.50				
0.75				
1.00				
1.25				
1.50				
1.75				
2.00				
3.00				
4.00				
5.00				
6.00				
7.00				
8.00				
9.00				
10.00				
11.00				
12.00				
13.00				
14.00				
15.00				
16.00				
17.00				
18.00				
19.00				
20.00				



COMMENTS: _____
 DEFICIENCIES: _____

TEST EQUIPMENT USED: _____ TESTED BY: Default Administrator



SYNCHRONOUS MOTOR WINDING RESISTANCE



OWNER Example Owner PAGE 18
 PLANT Example Plant AMBIENT TEMP. _____ °F DATE 10/13/2014
 SUBSTATION ROTATING MACHINERY HUMIDITY _____ % JOB # OTATING MACHINER
 POSITION GENERAL ASSET ID _____

NAMEPLATE DATA

MANUFACTURER _____ SERIAL NO. _____ TYPE _____
 FRAME _____ HORSEPOWER _____ VOLTAGE _____
 PHASE _____ FREQUENCY _____ HZ FULL LOAD CURRENT _____ AMPS
 LOCKED ROTOR CURRENT _____ AMPS RPM _____ POWER FACTOR _____
 SERVICE FACTOR _____ TEMPERATURE RISE _____ °C INSULATION CLASS _____
 DATE MANUFACTURED _____ NEMA DESIGN _____ WEIGHT _____
 SHAFT DIAMETER _____ LISTING UL CSA OTHER THERMALLY PROTECTED _____
 OTHER INFORMATION _____

FIELD INFORMATION

TYPE _____ SERIAL NO. _____ VOLTAGE _____ VDC
 CURRENT RATING _____ AMPS TEMPERATURE RISE _____ °C POWER FACTOR _____
 OTHER _____

STATOR WINDING

WINDING MATERIAL: COPPER

	MEASURED RESISTANCE OHMS	RESISTANCE CORRECTED TO 85 °C, OHMS
PHASE A -		
PHASE B -		
PHASE C -		
TOTAL WINDING RESISTANCE		

R_T = TOTAL WINDING RESISTANCE AT 85°C
 R_M = TOTAL WINDING RESISTANCE AT TEST TEMPERATURE
 T_S = TEMPERATURE FOR DESIRED RESISTANCE (85°C)
 T_M = AMBIENT TEMPERATURE
 T_K = TEMPERATURE RESISTANCE CONSTANT (°C)
 COPPER = 234.5°C
 DELTA WINDING MULTIPLIER = 3/2X
 WYE WINDING MULTIPLIER = 3X

ROTOR WINDING

WINDING MATERIAL: COPPER

MEASURED RESISTANCE	CALCULATED RESISTANCE CORRECTED TO 85°C
OHMS	OHMS

CONNECTED CONFIGURATION: DELTA WYE

MOTOR TEMPERATURE _____ °C

FIELD RESISTOR

NAMEPLATE VALUE	MEASURED RESISTANCE	CALCULATED RESISTANCE CORRECTED TO 85°C
OHMS	OHMS	OHMS

$$R_T = R_M \frac{T_S + T_K}{T_M + T_K}$$

COMMENTS: _____
 DEFICIENCIES: _____

TEST EQUIPMENT USED: _____ TESTED BY: Default Administrator



SYNCHRONOUS MOTOR DISSIPATION FACTOR TEST



OWNER Example Owner PAGE 19
 PLANT Example Plant AMBIENT TEMP. _____ °F DATE 10/13/2014
 SUBSTATION ROTATING MACHINERY HUMIDITY _____ % JOB # OTATING MACHINER
 POSITION GENERAL ASSET ID _____

NAMEPLATE DATA

MANUFACTURER _____ SERIAL NO. _____ TYPE _____
 FRAME _____ HORSEPOWER _____ VOLTAGE _____
 PHASE _____ FREQUENCY _____ HZ FULL LOAD CURRENT _____ AMPS
 LOCKED ROTOR CURRENT _____ AMPS RPM _____ POWER FACTOR _____
 SERVICE FACTOR _____ TEMPERATURE RISE _____ °C INSULATION CLASS _____
 DATE MANUFACTURED _____ NEMA DESIGN _____ WEIGHT _____
 SHAFT DIAMETER _____ LISTING UL CSA OTHER THERMALLY PROTECTED _____
 OTHER INFORMATION _____

