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CONTROLLER OSCILLATORY AND FAST TRANSIENT SWC TEST REPORT

Client:	Schweitzer Engineering Laboratories Inc., 2440 NE Hopkins Court, Pullman, WA, 99163 USA		
Test Date:	October 7th ,2015	**Project:**	PL-27147

Nameplate Data:

Recloser Controller:

Manufacturer:	Schweitzer Engineering Laboratories, Inc.
Model:	SEL-651R-2
Part No:	0651R2A3XGA8AA1111XXXX
Serial No.:	1152590493

Three-phase Recloser:

Manufacturer:	Tavrida Electric, Inc.
Type:	OSM25_AL_2(630_150_2)
Impulse level (BIL):	150 kV_{peak}
Rated voltage:	27 kV_{rms}
Rated current:	630 A_{rms} continuous
Serial No.:	163174

Test Standard:	IEEE C37.60-2012, Clause 6.111.2: "Oscillatory and fast transients surge tests"	
Test Witness:	Adrian Genz – Tavrida Electric NA	
Atmospheric Conditions:	Temperature	22.1 °C
	Relative humidity	57.8 %
	Barometric pressure	754.0 mmHg
Test Voltage:	Oscillatory - 2.5 kV_{peak} , Fast Transient – 4 kV_{peak}	
Test Procedure:	The testing was in accordance with IEEE C37.90.1-2012. Test surges were applied to the control cable in common and transverse mode using an external coupling/decoupling network in accordance with Table 3 and 4 of IEEE C37.90.1. Signal and data circuits were tested using a capacitive clamp. The AC power supply was tested while connected to 120 Volts, 60 Hz supply for all tests.	
Test Results:	The controller and recloser operated normally following the Oscillatory and Fast Transient Tests performed in accordance with the test procedures as per the above document. The controller complied with requirements of "IEEE C37.60-2012, Clause 6.111.2".	
Remarks:	None	

Tested by:

Hamish Miller, EIT.
Test Engineer, High Voltage Laboratory

Reviewed by:

Nov. 6, 2015
Alex Babakov, P. Eng.
Test Engineer, High Voltage Laboratory

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RECLOSER-CONTROLLER SIMULATED SURGE ARRESTER OPERATION TEST REPORT

Client:	Schweitzer Engineering Laboratories Inc., 2440 NE Hopkins Court, Pullman, WA, 99163 USA		
Test Date:	October 7th & 8th,2015	**Project:**	PL-27147

Nameplate Data:

Recloser Controller:

Manufacturer:	Schweitzer Engineering Laboratories, Inc.
Model:	SEL-651R-2
Part No:	0651R2A3XGA8AA1111XXXX
Serial No.:	1152590493

Three-phase Recloser:

Manufacturer:	Tavrida Electric, Inc.
Type:	OSM25_AL_2(630_150_2)
Impulse level (BIL):	150 kV_{peak}
Rated voltage:	27 kV_{rms}
Rated current:	630 A_{rms} continuous
Serial No.:	163174

Test Standard: IEEE Std C37.60-2012, Clause 6.111.3: "Simulated Surge Arrester Operation Test"

Test Witness: Adrian Genz – Schweitzer Engineering Laboratories Inc.,

Atmospheric Conditions:

	October 7th, 2015	October 8th, 2015
Temperature	22.1 °C	20.6 °C
Relative humidity	57.8 %	62.4 %
Barometric pressure	754.0 mmHg	754.0 mmHg

Nominal Test Voltage and Current: 120 kV_{peak} (150 kV_{peak} * 0.8), 6.0 kA_{peak}

Test Configurations Tested (in accordance with the above standard):

1 – 15 surges of positive polarity and 15 surges of negative polarity were applied to the source bushing with the recloser open.
2 – 15 surges of positive polarity and 15 surges of negative polarity were applied to the source bushing with the recloser closed.
3 – 15 surges of positive polarity and 15 surges of negative polarity were applied to the load bushing with the recloser closed.
4 - 15 surges of positive polarity and 15 surges of negative polarity were applied to a properly rated transformer with the recloser open.
5 - 15 surges of positive polarity and 15 surges of negative polarity were applied to a properly rated transformer with the recloser closed.

Test Results: The controller and recloser complied with the requirements of IEEE Std C37.60-2012, Clause 6.111.3, Configurations 1-5.

Remarks: None

Tested by:

Hamish Miller, EIT.
Test Engineer, High Voltage Laboratory

Reviewed by:

Nov. 6, 2015

Alex Babakov, P. Eng.
Test Engineer, High Voltage Laboratory