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中国认可
国际互认
检测
TESTING
CNAS L0207

报告编号

ReferenceNo

CT23-04950-1

检测报告

Test Report

样品名称 0.6/1kV冷缩式电缆户外（户内）终端
Name of sample 0.6/1kV cold-shrinkable cable outdoor (indoor) terminations

样品型号 GHD-1LS
Type of sample

委托方 航大电气有限公司
Consigner ZGHD ELECTRIC CO.,LTD.

试验类型 型式试验
Kind of test Type Test

上海国缆检测股份有限公司

SHANGHAI NATIONAL CENTER OF TESTING AND INSPECTION
FOR ELECTRIC CABLE AND WIRE CO., LTD

国家电线电缆质量检验检测中心

CHINA NATIONAL CENTRE OF TESTING AND INSPECTION
FOR ELECTRIC CABLE AND WIRE



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上海国缆检测股份有限公司
国家电线电缆质量检验检测中心
检测报告

Shanghai National Center of Testing and Inspection for Electric Cable and Wire Co.,Ltd
China National Centre of Testing and Inspection for Electric Cable and Wire
Test Report

共 8 页 第 1 页
Page 1 of 8

试验类型 Kind of test		型式试验 Type test		报告编号 Reference No.		CT23-04950-1	
样品名称 Name of sample		0.6/1kV冷缩式电缆户外（户内）终端 0.6/1kV cold-shrinkable cable outdoor (indoor) terminations					
型号规格 Type and Size		GHD-1LS 5×400		检测日期 Date of test		2023-10-25 ~ 2023-12-07	
委托方	Consigner	名称 Name 航大电气有限公司 ZGHD ELECTRIC CO.,LTD.					
		地址 Address 浙江省乐清市乐清湾港区乐商创业园 Yueshang Pioneer Park, Yueqing Bay Port Area, Yueqing City, Zhejiang Province					
		电话号码 Tel.	13764387888	邮政编码 P.C.	325600	单位编号 Unit No.	700993
生产单位	Manufacturer	名称 Name 航大电气有限公司 ZGHD ELECTRIC CO.,LTD.					
		地址 Address 浙江省乐清市乐清湾港区乐商创业园 Yueshang Pioneer Park, Yueqing Bay Port Area, Yueqing City, Zhejiang Province					
		电话号码 Tel.	13764387888	邮政编码 P.C.	325600	单位编号 Unit No.	700993
来样方式 Delivering mode		送样 Supplied by consigner	接收状态 Sample state at receiving	正常 Normal	收样日期 Receiving date	2023-10-24	
检测依据 Test standard		参照 JB/T 7829—2006 额定电压1kV($U_m=1.2kV$)到35kV($U_m=40.5kV$)电力电缆热收缩式终端 Heat-shrinkable terminations for power cables with rated voltages from 1kV($U_m=1.2kV$) up to 35kV($U_m=40.5kV$)					
判定依据 Verdict standard		同检测依据/Same as test standard.					
检测结论 Conclusion		样品进行了JB/T 7829—2006标准要求的全部项目检测，经检测该样品符合JB/T 7829—2006标准要求。All items for the sample have been carried out according to JB/T 7829—2006, and the sample is qualified for the requirements of JB/T 7829—2006.					
备 注 Note		1. 短路热稳定试验和短路动稳定试验不在本机构认可范围内，为分包项目。分包单位为上海电气设备检测所有限公司（CMA资质认定证书号为230008349711），其他试验项目在本中心试验基地-上海市杨浦区军工路1000号开展。Thermal short-circuit test and dynamic short-circuit test are not accredited and are subcontract items. The subcontractor is Shanghai Testing & Inspection Institute for Electrical Equipment Co., Ltd. (CMA Certificate No. 230008349711). The other test items have been carried out at our test base No. 1000, Jungong Road, Yangpu district, Shanghai. 2. 样品名称和型号规格由委托方提供。 The name and type and size of the sample are provided by consigner.					
主 检 Tested by	申永涛 Shen Yongtao 申永涛		审 核 Checked by	贺金红 He Jinhong 贺金红		批 准 Approved by	李闯 Li Chuang 李闯
日期 Date	2023-12-07		日期 Date	2023.12.07		日期 Date	2023.12.7

