

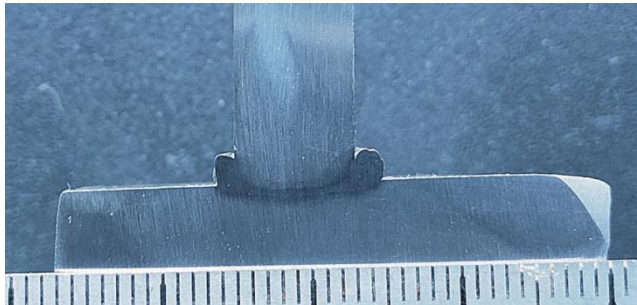
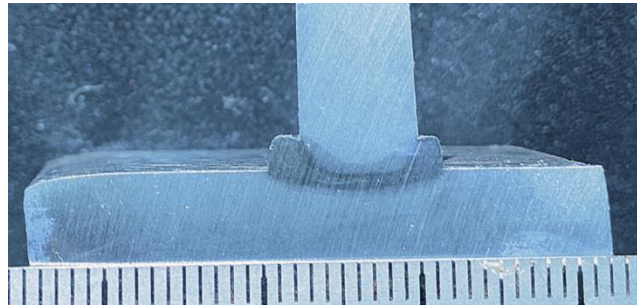
宏观检测报告 Macro test report

来样信息 Sample Information:

报告编号 Report No.: NTC-2211-T01

委托单位: Client	华初焊接技术有限公司 Huachu Welding Technology Co., Ltd.	收样日期: Receiving Date	2022.10.18
地址: Address	河北省邢台市巨鹿县邢台高速巨鹿收费站往东 800 米 800 meters east of Julu toll station, Julu County, Xingtai City, Hebei Province	样品状态: Sample Status	完好 Normal
试样编号: Spec. No.	T01	数量: Number	2
试样规格: Specimen Size	Ø8*80mm	材质 / 炉批号 Grade / Batch No.	SWRCH15A / 352108592 & 20221017S
测试项目: Test Items	显微组织 Microstructure		
试验方法: Test Method	GB/T 226:2015 钢的低倍组织及缺陷酸蚀检验法 GB/T 226:2015 Acid etching test for low power structures and defects in steel		
验收规范: Accept Standard	--		

试验数据:

T01-1	T01-2
	
放大倍数: 10X	放大倍数: 10X
备注: 焊缝和热影响区的横截面上无未熔合、裂纹及其他缺陷, 判定合格。 Note: There are no unfused, cracks or other defects on the cross section of the weld and the HAZ, acceptable.	

检测 Tested by:

贾然

审核 Reviewed by:

江杰

批准 Approved by:

江杰

日期 Date:

2022 年 11 月 16 日



声明 Statement:

1. 本报告无本实验室检验检测专用章无效 Test report without the seal mark of the testing center is invalid;
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4. 未经本机构书面批准, 不得复制测试报告 (完整复制除外) Test report should not be partly copied without approval of the testing center (Complete copy is an exception).

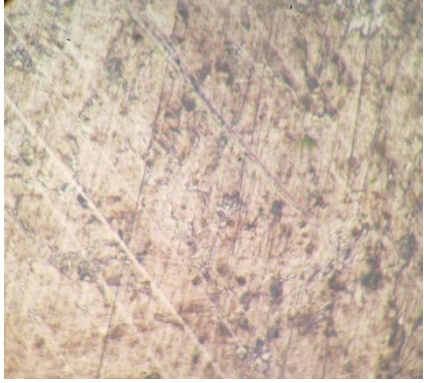
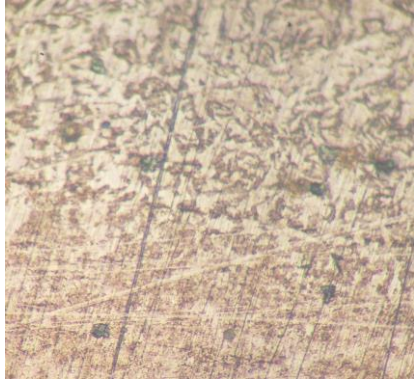
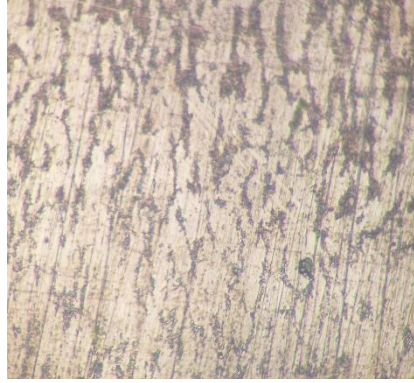
微观检测报告 Micro Examination report