FIELD INFORMATION

TYPE _____ SERIAL NO. _____ VOLTAGE _____ VDC
 CURRENT RATING _____ AMPS TEMPERATURE RISE _____ °C POWER FACTOR _____
 OTHER _____

CONNECTED EQUIPMENT _____ MOTOR TEMPERATURE _____ °C
 TEMPERATURE CORRECTION FACTOR TO 20°C, TCF _____

STATOR WINDING TEST

TYPE OF TEST	TEST kV	SW. POS.	CAPACITANCE					% DISSIPATION FACTOR					CALC. % P.F.	
			DIAL READING		CALC. AVG.	MULTIPLIER	PICO FARADS	DIAL READING		CALC. AVG.	MULTIPLIER	MEAS. %		20°C %
			NORM.	REV.				NORM.	REV.					
25% GST=STATOR-GND; RTR GND														
100% GST=STATOR-GND; RTR GND														
25% GST=STATOR-GND; RTR GND														
100% GST=STATOR-GND; RTR GND														
25% UST=STATOR-ROTOR														
100% UST=STATOR-ROTOR														

ROTOR WINDING TEST

25% GST=RTR-GND; STATOR GND														
100% GST=RTR-GND; STATOR GND														
25% GST=RTR-GND; STATOR GND														
100% GST=RTR-GND; STATOR GND														
25% UST=ROTOR-STATOR														
100% UST=ROTOR-STATOR														

$$PF = \frac{DF}{\sqrt{1 + DF^2}}$$

COMMENTS: _____
 DEFICIENCIES: _____

TEST EQUIPMENT USED: _____ TESTED BY: Default Administrator



SYNCHRONOUS MOTOR ROTOR WINDING VOLTAGE DROP TEST



OWNER Example Owner PAGE 20
 PLANT Example Plant AMBIENT TEMP. _____ °F DATE 10/13/2014
 SUBSTATION ROTATING MACHINERY HUMIDITY _____ % JOB # OTATING MACHINER
 POSITION GENERAL ASSET ID _____

NAMEPLATE DATA

MANUFACTURER _____ SERIAL NO. _____ TYPE _____
 FRAME _____ HORSEPOWER _____ VOLTAGE _____
 PHASE _____ FREQUENCY _____ HZ FULL LOAD CURRENT _____ AMPS
 LOCKED ROTOR CURRENT _____ AMPS RPM _____ POWER FACTOR _____
 SERVICE FACTOR _____ TEMPERATURE RISE _____ °C INSULATION CLASS _____
 DATE MANUFACTURED _____ NEMA DESIGN _____ WEIGHT _____
 SHAFT DIAMETER _____ LISTING UL CSA OTHER THERMALLY PROTECTED _____
 OTHER INFORMATION _____

FIELD INFORMATION

TYPE _____ SERIAL NO. _____ VOLTAGE _____ VDC
 CURRENT RATING _____ AMPS TEMPERATURE RISE _____ °C POWER FACTOR _____
 OTHER _____

COIL NO.	VOLTAGE READING (volts)	COIL NO.	VOLTAGE READING	COIL NO.	VOLTAGE READING
1		21		41	
2		22		42	
3		23		43	
4		24		44	
5		25		45	
6		26		46	
7		27		47	
8		28		48	
9		29		49	
10		30		50	
11		31		51	
12		32		52	
13		33		53	
14		34		54	
15		35		55	
16		36		56	
17		37		57	
18		38		58	
19		39		59	
20		40		60	

APPLIED TEST VOLTAGE _____ VAC

COMMENTS: _____
 DEFICIENCIES: _____

TEST EQUIPMENT USED: _____ TESTED BY: Default Administrator



SYNCHRONOUS MOTOR HIGH POTENTIAL TEST



OWNER Example Owner PAGE 21
 PLANT Example Plant AMBIENT TEMP. _____ °F DATE 10/13/2014
 SUBSTATION ROTATING MACHINERY HUMIDITY _____ % JOB # OTATING MACHINER
 POSITION GENERAL ASSET ID _____