型号和规格 Type and size	GHD-1LS 5×400	报告编号 Reference No.	CT23-04950-1
1.样品描述 Sample description 本试验共有2个试验回路，具体如下： Tests are carried out on two test loops, and details as follows: 1.1 试验回路1 Test loop 1 试验回路包含两套0.6/1kV冷缩式电缆户外（户内）终端（一套测试样品）、一套0.6/1kV冷缩式电缆中间接头和一根五芯长度10米的电力电缆，电缆的型号规格为YJV22-0.6/1 5×400。 Test loop comprises two 0.6/1kV cold-shrinkable cable outdoor (indoor) terminations (one test sample), one 0.6/1kV cold-shrinkable cable straight joint and a 10m five cores cable. Type and size of the cable is YJV22-0.6/1 5×400. 1.2 试验回路2 Test loop 2 组成同试验回路1（一套测试样品）。 Assembled same as test loop 1 (one test sample). 2. 试验程序 Test sequences 2.1 试验回路1和试验回路2按JB/T 7829—2006中表3规定的户内终端和户外终端中试验系列1进行试验。 Test loop 1 and test loop 2 are tested according to test sequence 1 for indoor termination and outdoor termination given in table 3 of JB/T 7829—2006. 2.2 试验回路1完成试验系列1后，再按试验系列2和3进行试验。 Test loop 1 is tested according to test sequences 2 and 3 after completing sequence 1. 2.3 各试验程序中的检验（检查）项目结果“无异常”，是指试验后终端的管件、雨罩、分支套及带材未出现裂纹： The “no abnormality” in test result of examination in each test sequence means no cracks in the tube components, rain shield, breakout and tape of termination after testing.			

型号和规格 Type and size		GHD-1LS 5×400		报告编号 Reference No.	CT23-04950-1
序号 No.	检测项目 Test Items	单位 Unit	技术要求 Requirements	检测结果 Test Results	单项评定 Verdict
1	试验系列 Sequence 1				
1.1	交流耐压试验 AC voltage test				
1.1.1	交流耐压试验(8kV, 5min) AC voltage test (8kV, 5min)		不击穿或闪络 No breakdown or flashover	两个样品均未击穿或闪络 No breakdown or flashover for two samples	P
1.1.2	交流耐压试验 (湿态, 7.2kV, 1min) AC voltage test (wet, 7.2kV, 1min)		不击穿或闪络 No breakdown or flashover	两个样品均未击穿或闪络 No breakdown or flashover for two samples	P
1.2	空气中恒压负荷循环试验 (4.5kV。加热循环至少 8h, 95℃~100℃至少 2h, 自然冷 却至少 3h, 共 60 次热循环) Heating cycles test in air (4.5kV. Heating cycle at least 8h, 95℃~100℃at least 2h, natural cooling at least 3h, total 60 heating cycles)		不击穿或闪络 No breakdown or flashover	两个样品均未击穿或闪络 No breakdown or flashover for two samples	P
1.3	水中负荷循环试验 (加热循环至少 8h, 95℃~ 100℃至少 2h, 自然冷却至少 3h, 共 10 次热循环) Heating cycles test under water (Heating cycle at least 8h, 95℃~100℃at least 2h, natural cooling at least 3h, total 10 heating cycles)	/		完成10次热循环 10 times of heating cycles test completed 由后续交流耐压试验(序 号1.4)评定 Evaluation followed by AC voltage test (No. 1.4)	N
1.4	交流耐压试验(4.5kV, 15min) AC voltage test(4.5kV, 15min)		不击穿或闪络 No breakdown or flashover	两个样品均未击穿或闪络 No breakdown or flashover for two samples	P

注：“单项评定”符号含义：P：检测结果符合要求；F：检测结果不符合要求；N：检测结果不要求判定。

Note: “P” means this item does meet the requirement, “F” means this item does not meet the requirement, “N” means this item does not require to the verdict.

型号和规格 Type and size		GHD-1LS 5×400		报告编号 Reference No.	CT23-04950-1
序号 No.	检测项目 Test Items	单位 Unit	技术要求 Requirements	检测结果 Test Results	单项评定 Verdict
1.5	检验（检查）Examination		/	两个样品均未见异常 No abnormality for two samples	N
2	试验系列 Sequence 2+3				
2.1	交流耐压试验(8kV, 5min) AC voltage test (8kV, 5min)		不击穿或闪络 No breakdown or flashover	样品未击穿或闪络 No breakdown or flashover for the sample	P
2.2	短路热稳定试验 (导体, 42.9kA, 3s, 2 次) Thermal short-circuit test (conductor, 42.9kA, 3s, two short-circuits)		无可见损伤 No visible deterioration	样品未见损伤 No visible deterioration for the sample (环境温度 ambient temperature: 12℃)	P
2.3	短路动稳定试验 (185.8kA, 至少 10ms, 1 次) Dynamic short-circuit test (185.8kA, at least 10ms, One short-circuit)		无可见损伤 No visible deterioration	样品未见损伤 No visible deterioration for the sample (环境温度 ambient temperature: 12℃)	P
2.4	交流耐压试验(4.5kV, 15min) AC voltage test (4.5kV, 15min)		不击穿或闪络 No breakdown or flashover	样品未击穿或闪络 No breakdown or flashover for the sample	P
2.5	检验（检查）Examination		/	样品未见异常 No abnormality for the sample	N
以下为试验图形和照片 Following oscillograms and photos about testing					

