

TEST REPORT

SABS

Test Report No. **SC / 104616**

SHORT-CIRCUIT LABORATORY

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Client : STARO PROCESS CONTROL (Pty) LTD, 40 Doringberg Street, Vaalpark, South Africa

Manufacturer : STARO PROCESS CONTROL (Pty) LTD, 40 Doringberg Street, Vaalpark, South Africa
(subject to joint venture agreement as appended to this test report)

Apparatus : Three-phase low-voltage switchgear and controlgear ASSEMBLY

Designation : VWS3000 **Serial No.** : -

Ratings assigned by the manufacturer:

Operational voltage: Up to 1000 V A.C
Rated short-circuit withstand current: $I_{cw} = 50 \text{ kA for } 1 \text{ s}$, $I_{pk} = 105 \text{ kA}$
Rated frequency: 50 Hz
Other characteristics listed on page 2

The tests have been carried out strictly in accordance with:

IEC 61439-2:2009 Ed. 1 / SANS 61439-2:2009 Ed. 1 and IEC 61439-1:2009 Ed. 1 / SANS 61439-1:2009 Ed. 1
Low-voltage switchgear and controlgear assemblies
Part 1: General rules and Part 2: Power switchgear and controlgear assemblies

Date of test(s): Period including 02 August 2010 to 03 September 2010

THE APPARATUS HAS COMPLIED WITH THE FOLLOWING CLAUSES OF IEC / SANS 61439 SERIES

Part 2: Sub-clause 8.101	- Internal separation of ASSEMBLIES by barriers or partitions	FORM 3b
	- Incoming: FORM 1 - Outgoing functional units	960 °C
Part 1: Sub-clause 10.2.3.3	- Glow-wire test - busbars support material	IP2X
Part 1: Sub-clause 10.3	- Internal degree of protection/ separation	IP3X and IP4X
	- Verification of degree of protection - External	8mm / 16 mm
Part 1: Sub-clause 10.4	- Verification of clearances and creepage distances	< 0.1 Ω
Part 1: Sub-clause 10.5.2	- Effective earth continuity	2.5 kV, 1 min.
Part 1: Sub-clause 10.9.2	- Power-frequency withstand voltage	8 kV
Part 1: Sub-clause 10.9.3	- Impulse voltage withstand test	2750 A - IP3X
Part 1: Sub-clause 10.10.2.3.5	- Verification of temperature-rise limits-testing with current	2400 A - IP4X
	- Verification of temperature-rise limits-testing with current	50kA, 1s
Part 1: Sub-clause 10.11.5	- Verification of short-circuit withstand strength	30kA, 1s
	- Main and distribution busbars	
	- Neutral and protective earth (sub-clause 10.5.3.5) busbars	
	- Functional units-Conditional short-circuit tests	
	- Panels (D2 and D8)	50kA at 400V +10%
	- Panels (A2,B3,B4,B5 and B7)	50kA at 525V +10%
Excluded sub-clauses	- 10.2.2 10.2.3.1 10.2.3.2 10.2.4 10.2.5 10.2.6 10.2.7 10.6 10.7 10.8 10.12 and 10.13	

This report consists of:

Report forms	21	
Data Sheet(s)	13	As appended to this report
Drawing(s)	19	As listed on page 2
Photograph(s)	46	As listed on page 20 and 21
Joint Venture Agreement	3-pages	-As appended to this report
Oscillogram(s)	15	YH3107, YH3108, YI0102 YI0104, YI0105, YI0106 YI0107, YI0108, YI0110 YI0111, YI0112, YI0210 YI0211, YI0212, YI0213


S.S. Mnisi
Specialist: Short-Circuit Project.
SABS-NETFA
(Technical Signatory)


J.L. Monyai
Area Manager
SABS-NETFA
Olifantsfontein, 24 March 2011

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This test was performed by SABS Commercial (Pty) Ltd. This report and test results relate only to the specific sample(s) identified herein. It does not imply SABS approval of the quality and/or performance of the item (s) in question and the test results do not apply to any similar item that has not been tested. (Refer also to the complete conditions printed on the back of this page)