NAMEPLATE DATA

MANUFACTURER _____ SERIAL NO. _____ TYPE _____
 FRAME _____ HORSEPOWER _____ VOLTAGE _____
 PHASE _____ FREQUENCY _____ HZ FULL LOAD CURRENT _____ AMPS
 LOCKED ROTOR CURRENT _____ AMPS RPM _____ POWER FACTOR _____
 SERVICE FACTOR _____ TEMPERATURE RISE _____ °C INSULATION CLASS _____
 DATE MANUFACTURED _____ NEMA DESIGN _____ WEIGHT _____
 SHAFT DIAMETER _____ LISTING UL CSA OTHER THERMALLY PROTECTED _____
 OTHER INFORMATION _____

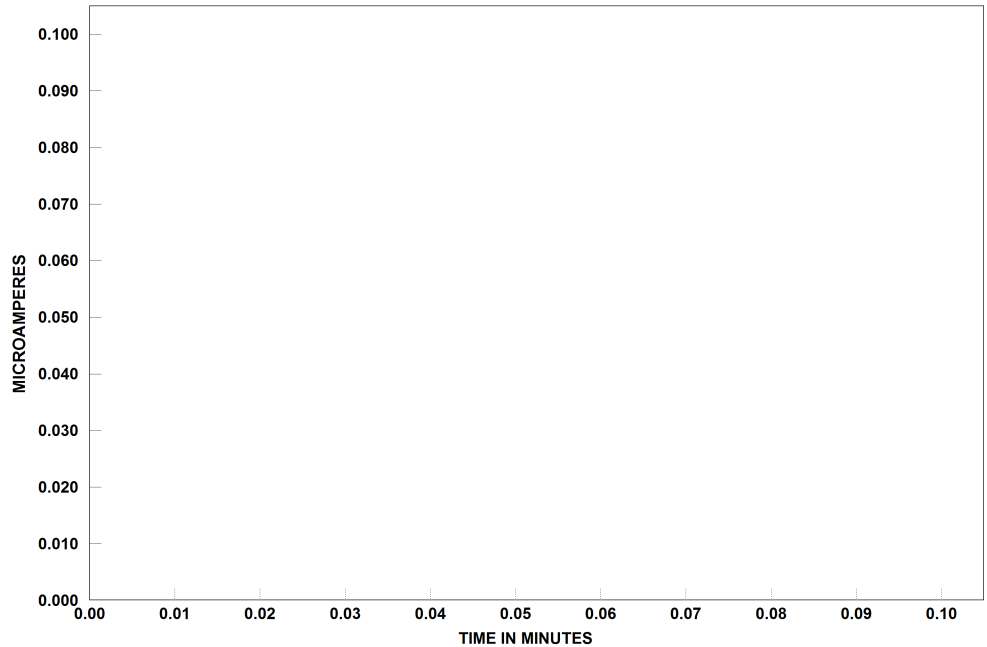
FIELD INFORMATION

TYPE _____ SERIAL NO. _____ VOLTAGE _____ VDC
 CURRENT RATING _____ AMPS TEMPERATURE RISE _____ °C POWER FACTOR _____
 OTHER _____

CONNECTED EQUIPMENT _____ MOTOR TEMPERATURE _____ °C
 TEST VOLTAGE _____ kV DC AC

STATOR HIGH POTENTIAL TEST

TIME MINUTES	TEST VOLTAGE (kV)	μA
0.25		
0.50		
0.75		
1.00		
1.25		
1.50		
1.75		
2.00		
3.00		
4.00		
5.00		
6.00		
7.00		
8.00		
9.00		
10.00		



COMMENTS: _____
 DEFICIENCIES: _____

TEST EQUIPMENT USED: _____ TESTED BY: Default Administrator



MOTOR STATOR WINDING RESISTANCE TEST



OWNER Example Owner PAGE 22
 PLANT Example Plant AMBIENT TEMP. _____ °F DATE 10/13/2014
 SUBSTATION ROTATING MACHINERY HUMIDITY _____ % JOB # OTATING MACHINER
 POSITION GENERAL ASSET ID _____