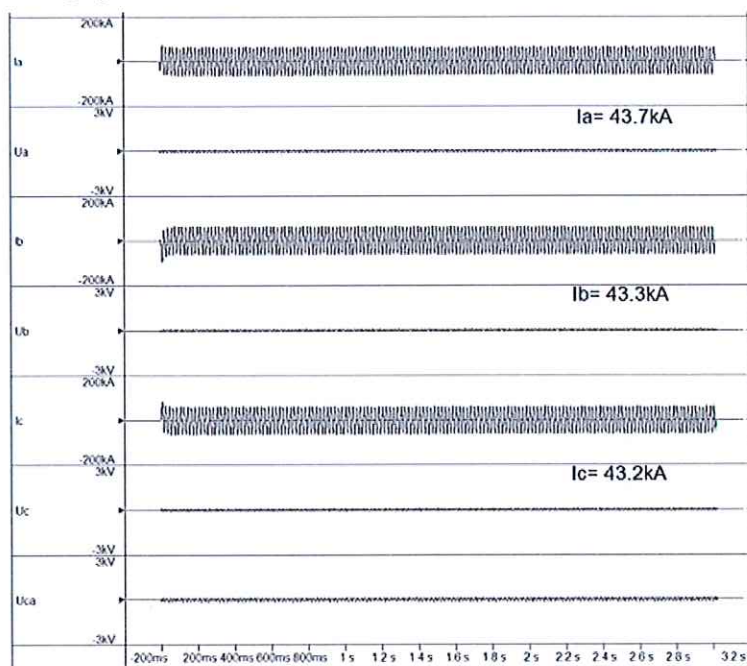
注：“单项评定”符号含义：P：检测结果符合要求；F：检测结果不符合要求；N：检测结果不要求判定。

Note: “P” means this item does meet the requirement, “F” means this item does not meet the requirement, “N” means this item does not require to the verdict.

型号和规格 Type and size	GHD-1LS 5×400	报告编号 Reference No.	CT23-04950-1
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附录A 短路热稳定电流曲线图

Annex A The graphs of thermal short-circuit current



短路电流有效值 R.M.S.
value of short-circuit
current:

 $I_A: 43.7 \text{ kA}$ $I_B: 43.3 \text{ kA}$

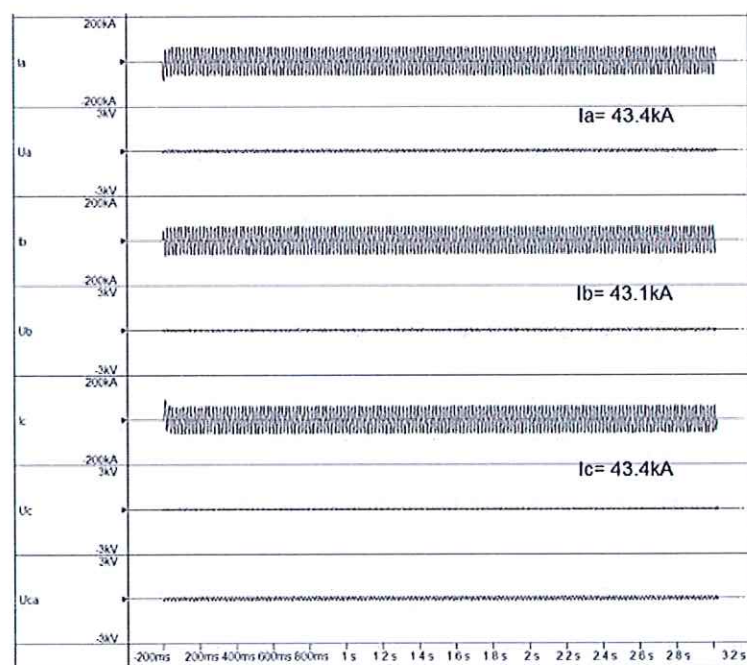
I_c : 43.2 kA

持续时间

Duration time:

t: 3.02s

A1: 第1次 The 1st



短路电流有效值 R.M.S.
value of short-circuit
current:

$$I_A: 43.4 \text{ kA}$$

I_B : 43.1 kA

I_c : 43.4 kA

持续时间

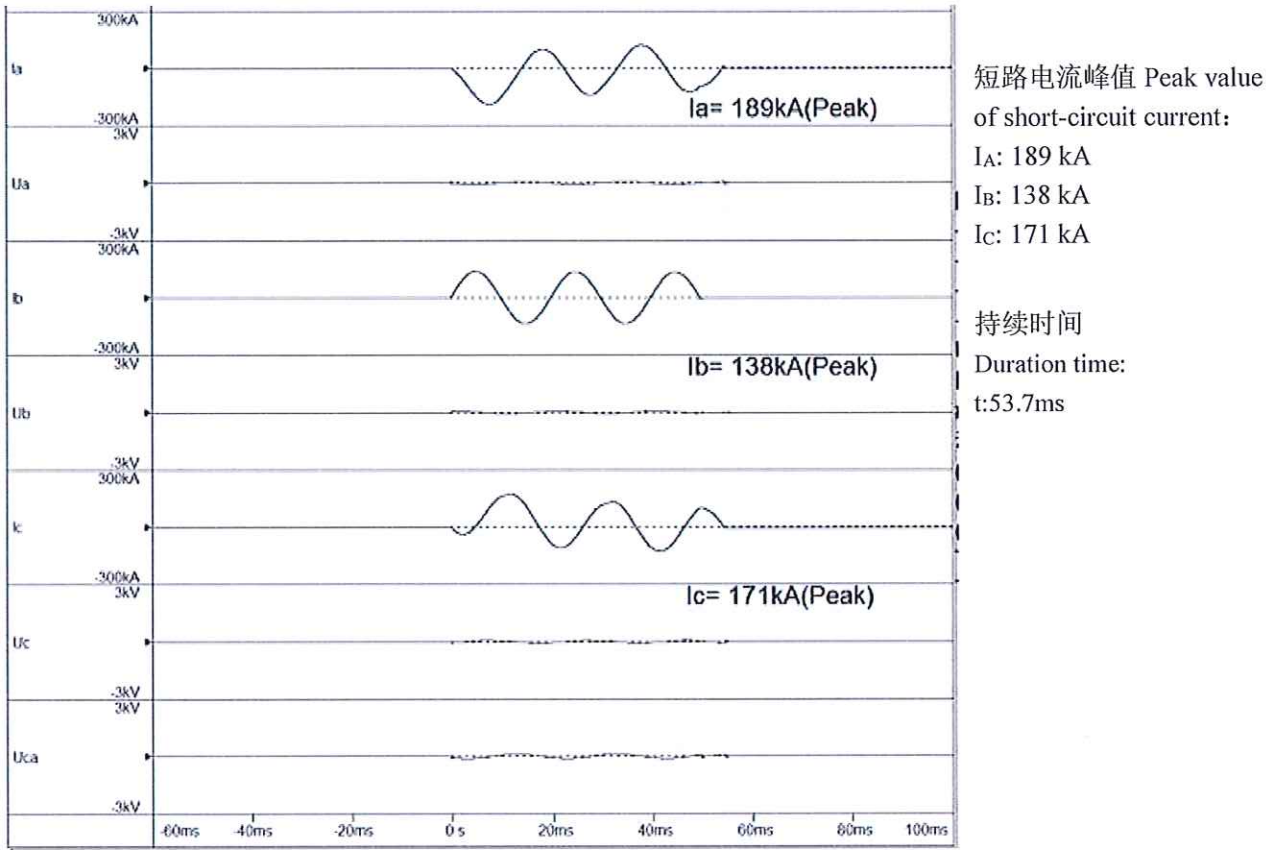
Duration time:

t: 3.02s

A2: 第2次 The 2nd

型号和规格 Type and size	GHD-1LS 5×400	报告编号 Reference No.	CT23-04950-1
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附录B 短路动稳定电流曲线图
Annex B The graphs of dynamic short-circuit current



型号和规格 Type and size	GHD-1LS 5×400	报告编号 Reference No.	CT23-04950-1
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附录C 试验照片 Annex C Photos about testing



C1: 样品外观 The appearance of the sample



C2: 样品交流电压试验 AC voltage test on the sample

型号和规格 Type and size	GHD-1LS 5×400	报告编号 Reference No.	CT23-04950-1
附录D 试验电缆的标识 Annex D Identification of test cable			
额定电压U ₀ /U(U _m) Rated voltage	0.6/1(1.2) kV		
结构: Construction	芯数 Core number	五芯 Five-core	
	屏蔽结构 Screened	/	
导体: Conductor	材料 Material	铜 Copper	
	形状 Shape	紧压圆形绞合 Stranded compacted circular	
	截面 Cross-sectional area	400mm ²	
	外径 Overall diameter	22.6mm	
绝缘: Insulation	材料 Material	交联聚乙烯 XLPE	
	厚度 Thickness	2.0mm	
	外径 Overall diameter	26.6mm	
铠装: Armour	结构和材料 Construction and Material	双层钢带 Two steel tapes	
外护套: Oversheath	材料 Material	聚氯乙烯 PVC	
	外径 Overall diameter	86.6mm	
电缆标示: Cable marking	YJV22-0.6/1 5×400		