来样信息 Sample Information:

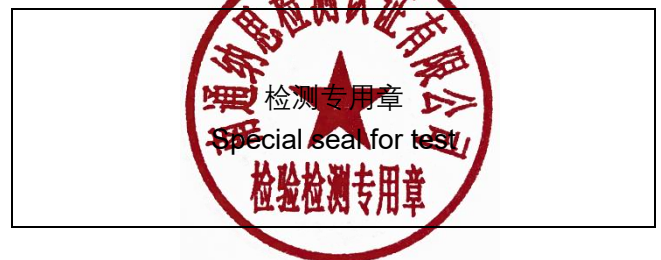
报告编号 Report No.: NTC-2211-T01

委托单位: Client	华初焊接技术有限公司 Huachu Welding Technology Co., Ltd.	收样日期: Receiving Date	2022.10.18
地址: Address	河北省邢台市巨鹿县邢台高速巨鹿收费站往东 800 米 800 meters east of Julu toll station, Julu County, Xingtai City, Hebei Province	样品状态: Sample Status	完好 Normal
试样编号: Spec. No.	T01	数量: Number	2
试样规格: Specimen Size	Ø8*80mm	材质 / 炉批号 Grade / Batch No.	SWRCH15A / 352108592 & 20221017S
测试项目: Test Items	显微组织 Microstructure		
试验方法: Test Method	GB/T 13298- 2015 《金属显微组织检验方法》 GB/T 13298- 2015 Inspection methods of microstructure for metals		
验收规范: Accept Standard	--		

试验数据:

T01-3	T01-4	T01-5
		
焊缝 Weld	热影响区(钢板侧) HAZ-Steel	热影响区(连接外侧) HAZ-Connecting the outer side
备注: 放大倍数 200X, 无显微裂纹和异常组织, 判定合格 Note: Magnification 200X, no microscopic cracks and abnormal structures, acceptable		

检测 Tested by: 贾然
审核 Reviewed by: 江杰
批准 Approved by: 江杰
日期 Date: 2022 年 11 月 16 日



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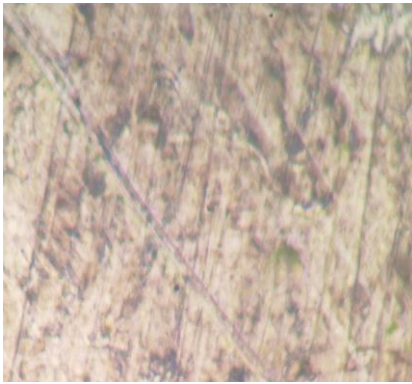
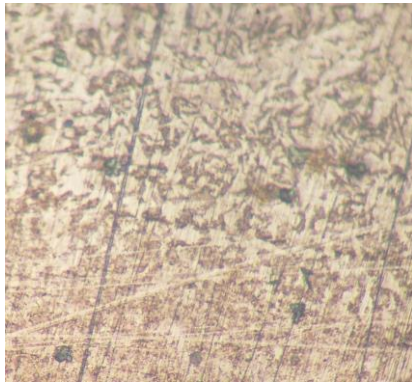
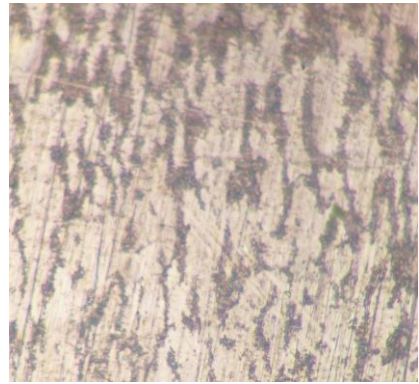
微观检测报告 Micro Examination report

