بسم الله الرحمن الرحيم

Test circuit breaker 400KV G,I,S

1-Circuit Breaker test

2-Disconnector

3-Disconnector and earth switch

- Introduction

Power stations consist of a crane and power lines in power plants and transmission lines and transformers in the transport and transformer stations decreases in distribution transformers transfer stations

Types of power stations Sub station

1-A I S

Used frequently in our system facilitated the monument facilitated maintenance take large areas affected by weather conditions

2-G I S

Used frequently in our system facilitated the monument facilitated maintenance take large areas affected by weather conditions .

User in our system is limited, and does not require maintenance, but a little tough and faults is not affected by weather conditions have the effect of damaging the environment and the health of workers in maintenance, especially when you switch the penalty affected

3-H I S

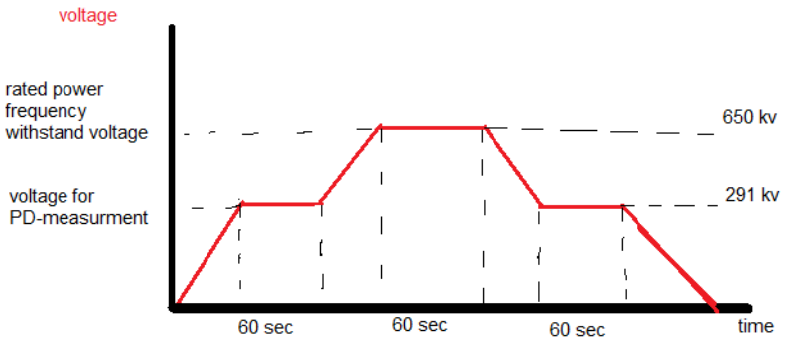
Hybrid that combines qualities of the first, second and placed certain conditions, an issue report

Tests that were made in the laboratory product at Siemens

Rated and test values normal {IES 62271-203}

Control voltage	100%	220 v
	110%	242 v
	85%	187v
	70%	154%
Normal rated voltage		420 kv
Test Voltage for PD-Check		292 kv
Voltage level for High Voltage Test		650 kv
Test pressure {switchgear/circuit breaker}		3,0/5,0 bar
Pressure for alarm SF6 –LOSS {circuit breaker }		5.2 bar
Pressure for general lockout.SF6 {circuit breaker}		5.0 bar

1-High voltage test




HIGH VOLT
+650.6 kV
Measure
Extern
DKD-K-24501
4182
DKD-K-24501
2011-05
Mode
Reset
Check
OK
0.76pC
AC/DC Peak Voltmeter
MU17
SIEMENS
TOUCH
measuring system
180 mA
27 °C
181 mA
27 °C
361 mA
30 °C
33.8 °C
32.5 °C
High Voltage
Low Voltage
9 A
529 V
51 Hz
parameter
cycle

2-Circuit Breaker test

a-Operation

5*CLOSE and OPEN at 110% Un

5*CLOSE and OPEN at 100% Un

5*CLOSE at 85%Un and 5*OPEN at 70% Un

5*OPEN –CLOSE-OPEN at 100% Un

b-Oscillograph display of operating times at 100%Un

close time

open time

CLOSE-OPEN-time

c-test of spring stored-energy mechanism

Charging time of closing spring

d-Pressure monitoring {SF6}at increasing and falling pressure

SF6 –loss

General lock out SF6

e-Measurement of the voltage drop at 100 A DC

f-Voltage test at auxiliary circuit

2 KV 50 HZ 1min [wiring, auxiliary,contactors,etc}

1.2 KV 50 HZ 1min {motor Un <=250 V }

3-Disconnector Earth Switch and Make –proof Earthing Switch

a-Operating

5*CLOSE and OPEN at 110%Un

5*CLOSE and OPEN at 85%Un

b-Current measurement of motor drive during CLOSE and OPEN at 100% Un

c-Measurement of motor operating time during CLOSE and OPEN at 100%Un

Conclusion

Tests that were made in the laboratory product at Siemens to the importance of these systems in their entry in several areas of the state to try to enter into the field of secondary stations manufacture all parts and not rely on proprietary companies, similar to our neighboring countries such as Turkey, where that now have a wide range in the transformer industry breakers session while in the seventies was dependent on the state of Western industry

.AHMED SALIM KURDI