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中国认可
国际互认
检测
TESTING
CNAS L0207

报告编号

Reference No

CT23-04950-2

检测报告

Test Report

样品名称 0.6/1kV冷缩式电缆中间接头
Name of sample 0.6/1kV cold-shrinkable cable straight joint

样品型号 GHD-1JTLS
Type of sample

委托方 航大电气有限公司
Consigner ZGHD ELECTRIC CO.,LTD.

试验类型 型式试验
Kind of test Type Test

上海国缆检测股份有限公司

SHANGHAI NATIONAL CENTER OF TESTING AND INSPECTION
FOR ELECTRIC CABLE AND WIRE CO., LTD

国家电线电缆质量检验检测中心

CHINA NATIONAL CENTRE OF TESTING AND INSPECTION
FOR ELECTRIC CABLE AND WIRE



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China National Centre of Testing and Inspection for Electric Cable and Wire
Test Report

共 8 页 第 1 页
Page 1 of 8

试验类型 Kind of test		型式试验 Type test		报告编号 Reference No.		CT23-04950-2	
样品名称 Name of sample		0.6/1kV冷缩式电缆中直接头 0.6/1kV cold-shrinkable cable straight joint					
型号规格 Type and Size		GHD-1JTLS 5×400		检测日期 Date of test		2023-10-25 ~ 2023-12-07	
委托方	Consigner	名称 Name 航大电气有限公司 ZGHD ELECTRIC CO.,LTD.					
		地址 Address 浙江省乐清市乐清湾港区乐商创业园 Yueshang Pioneer Park, Yueqing Bay Port Area, Yueqing City, Zhejiang Province					
		电话号码 Tel.	13764387888	邮政编码 P.C.	325600	单位编号 Unit No.	700993
生产单位	Manufacturer	名称 Name 航大电气有限公司 ZGHD ELECTRIC CO.,LTD.					
		地址 Address 浙江省乐清市乐清湾港区乐商创业园 Yueshang Pioneer Park, Yueqing Bay Port Area, Yueqing City, Zhejiang Province					
		电话号码 Tel.	13764387888	邮政编码 P.C.	325600	单位编号 Unit No.	700993
来样方式 Delivering mode		送样 Supplied by consigner	接收状态 Sample state at receiving	正常 Normal	收样日期 Receiving date	2023-10-24	
检测依据 Test standard		参照 JB/T 7830—2006 额定电压1kV($U_m=1.2kV$)到10kV($U_m=12kV$)挤包绝缘电力电缆 热收缩式直通接头 Heat-shrinkable straight joints for extruded insulation power cables with rated voltages from 1kV($U_m=1.2kV$) up to 10kV($U_m=12kV$)					
判定依据 Verdict standard		同检测依据/Same as test standard.					
检测结论 Conclusion		样品进行了JB/T 7830—2006标准要求的全部项目检测, 经检测该样品符合JB/T 7830—2006标准要求。All items for the sample have been carried out according to JB/T 7830—2006, and the sample is qualified for the requirements of JB/T 7830—2006.					
备注 Note		1. 短路热稳定试验和短路动稳定试验不在本机构认可范围内, 为分包项目, 分包单位为上海电器设备检测所有限公司 (CMA资质认定证书号为230008349711), 其他试验项目在本中心试验基地-上海市杨浦区军工路1000号开展。Thermal short-circuit test and dynamic short-circuit test are not accredited and are subcontract items. The subcontractor is Shanghai Testing & Inspection Institute for Electrical Equipment Co., Ltd. (CMA Certificate No. 230008349711). The other test items have been carried out at our test base No. 1000, Jungong Road, Yangpu district, Shanghai. 2. 样品名称和型号规格由委托方提供。 The name and type and size of the sample are provided by consigner.					
主检 Tested by	申永涛 Shen Yongtao 申永涛		审核 Checked by	贺金红 He Jinhong 贺金红		批准 Approved by	李闯 Li Chuang 李闯
日期 Date	2023-12-07		日期 Date	2023.12.07		日期 Date	2023.12.7

