



No. 08938

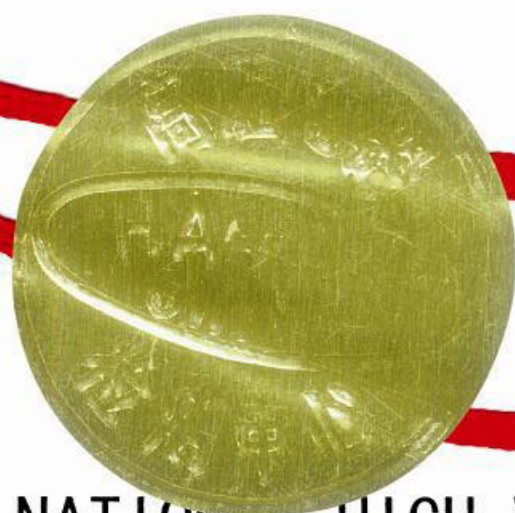
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TEST REPORT

APPARATUS: VS1 (ZN63A)-12/T1600-31.5 INDOOR ALTERNATING-CURRENT HIGH-VOLTAGE VACUUM CIRCUIT-BREAKER

CLIENT: NINGBO MACWEY INDUSTRIAL TECHNOLOGY CO., LTD

TEST TYPE: TYPE TEST

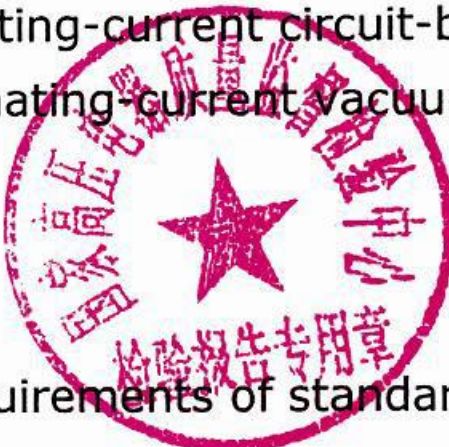

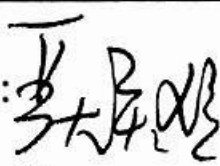





CHINA NATIONAL HIGH VOLTAGE APPARATUS QUALITY
SUPERVISION TESTING CENTER

XI'AN HIGH VOLTAGE APPARATUS RESEARCH INSTITUTE
HIGH VOLTAGE APPARATUS TESTING LABORATORY

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Test type		Type test				
Apparatus		VS1 (ZN63A)-12/T1600-31.5Indoor Alternating-current High-voltage Vacuum Circuit-breaker				
Client		Ningbo Macwey Industrial Technology Co., Ltd				
Manufacturer		Ningbo Macwey Industrial Technology Co., Ltd				
Manufacture date and serial No.(high voltage and the capacity tests)				MD0810001		
Manufacture date and serial No.(mechanical and temperature-rise tests)				MD0810002		
Rated value assigned by the client	Rated Voltage kV		12	Power Frequency Withstand Voltage(**)kV		48
	Rated Current A		1600	Lightning Impulse Withstand Voltage(**)kV		85
	Rated Frequency Hz		50	**:Between the Open Contacts		
	Rated Short-circuit Breaking Current kA		31.5	Classification Acc.Electrical Endurance		E2
	Rated Short-circuit Making Current(*)kA		80	Classification Acc.Mechanical Endurance		M2
	*:Peak value			Classification Acc.Capacitive Capacity		C2
	Rated Duration of Short-circuit s		4	Resistance of Main Circuit μΩ		≤30
	Rated Short-time Withstand Current kA		31.5			
	Rated Peak Withstand Current kV		80			
	Power Frequency Withstand Voltage kV		42			
	Lightning Impulse Withstand Voltage kV		75			
	Rated Operation Sequence		O-0.3s-CO-180s-CO			
The tested object is guaranteed by the manufacturer to comply with the following technical documents and drawings		M01.JT.01.01 Technical Specification of VS1 -12/1600-31.5 Indoor Alternating-current				
		High-voltage Vacuum Circuit-breaker				
		M01.SJ.01.01 Test Program of VS1 -12/1600-31.5 Indoor Alternating-current High-voltage				
		Vacuum Circuit-breaker				
		2MD.024.002 General Assembly Drawing of VS1 (ZN63A)-12/T1600-31.5 Indoor Alternating-				
		current High-voltage Vacuum Circuit-breaker				
Note						
Tests witnessed by: Gao Xiaobing						
Date of tests: From 2008-12-18 To 2009-03-19						

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Test Conclusion		
Client:	Ningbo Macwey Industrial Technology Co., Ltd	
Apparatus:	VS1 (ZN63A)-12/T1600-31.5 Indoor Alternating-current High-voltage Vacuum Circuit-breaker	
Manufacturer:	Ningbo Macwey Industrial Technology Co., Ltd	
Tests have been performed:		
Measurement of the Resistance of Main Circuits [$\leq 30\mu\Omega$]		
Temperature-rise Tests [1600A]		
Mechanical Characteristics Tests		
Mechanical Operation Tests [Class M2: 30000 times]		
Temperature-rise Tests on Auxiliary and Control Circuits		
Dielectric Tests on Auxiliary and Control Circuits		
Power Frequency Withstand Voltage Tests[Between poles and to earth: 42kV 1min]		
[Between the open contacts: 48kV 1min]		
Lightning Impulse Withstand Voltage Tests[Between poles and to earth: 75kV]		
[Between the open contacts: 85kV]		
The BTF Test--Duty T10~T100a [12kV 31.5kA 80kA(peak) DC: 47%]		
The Electrical Endurance Tests[Class E2: 12kV 31.5kA 30 times]		
Double-earth Fault Tests[12kV 27.4kA]		
Capacitive Current Swithing Tests CC1~CC2 [Class C2: 12kV 25A]		
Short-time and Peak Withstand Current Tests[4s 31.5kA 80kA(peak)]		
The tests have been performed in accordance with:		
GB 1984-2003 High-voltage alternating-current circuit-breakers		
IEC62271-100: 2001 High-voltage alternating-current vacuum circuit-breakers		
Conclusion:		
	All the tests above satisfied the requirements of standards.	
Translated by:	Checked by:	Verified by:
		
Date: 2009-08-03	Date: 2009-08-03	Date: 2009-08-03
Approved by: 		
		
Note: This report is translated from Chinese version. (The approved date of original version is 2009-04-07.)		