来样信息 **Sample Information:**

报告编号 Report No.: NTC-2211-T01

委托单位: Client	华初焊接技术有限公司 Huachu Welding Technology Co., Ltd.	收样日期: Receiving Date	2022.10.18
地址: Address	河北省邢台市巨鹿县邢台高速巨鹿收费站往东 800 米 800 meters east of Julu toll station, Julu County, Xingtai City, Hebei Province	样品状态: Sample Status	完好 Normal
试样编号: Spec. No.	T01	数量: Number	2
试样规格: Specimen Size	Ø8*80mm	材质 / 炉批号 Grade / Batch No.	SWRCH15A / 352108592 & 20221017S
测试项目: Test Items	显微组织 Microstructure		
试验方法: Test Method	GB/T 13298- 2015 《金属显微组织检验方法》 GB/T 13298- 2015 Inspection methods of microstructure for metals		
验收规范: Accept Standard	--		

试验数据:

T01-6	T01-7	T01-8
		
焊缝 Weld	热影响区(钢板侧) HAZ-Steel	热影响区(连接外侧) HAZ-Connecting the outer side
备注: 放大倍数 200X, 无显微裂纹和异常组织, 判定合格 Note: Magnification 200X, no microscopic cracks and abnormal structures, acceptable.		

检测 Tested by: 贾然
 审核 Reviewed by: 江杰
 批准 Approved by: 江杰
 日期 Date: 2022 年 11 月 16 日



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硬度检测报告 Hardness Test Report

来样信息 **Sample Information:**

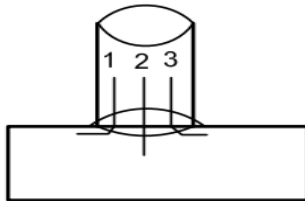
报告编号 Report No.: NTC-2211-T01

委托单位: Client	华初焊接技术有限公司 Huachu Welding Technology Co., Ltd.	收样日期: Receiving Date	2022.10.18
地址: Address	河北省邢台市巨鹿县邢台高速巨鹿收费站往东 800 米 800 meters east of Julu toll station, Julu County, Xingtai City, Hebei Province	样品状态: Sample Status	完好 Normal
试样编号: Spec. No.	T01	数量: Number	2
试样规格: Specimen Size	Ø8*80mm	材质 / 炉批号 Grade / Batch No.	SWRCH15A / 352108592 & 20221017S
测试项目: Test Items	维氏硬度 HV30 Vickers hardness		
试验方法: Test Method	GB/T 4340.1- 2009 《金属材料 维氏硬度试验 第 1 部分: 试验方法》 GB/T 4340.1- 2009 Metallic materials- Vickers hardness test - Part 1: Test method		
验收规范: Accept Standard	--		

测试数据 **Test Data:**

方向 Direction	位置 Location								
	母材 Base metal			热影响区 HAZ			焊缝 Weld		
	1	2	3	4	5	6	7	8	9
横向 Transverse	177	173	181	312	298	315	171	177	172
	10	11	12	13	14	15	16	17	18
	171	175	182	297	288	302	170	172	174
	19	20	21	22	23	24	25	26	27
	173	172	176	295	312	286	166	173	176

硬度示意图 Picture



备注: ≤350HV30, 结果合格。
Note: ≤350HV30, acceptable.

检测 Tested by:

贾然

审核 Reviewed by:

江杰

批准 Approved by:

陈峰

日期 Date:

2022 年 11 月 16 日



声明 Statement:

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硬度检测报告 Hardness Test Report

来样信息 **Sample Information:**

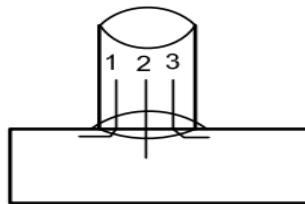
报告编号 Report No.: NTC-2211-T01

委托单位: Client	华初焊接技术有限公司 Huachu Welding Technology Co., Ltd.	收样日期: Receiving Date	2022.10.18
地址: Address	河北省邢台市巨鹿县邢台高速巨鹿收费站往东 800 米 800 meters east of Julu toll station, Julu County, Xingtai City, Hebei Province	样品状态: Sample Status	完好 Normal
试样编号: Spec. No.	T01	数量: Number	2
试样规格: Specimen Size	Ø8*80mm	材质 / 炉批号 Grade / Batch No.	SWRCH15A / 352108592 & 20221017S
测试项目: Test Items	维氏硬度 HV30 Vickers hardness		
试验方法: Test Method	GB/T 4340.1- 2009 《金属材料 维氏硬度试验 第 1 部分: 试验方法》 GB/T 4340.1- 2009 Metallic materials- Vickers hardness test - Part 1: Test method		
验收规范: Accept Standard	--		

测试数据 **Test Data:**

方向 Direction	位置 Location								
	母材 Base metal			热影响区 HAZ			焊缝 Weld		
	1	2	3	4	5	6	7	8	9
横向 Transverse	175	174	183	311	294	305	172	171	173
	10	11	12	13	14	15	16	17	18
	172	176	189	299	289	311	171	169	172
	19	20	21	22	23	24	25	26	27
	173	174	171	292	306	278	168	181	179

硬度示意图 Picture



备注: ≤350HV30, 结果合格。
Note: ≤350HV30, acceptable.