型号和规格 Type and size	GHD-1JTLS 5×400	报告编号 Reference No.	CT23-04950-2
1.样品描述 Sample description 本试验共有2个试验回路，具体如下： Tests are carried out on two test loops, and details as follows: 1.1 试验回路1 Test loop 1 试验回路包含两套0.6/1kV冷缩式电缆户外（户内）终端、一套0.6/1kV冷缩式电缆中间接头（一套测试样品）和一根五芯长度10米的电力电缆，电缆的型号规格为YJV22-0.6/1 5×400。 Test loop comprises two 0.6/1kV cold-shrinkable cable outdoor (indoor) terminations, one 0.6/1kV cold-shrinkable cable straight joint (one test sample) and a 10m five cores cable. Type and size of the cable is YJV22-0.6/1 5×400. 1.2 试验回路2 Test loop 2 组成同试验回路1（一套测试样品）。 Assembled same as test loop 1 (one test sample). 2. 试验程序 Test sequences 2.1 试验回路1和试验回路2按JB/T 7830—2006中表3规定的试验系列1进行试验。 Test loop 1 and test loop 2 are tested according to test sequence 1 given in table 3 of JB/T 7830—2006. 2.2 试验回路1完成试验系列1后，再按试验系列2和3进行试验。 Test loop 1 is tested according to test sequences 2 and 3 after completing sequence 1. 2.3 各试验程序中的检验（检查）项目结果“无异常”，是指试验后接头的管件及带材未出现裂纹： The “no abnormality” in test result of examination in each test sequence means no cracks in the tube components and tape of joint after testing.			

型号和规格 Type and size		GHD-1JTLS 5×400		报告编号 Reference No.	CT23-04950-2
序号 No.	检测项目 Test Items	单位 Unit	技术要求 Requirements	检测结果 Test Results	单项评定 Verdict
1	试验系列 Sequence 1				
1.1	交流耐压试验(8kV, 5min) AC voltage test (8kV, 5min)		不击穿 No breakdown	两个样品均未击穿 No breakdown for two samples	P
1.2	空气中恒压负荷循环试验 (4.5kV。加热循环至少 8h， 95℃~100℃至少 2h，自然冷 却至少 3h，共 30 次热循环) Heating cycles test in air (4.5kV. Heating cycle at least 8h, 95℃~100℃at least 2h, natural cooling at least 3h, total 30 heating cycles)		不击穿 No breakdown	两个样品均未击穿 No breakdown for two samples	P
1.3	水中恒压负荷循环试验 (4.5kV。加热循环至少 8h， 95℃~100℃至少 2h，自然冷 却至少 3h，共 30 次热循环) Heating cycles test under water (4.5kV. Heating cycle at least 8h, 95℃~100℃at least 2h, natural cooling at least 3h, total 30 heating cycles)		不击穿 No breakdown	两个样品均未击穿 No breakdown for two samples	P
1.4	交流耐压试验(4.5kV, 15min) AC voltage test(4.5kV, 15min)		不击穿 No breakdown	两个样品均未击穿 No breakdown for two samples	P
1.5	检验（检查）Examination		/	两个样品均未见异常 No abnormality for two samples	N
2	试验系列 Sequence 2+3				
2.1	交流耐压试验(8kV, 5min) AC voltage test (8kV, 5min)		不击穿 No breakdown	未击穿 No breakdown	P

注：“单项评定”符号含义：P：检测结果符合要求；F：检测结果不符合要求；N：检测结果不要求判定。

Note: “P” means this item does meet the requirement, “F” means this item does not meet the requirement, “N” means this item does not require to the verdict.

型号和规格 Type and size		GHD-1JTLS 5×400		报告编号 Reference No.	CT23-04950-2
序号 No.	检测项目 Test Items	单位 Unit	技术要求 Requirements	检测结果 Test Results	单项评定 Verdict
2.2	短路热稳定试验 (导体, 42.9kA, 3s, 2 次) Thermal short-circuit test (conductor, 42.9kA, 3s, two short-circuits)		无可见损伤 No visible deterioration	样品未见损伤 No visible deterioration for the sample (环境温度 ambient temperature: 12℃)	P
2.3	短路动稳定试验 (185.8kA, 至少 10ms, 1 次) Dynamic short-circuit test (185.8kA, at least 10ms, One short-circuit)		无可见损伤 No visible deterioration	样品未见损伤 No visible deterioration for the sample (环境温度 ambient temperature: 12℃)	P
2.4	交流耐压试验(4.5kV, 15min) AC voltage test (4.5kV, 15min)		不击穿 No breakdown	样品未击穿 No breakdown for the sample	P
2.5	检验（检查）Examination		/	样品未见异常 No abnormality for the sample	N
以下为试验图形和照片 Following oscillograms and photos about testing					