NAMEPLATE DATA

MANUFACTURER _____ SERIAL NO. _____ TYPE _____
 FRAME _____ HORSEPOWER _____ VOLTAGE _____
 PHASE _____ FREQUENCY _____ HZ FULL LOAD CURRENT _____ AMPS
 LOCKED ROTOR CURRENT _____ AMPS RPM _____ POWER FACTOR _____
 SERVICE FACTOR _____ TEMPERATURE RISE _____ °C INSULATION CLASS _____
 DATE MANUFACTURED _____ NEMA DESIGN _____ WEIGHT _____
 SHAFT DIAMETER _____ LISTING UL CSA OTHER THERMALLY PROTECTED _____
 OTHER INFORMATION _____

R_T = TOTAL WINDING RESISTANCE AT 85°C
 R_M = TOTAL WINDING RESISTANCE AT TEST TEMPERATURE
 T_S = TEMPERATURE FOR DESIRED RESISTANCE (85°C)
 T_M = AMBIENT TEMPERATURE
 T_K = TEMPERATURE RESISTANCE CONSTANT (°C)
 COPPER = 234.5°C
 DELTA WINDING MULTIPLIER = 3/2X
 WYE WINDING MULTIPLIER = 3X

CONNECTED CONFIGURATION DELTA WYE

MOTOR TEMPERATURE _____ °C

$$R_T = R_M \frac{T_S + T_K}{T_M + T_K}$$

	MEASURED RESISTANCE OHMS	RESISTANCE CORRECTED TO 85 °C, OHMS
PHASE A - T1 - T2		
PHASE B - T3 - T4		
PHASE C - T5 - T6		
TOTAL RESISTANCE		

COMMENTS: _____
 DEFICIENCIES: _____

TEST EQUIPMENT USED: _____ TESTED BY: Default Administrator



MOTOR DISSIPATION FACTOR TEST



OWNER Example Owner PAGE 23
 PLANT Example Plant AMBIENT TEMP. _____ °F DATE 10/13/2014
 SUBSTATION ROTATING MACHINERY HUMIDITY _____ % JOB # OTATING MACHINER
 POSITION GENERAL ASSET ID _____

NAMEPLATE DATA

MANUFACTURER _____ SERIAL NO. _____ TYPE _____
 FRAME _____ HORSEPOWER _____ VOLTAGE _____
 PHASE _____ FREQUENCY _____ HZ FULL LOAD CURRENT _____ AMPS
 LOCKED ROTOR CURRENT _____ AMPS RPM _____ POWER FACTOR _____
 SERVICE FACTOR _____ TEMPERATURE RISE _____ °C INSULATION CLASS _____
 DATE MANUFACTURED _____ NEMA DESIGN _____ WEIGHT _____
 SHAFT DIAMETER _____ LISTING UL CSA OTHER THERMALLY PROTECTED _____
 OTHER INFORMATION _____

CONNECTED EQUIPMENT _____ MOTOR TEMPERATURE _____ °C

TEST	TYPE OF TEST	TEST KV	SW. POS.	CAPACITANCE					% DISSIPATION FACTOR					CALC. % P.F. 20°C	
				DIAL READING		CALC. AVG.	MULTIPLIER	CAP. pF	DIAL READING		CALC. AVG.	MULTIPLIER	MEAS. %		20° %
				NORM.	REV.				NORM.	REV.					
1															
2															
3															
4															
5															
6															

TEMPERATURE CORRECTION FACTOR TO 20°C, TCF _____

- WINDING TIP UP TESTS**
1. GST - WINDING 1 - GROUND @ 25% TEST VOLTAGE
 2. GST - WINDING 1 - GROUND @ 100% TEST VOLTAGE
 3. GST - WINDING 2 - GROUND @ 25% TEST VOLTAGE
 4. GST - WINDING 2 - GROUND @ 100% TEST VOLTAGE
 5. GST - WINDING 3 - GROUND @ 25% TEST VOLTAGE
 6. GST - WINDING 3 - GROUND @ 100% TEST VOLTAGE

$$PF = \frac{DF}{\sqrt{1 + DF^2}}$$

COMMENTS: _____
 DEFICIENCIES: _____

TEST EQUIPMENT USED: _____ TESTED BY: Default Administrator