检测 Tested by: 贾然
审核 Reviewed by: 江杰
批准 Approved by: 陈伟
日期 Date: 2022 年 11 月 16 日



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化学分析报告 Chemical analysis report

来样信息 Sample Information:

报告编号 Report No.: NTC-2211-T01

委托单位: Client	华初焊接技术有限公司 Huachu Welding Technology Co., Ltd.	收样日期: Receiving Date	2022.10.18
地址: Address	河北省邢台市巨鹿县邢台高速巨鹿收费站往东 800 米 800 meters east of Julu toll station, Julu County, Xingtai City, Hebei Province	样品状态: Sample Status	完好 Normal
试样编号: Spec. No.	T01	数量: Number	1
试样规格: Specimen Size	--	材质 / 炉批号 Grade / Batch No.	SWRCH15A / 352108592 & 20221017S
测试项目: Test Items	化学分析 (成品分析) Chemical analysis (product analysis)		
试验方法: Test Method	GB/T 4336-2016/XG1-2017 碳素钢和中低合金钢 多元素含量的测定火花放电原子发射光谱法 (常规法) GB/T 4336-2016/XG1-2017 Carbon and low alloy steel- -Determination of multi-element contents- Spark discharge atomic emission spectrometric method (routine method)		
验收规范: Accept Standard	--		

测试数据 Test Data:

试样号 Sample No	T01-11									
元素 Element 范围 Spec.	C [%]	Si [%]	Mn [%]	P [%]	S [%]	Al [%]	Cr [%]	Cu [%]	N [%]	Mo [%]
测量值 (%) Test value	0.12~0.19	≤0.12	0.27~0.63	≤0.040	≤0.040	≥0.017	--	--	--	--
	0.15	0.06	0.48	0.017	0.010	0.036	--	--	--	--

检测 Tested by:

夏然

审核 Reviewed by:

江杰

批准 Approved by:

江杰

日期 Date:

2022 年 11 月 16 日



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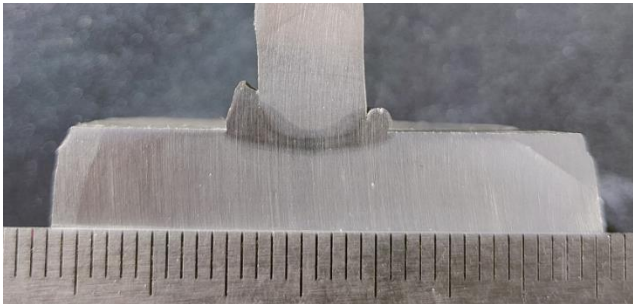
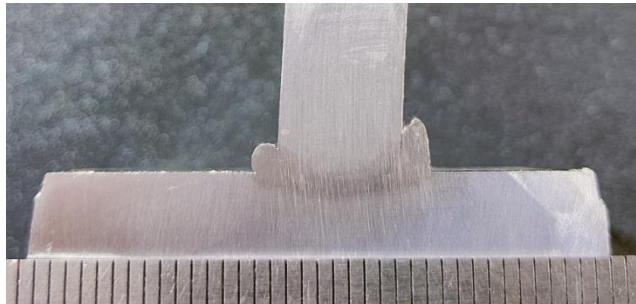
宏观检测报告 Macro test report

来样信息 Sample Information:

报告编号 Report No.: NTC-2211-T02

委托单位: Client	华初焊接技术有限公司 Huachu Welding Technology Co., Ltd.	收样日期: Receiving Date	2022.10.18
地址: Address	河北省邢台市巨鹿县邢台高速巨鹿收费站往东 800 米 800 meters east of Julu toll station, Julu County, Xingtai City, Hebei Province	样品状态: Sample Status	完好 Normal
试样编号: Spec. No.	T02	数量: Number	2
试样规格: Specimen Size	Ø8*80mm	材质 / 炉批号 Grade / Batch No.	SWRCH15A / 352108592 & 20221017S
测试项目: Test Items	显微组织 Microstructure		
试验方法: Test Method	GB/T 226:2015 钢的低倍组织及缺陷酸蚀检验法 GB/T 226:2015 Acid etching test for low power structures and defects in steel		
验收规范: Accept Standard	--		

试验数据:

T02-1	T02-2
	
放大倍数: 10X	放大倍数: 10X
备注: 焊缝和热影响区的横截面上无未熔合、裂纹及其他缺陷, 判定合格。 Note: There are no unfused, cracks or other defects on the cross section of the weld and the HAZ, acceptable.	

