



17.5/24kV 250A Deadbreak Elbow Type Test Report

Test Sequence D2

Report Number:

Test Start Date:

Test Complete Date:

RN-R7607-D2

2015 / 04 / 27

2015/ 05 / 13

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3. Thermal Short Circuit (conductor)

Object

To verify the connectors that the parts meet the Thermal Short Circuit(conductor) requirements, 2 short circuits of 8.7 kA – 1.00s, no breakdown.

Testing Samples

Deadbreak Elbow	CHARDON 24-CE250	3 pcs
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Mating Parts

Deadbreak Bushing	CHARDON 24-DIB250
Cable	20kV YJV 1*50
Termination	CHARDON 25-CSTO
Bus Bar	8*30*300 Copper

Procedure and Testing Spec

Two short-circuits shall be applied using either a.c. or d.c. to raise the conductor temperature to the maximum permissible short-circuit temperature of the cable (θ_{sc}) within 5 s. Between the two short-circuits, the test loop shall be allowed to cool to a temperature less than 10 K above its temperature prior to the first short-circuit (θ_i)

The following formulae from IEC 60986 shall be used:

$$I^2 t = 5.11 \cdot 10^4 \cdot S^2 \cdot \ln\left(\frac{\theta_{sc} + 234.5}{\theta_i + 234.5}\right)$$

Where

I——is the r.m.s. value of short-circuit current (A);

t——is the duration (s);

S——is the conductor cross-sectional area (mm²);

θ_{sc} ——is the permissible short-circuit conductor temperature (°C);

θ_i ——is the conductor temperature at start of test (°C);

Ln——is the loge

Results

Sample number	8.7kA/1.00s 1 st Short Circuit	8.7kA/1.00s 2 nd Short Circuit
A5	PASS	PASS
A6	PASS	PASS
A7	PASS	PASS

Remark

This test was performed by China National Centre for Quality Supervision and Test of Electric Wire and Cable, see original test report in Appendix.

4. Dynamic Short Circuit

Object

To verify the connectors that the parts meet the Dynamic Short Circuit requirements, one 21.75 kA circuit for at least 10 ms, no break down.

Testing Samples

Deadbreak Elbow	CHARDON 24-CE250	3 pcs
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Mating Parts

Deadbreak Bushing	CHARDON 24-DIB250
Cable	20kV YJV 1*50
Termination	CHARDON 25-CSTO
Bus Bar	8*30*300 Copper

Procedure and Testing Spec

The test loop shall consist of either three single-core cables or a three-core cable with accessories. One end of the test cable loop shall be connected to the short-circuit generator and the other to a short-circuiting bar, as described in the relevant standard. For terminations, separable connectors and joints, the cable and accessories clamping method and the spacing between the accessories shall be as recommended by the manufacturer and shall be recorded in the test report. In addition, single-core cable joints shall be tested in a trefoil configuration

The short-circuit current shall be applied for a minimum of 10 ms to ensure that the initial peak current, as specified in the relevant standard, is reached. The waveform shall be recorded.





Results

Sample number	21.75kA 10ms
A5	PASS
A6	PASS
A7	PASS

Remark

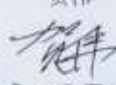
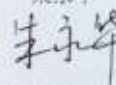
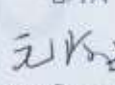
This test was performed by China National Centre for Quality Supervision and Test of Electric Wire and Cable, see original test report in Appendix.

APPENDIX -External Test Report

				报告编号 Reference No	CT15-1697
2012000369Z (2012)国认监认字(093)			检测 CNAS L0207		
<h1>检 验 报 告</h1> <h2>Test Report</h2>					
样 品 名 称 Name of sample	20kV 250A电缆连接器				
样 品 型 号 Type of sample	/				
委 托 方 Consigner	上海翔登机电有限公司				
试 验 类 型 Kind of test	委托检验				
   国家电线电缆质量监督检验中心 CHINA NATIONAL CENTRE FOR QUALITY SUPERVISION AND TEST OF ELECTRIC WIRE AND CABLE					
地址: 上海市军工路1000号	电话: 021-65494605	传真: 021-65490171			
报告查询网址: www.ticw.com.cn	电子信箱: ewec@ticw.com.cn	邮编: 200093			