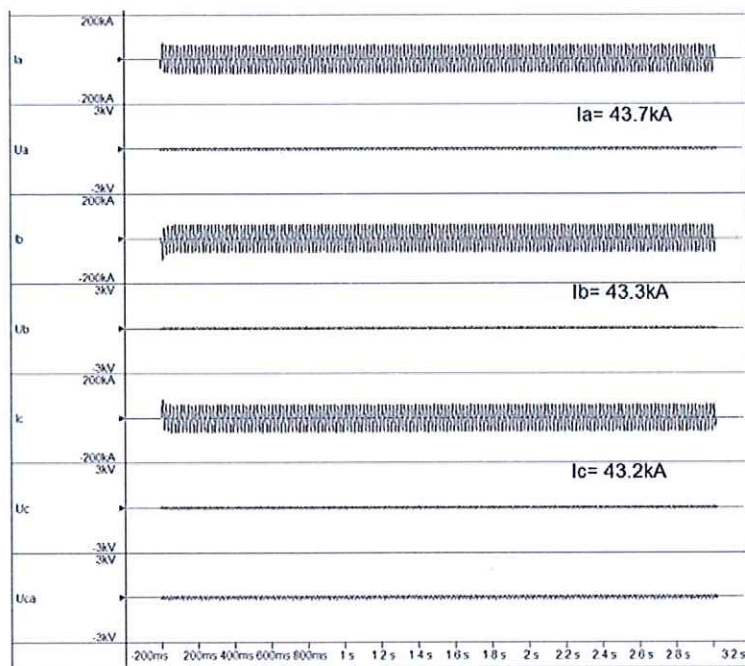
注：“单项评定”符号含义：P：检测结果符合要求；F：检测结果不符合要求；N：检测结果不要求判定。

Note: "P" means this item does meet the requirement, "F" means this item does not meet the requirement, "N" means this item does not require to the verdict.

型号和规格 Type and size	GHD-1JTLS 5×400	报告编号 Reference No.	CT23-04950-2
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附录A 短路热稳定电流曲线图

Annex A The graphs of thermal short-circuit current



短路电流有效值 R.M.S.
value of short-circuit
current:

 $I_A: 43.7 \text{ kA}$ $I_B: 43.3 \text{ kA}$

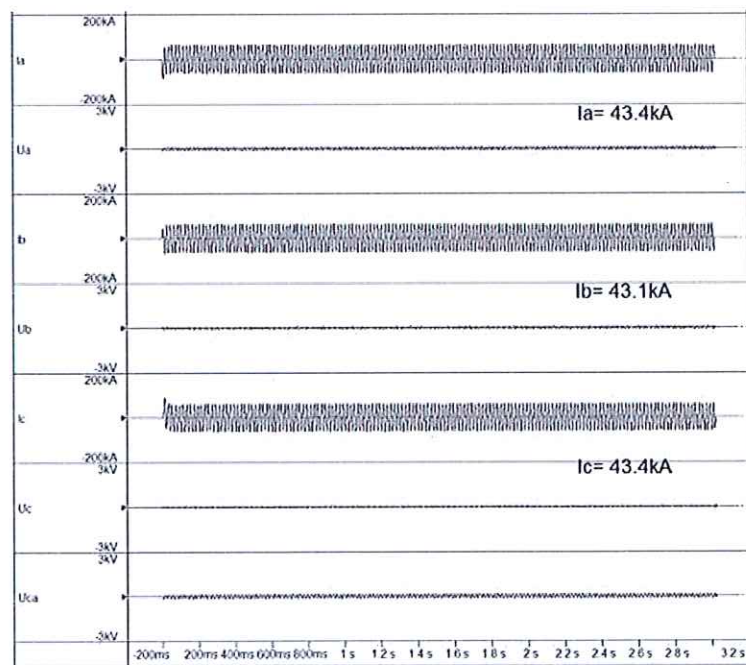
I_C : 43.2 kA

持续时间

Duration time:

t: 3.02s

A1: 第1次 The 1st



短路电流有效值 R.M.S.
value of short-circuit
current:

$$I_A: 43.4 \text{ kA}$$
$$I_B: 43.1 \text{ kA}$$

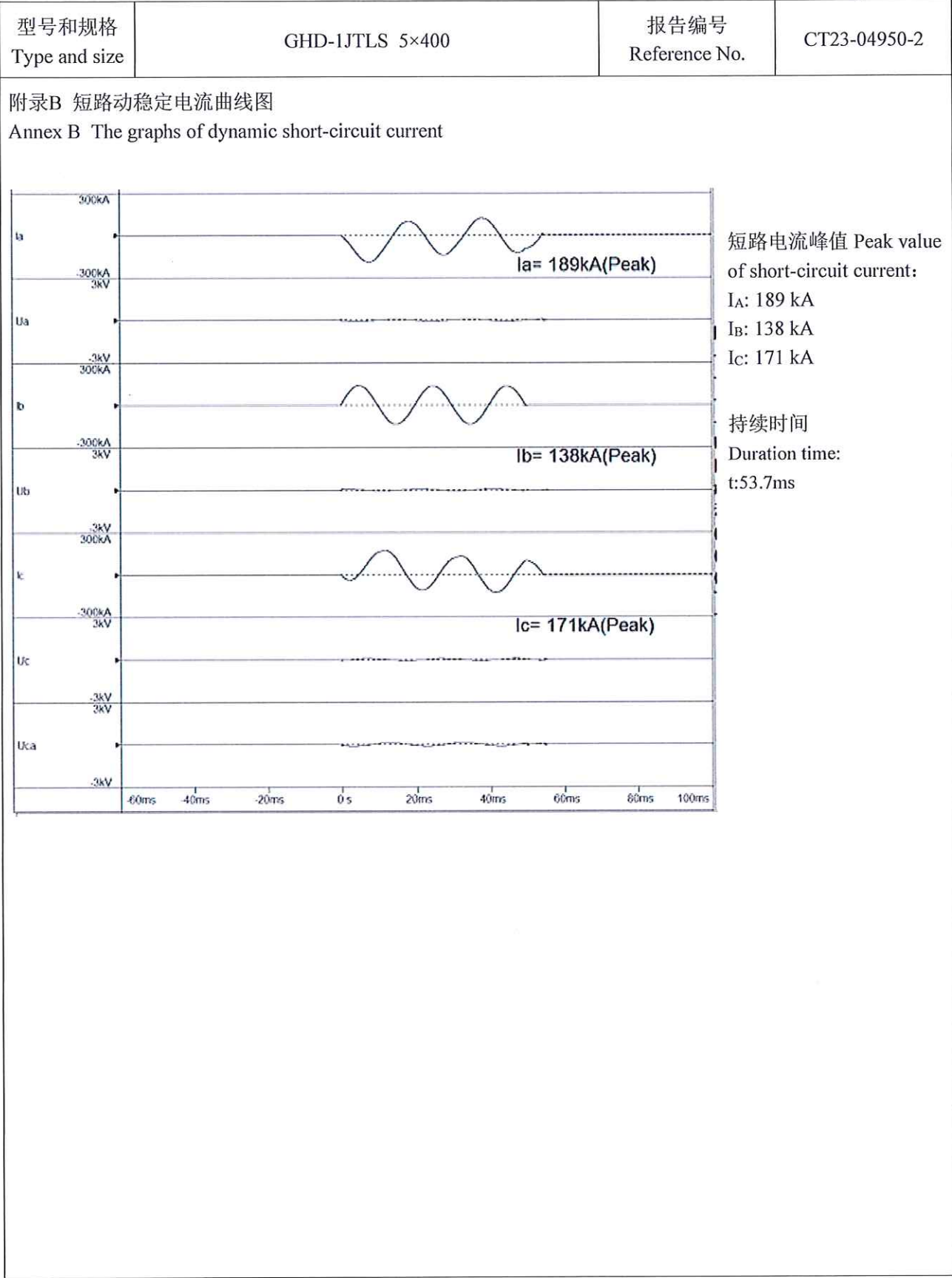
I_c : 43.4 kA

持续时间

Duration time:

t: 3.02s

A2: 第2次 The 2nd



型号和规格 Type and size	GHD-1JTLS 5×400	报告编号 Reference No.	CT23-04950-2
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附录C 试验照片 Annex C Photos about testing



C1: 样品外观 The appearance of the sample



C2: 样品交流电压试验 AC voltage test on the sample

型号和规格 Type and size	GHD-IJTLS 5×400	报告编号 Reference No.	CT23-04950-2
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附录D 试验电缆的标识 Annex D Identification of test cable

额定电压 $U_0/U(U_m)$ Rated voltage	0.6/1(1.2) kV	
结构: Construction	芯数 Core number	五芯 Five-core
	屏蔽结构 Screened	/
导体: Conductor	材料 Material	铜 Copper
	形状 Shape	紧压圆形绞合 Stranded compacted circular
	截面 Cross-sectional area	400mm ²
	外径 Overall diameter	22.6mm
绝缘: Insulation	材料 Material	交联聚乙烯 XLPE
	厚度 Thickness	2.0mm
	外径 Overall diameter	26.6mm
铠装: Armour	结构和材料 Construction and Material	双层钢带 Two steel tapes
外护套: Oversheath	材料 Material	聚氯乙烯 PVC
	外径 Overall diameter	86.6mm
电缆标示: Cable marking	YJV22-0.6/1 5×400	