检测 Tested by: 贾然

审核 Reviewed by: 江杰

批准 Approved by: 江杰

日期 Date: 2022 年 11 月 16 日



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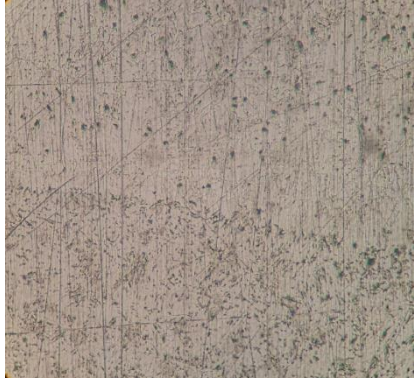

微观检测报告 Micro Examination report

来样信息 Sample Information:

报告编号 Report No.: NTC-2211-T02

委托单位: Client	华初焊接技术有限公司 Huachu Welding Technology Co., Ltd.	收样日期: Receiving Date	2022.10.18
地址: Address	河北省邢台市巨鹿县邢台高速巨鹿收费站往东 800 米 800 meters east of Julu toll station, Julu County, Xingtai City, Hebei Province	样品状态: Sample Status	完好 Normal
试样编号: Spec. No.	T02	数量: Number	2
试样规格: Specimen Size	Ø8*80mm	材质 / 炉批号 Grade / Batch No.	SWRCH15A / 352108592 & 20221017S
测试项目: Test Items	显微组织 Microstructure		
试验方法: Test Method	GB/T 13298- 2015 《金属显微组织检验方法》 GB/T 13298- 2015 Inspection methods of microstructure for metals		
验收规范: Accept Standard	--		

试验数据:

T02-3	T02-4	T02-5
		
焊缝 Weld	热影响区(钢板侧) HAZ-Steel	热影响区(连接外侧) HAZ-Connecting the outer side
备注: 放大倍数 200X, 无显微裂纹和异常组织, 判定合格 Note: Magnification 200X, no microscopic cracks and abnormal structures, acceptable.		

检测 Tested by: 贾然
审核 Reviewed by: 江杰
批准 Approved by: 姜峰
日期 Date: 2022 年 11 月 16 日



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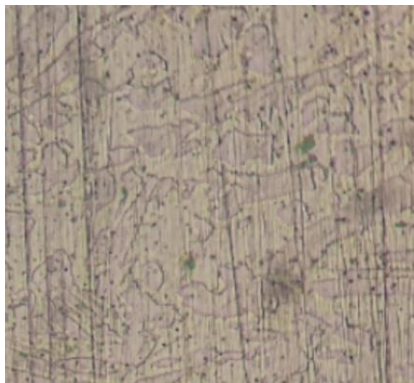
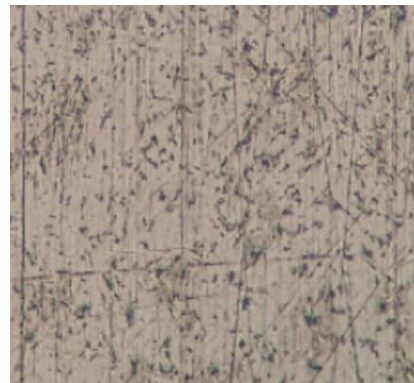

微观检测报告 Micro Examination report

来样信息 Sample Information:

报告编号 Report No.: NTC-2211-T02

委托单位: Client	华初焊接技术有限公司 Huachu Welding Technology Co., Ltd.	收样日期: Receiving Date	2022.10.18
地址: Address	河北省邢台市巨鹿县邢台高速巨鹿收费站往东 800 米 800 meters east of Julu toll station, Julu County, Xingtai City, Hebei Province	样品状态: Sample Status	完好 Normal
试样编号: Spec. No.	T02	数量: Number	2
试样规格: Specimen Size	Ø8*80mm	材质 / 炉批号 Grade / Batch No.	SWRCH15A / 352108592 & 20221017S
测试项目: Test Items	显微组织 Microstructure		
试验方法: Test Method	GB/T 13298- 2015 《金属显微组织检验方法》 GB/T 13298- 2015 Inspection methods of microstructure for metals		
验收规范: Accept Standard	--		

试验数据:

T02-3	T02-4	T02-5
		
焊缝 Weld	热影响区(钢板侧) HAZ-Steel	热影响区(连接外侧) HAZ-Connecting the outer side
备注: 放大倍数 200X, 无显微裂纹和异常组织, 判定合格 Note: Magnification 200X, no microscopic cracks and abnormal structures, acceptable.		

检测 Tested by:

贾然

审核 Reviewed by:

江杰

批准 Approved by:

江杰

日期 Date:

2022 年 11 月 16 日



声明 Statement:

1. 本报告无本实验室检验检测专用章无效 Test report without the seal mark of the testing center is invalid;
2. 此报告结果仅对来样负责 Test report is only responsible for the testing sample;
3. 受检单位如对测试报告有异议应及时提出 (本机构样品一般保留一个月备复检) Any questions on the test report should be put forward in time by client (Note: The testing samples are kept for one month for retest);
4. 未经本机构书面批准, 不得复制测试报告 (完整复制除外) Test report should not be partly copied without approval of the testing center (Complete copy is an exception).

硬度检测报告 Hardness Test Report

来样信息 **Sample Information:**

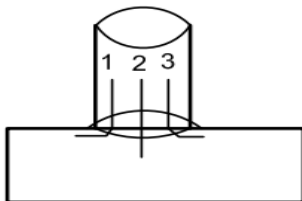
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试样编号: Spec. No.	T02	数量: Number	2
试样规格: Specimen Size	Ø8*80mm	材质 / 炉批号 Grade / Batch No.	SWRCH15A / 352108592 & 20221017S
测试项目: Test Items	维氏硬度 HV30 Vickers hardness		
试验方法: Test Method	GB/T 4340.1- 2009 《金属材料 维氏硬度试验 第 1 部分: 试验方法》 GB/T 4340.1- 2009 Metallic materials- Vickers hardness test - Part 1: Test method		
验收规范: Accept Standard	--		

测试数据 **Test Data:**

方向 Direction	位置 Location								
	母材 Base metal			热影响区 HAZ			焊缝 Weld		
	1	2	3	4	5	6	7	8	9
横向 Transverse	173	170	174	323	332	328	168	171	172
	10	11	12	13	14	15	16	17	18
	171	172	174	315	311	298	176	170	210
	19	20	21	22	23	24	25	26	27
	177	177	180	256	274	170	168	167	202

硬度示意图 Picture



备注: ≤350HV30, 结果合格。
Note: ≤350HV30, acceptable.

检测 Tested by:

贾然

审核 Reviewed by:

江杰

批准 Approved by:

何梅

日期 Date:

2022 年 11 月 16 日



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硬度检测报告 Hardness Test Report

来样信息 Sample Information:

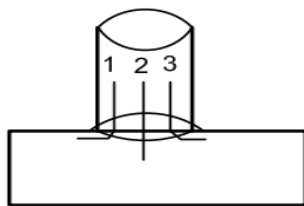
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试验方法: Test Method	GB/T 4340.1- 2009 《金属材料 维氏硬度试验 第 1 部分: 试验方法》 GB/T 4340.1- 2009 Metallic materials- Vickers hardness test - Part 1: Test method		
验收规范: Accept Standard	--		

测试数据 Test Data:

方向 Direction	位置 Location								
	母材 Base metal			热影响区 HAZ			焊缝 Weld		
	1	2	3	4	5	6	7	8	9
横向 Transverse	177	172	177	311	309	312	175	174	179
	10	11	12	13	14	15	16	17	18
	166	173	169	305	309	304	171	177	212
	19	20	21	22	23	24	25	26	27
	174	173	186	276	289	167	169	173	187

硬度示意图 Picture



备注: ≤350HV30, 结果合格。
Note: ≤350HV30, acceptable.

检测 Tested by:

贾然

审核 Reviewed by:

江杰

批准 Approved by:

李峰

日期 Date:

2022 年 11 月 16 日



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