国家电线电缆质量监督检验中心 检 验 报 告

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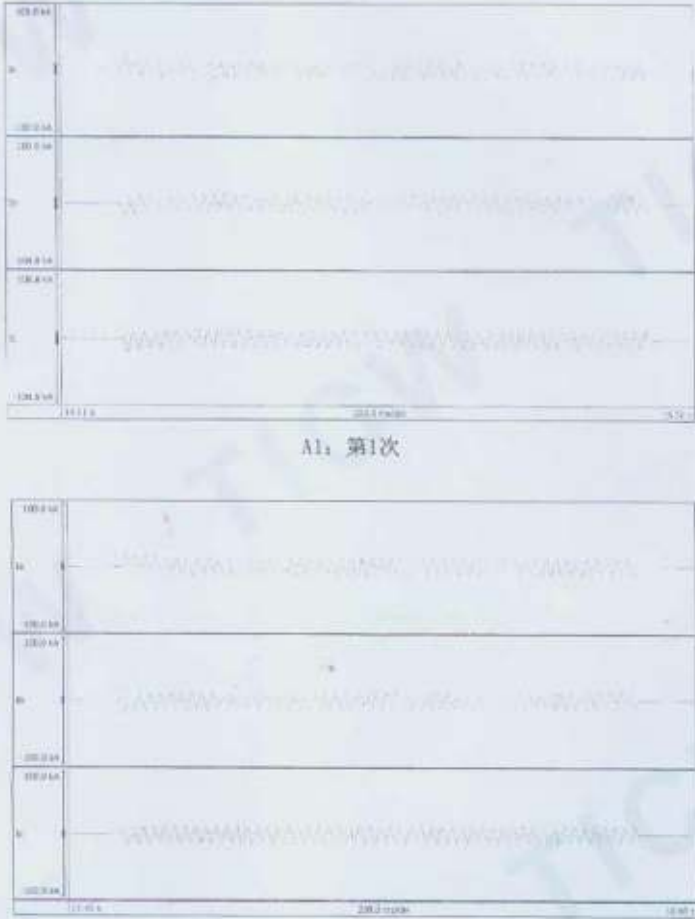
试验类型		委托检验		报告编号		CT15-1697			
样品名称		20kV 250A电缆连接器							
委托方	名称	上海翔登机电有限公司							
	地址	上海市嘉定区马陆镇丰功路55弄9号							
	电话号码	021-39105900	邮政编码		单位编号	900929			
生产单位	名称	上海翔登机电有限公司							
	地址	上海市嘉定区马陆镇丰功路55弄9号							
	电话号码	021-39105900	邮政编码		单位编号	900929			
样品描述	型号规格	20kV							
	接收状态	正常			来样方式	送样			
	抽样人	/			联系人	/			
	抽样日期	/			收样日期	2015年4月20日			
检验日期		2015年4月21日 至 2015年5月11日							
检验依据		GB/T 12706.4-2008 额定电压1kV(Um=1.2kV)到35kV(Um=40.5kV)挤包绝缘电力电缆及附件 第4部分：额定电压6kV(Um=7.2kV)到35kV(Um=40.5kV)电力电缆附件 试验要求							
检验结论		样品所测项目符合GB/T 12706.4-2008的标准要求。							
备注		短路热稳定试验和短路动稳定试验项目分包。							
主检	姓名	贺伟		姓名	朱永华		姓名	毛阿兴	
	签名			审核			批准		
	日期	2015.5.11		日期	2015.5.11		日期	2015.5.11	

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样品型号和规格		20kV		报告编号	CT15-1697		
序号	检 验 项 目	单 位	技 术 要 求	检 验 结 果			单 项 评 定
	样品编号			1	2	3	N
1	交流耐压试验(54kV, 5min)		不击穿	通过	通过	通过	P
2	短路热稳定试验 (导体, 9.1kA, 1s, 2次)		无可见损伤	三个样品均未见损伤 (环境温度: 18℃)			P
3	短路动稳定试验(21.75kA, 至少 10ms, 1次)			三个样品均未见损伤			N
以下空白							

注: “单项评定”符号含义: P: 检验结果符合要求; F: 检验结果不符合要求; N: 检验结果不要求判定; “/”表示不要求检测。

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样品型号 和规格	20kV	报告 编号	CT15-1697
<p>附录A 短路热稳定电流曲线图</p>  <p>A1: 第1次</p> <p>A2: 第2次</p>			

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样品型号 和规格	20kV	报告 编号	CT15-1697
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附录B 短路动稳定电流曲线图



附录C 试验照片



C1: 样品外观

