



Cladding-Technology-Shanxi-Co.,-Ltd- CLADDING-ITP-023-Cladding-Product- Factory-Inspection-ITP

科雷丁技术（山西）有限公司

Cladding-Technology-Shanxi-Co.,-Ltd

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堆焊产品出厂前最终检验与试验计划及合格证签发

Final Inspection and Test Plan and Certificate of Conformity Issuance for
Cladding Products Prior to Factory Delivery

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Final Inspection and Test Plan and Certificate of Conformity Issuance for Cladding Products Prior to Factory Delivery	



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1 目的 Purpose

建立堆焊产品出厂前的最终检验与试验程序，确保所有法兰堆焊、管件堆焊、钢管堆焊、轴套管堆焊、模具堆焊修复产品及增材制造产品符合合同要求、技术协议及国家/行业标准规定，明确合格证签发流程，保证产品质量的可追溯性。

Establish the final inspection and test procedure for cladding products prior to factory delivery, ensure that all flange cladding, pipe fitting cladding, steel pipe cladding, shaft sleeve cladding, mold cladding repair products and additive manufacturing products comply with contract requirements, technical agreements and national/industry standard regulations, clarify the certificate of conformity issuance process, and ensure product quality traceability.

2 适用范围 Scope of Application

本程序适用于科雷丁技术（山西）有限公司所有堆焊产品及增材制造产品出厂前的最终检验与试验，包括但不限于：

This procedure applies to the final inspection and test of all cladding products and additive manufacturing products of Cladding-Technology-Shanxi-Co.,-Ltd prior to factory delivery, including but not limited to:

- 法兰堆焊产品 Flange cladding products
- 管件堆焊产品 Pipe fitting cladding products
- 钢管堆焊产品 Steel pipe cladding products
- 轴套管堆焊产品 Shaft sleeve cladding products
- 模具堆焊修复产品 Mold cladding repair products
- TIG/MIG 电弧增材制造产品 TIG/MIG arc additive manufacturing products



- 工业零部件表面强化与再制造修复产品 Industrial component surface strengthening and remanufacturing repair products

3 职责 Responsibilities

部门/岗位 Department/Position	职责 Responsibilities
质量管理部 Quality Management Department	负责制定最终检验与试验计划，组织实施最终检验与试验，编制检验报告，审核并签发合格证
Responsible for developing final inspection and test plan, organizing and implementing final inspection and test, preparing inspection reports, reviewing and issuing certificate of conformity	
技术部 Technical Department	负责提供产品技术文件、工艺参数要求，参与不合格品评审，提供技术支持
Responsible for providing product technical documents, process parameter requirements, participating in nonconforming product review, providing technical support	
生产部 Production Department	负责产品生产过程控制，配合最终检验工作，提供产品标识信息
Responsible for product production process control, cooperating with final inspection work, providing product identification information	
焊接工程师 Welding Engineer	负责焊接工艺评定，确认堆焊工艺参数符合性，参与焊接质量评审
Responsible for welding procedure qualification, confirming cladding process parameter compliance, participating in welding quality review	
总经理 General Manager	负责批准重大不合格品的让步接收，签发特殊情况下合格证
Responsible for approving concession acceptance of major nonconforming products, issuing certificate of conformity under special circumstances	



4 管理内容与程序 Management Content and Procedure

4.1 最终检验与试验计划编制 Final Inspection and Test Plan Development

4.1.1 计划编制依据 Basis for Plan Development

质量管理部应根据以下文件编制最终检验与试验计划：

The Quality Management Department shall develop the final inspection and test plan based on the following documents:

- 客户合同及技术协议 Customer contract and technical agreement
- 产品图纸及技术条件 Product drawings and technical conditions
- 焊接工艺规程 Welding procedure specification
- 相关国家/行业标准 Relevant national/industry standards
- 公司内部质量检验标准 Internal quality inspection standards

4.1.2 计划内容 Plan Content

最终检验与试验计划应包含以下内容：

The final inspection and test plan shall include the following content:

序号 No.	检验项目 Inspection Item	检验内容 Inspection Content	检验方法 Inspection Method	检验标准 Inspection Standard	检验频次 Inspection Frequency	责任部门 Responsible Department
1	外观检查 Visual Inspection	堆焊层外观质量、表面缺陷、几何尺寸	目视检查、量具测量 Visual inspection, measuring tools	GB/T 19869、合同要求	100%	质量管理部
2	尺寸检验 Dimensional Inspection	堆焊层厚度、宽度、长度、圆度、平面度	千分尺、卡尺、三坐标测量仪 Micrometer, caliper, CMM	图纸要求 Drawing requirements	100%	质量管理部
3	化学成分分析 Chemical Composition Analysis	堆焊层化学成分、稀释率验证	光谱分析 Spectral analysis	GB/T 228、合同要求	按批次/按件	质量管理部



4	力学性能试验 Mechanical Property Test	抗拉强度、 硬度、冲击 韧性	拉伸试验、硬 度试验、冲击 试验 Tensile test, hardness test, impact test	GB/T 229、 GB/T 230	按工艺评定 要求	质量管理部
5	无损检测 Non- Destructive Testing	堆焊层及热 影响区缺陷 检测	射线检测 RT、超声波 检测 UT、磁 粉检测 MT、 渗透检测 PT	GB/T 3323、GB/T 11345、 GB/T 15822、 GB/T 18851	按合同/标 准要求	质量管理部
6	金相检验 Metallographic Inspection	堆焊层组 织、稀释 率、界面结 合质量	金相显微镜观 察 Metallographic microscope observation	GB/T 13298	按工艺评定 要求	质量管理部
7	耐磨/耐腐蚀性 能试验 Wear/Corrosion Resistance Test	堆焊层耐磨 性、耐腐蚀 性验证	磨损试验、腐 蚀试验 Wear test, corrosion test	合同要求	按合同要求	质量管理部
8	焊接工艺参数 确认 Welding Process Parameter Confirmation	TIG/MIG 堆 焊工艺参数 符合性	设备参数记录 核查 Equipment parameter record verification	焊接工艺规 程	100%	焊接工程师
9	产品标识检查 Product Identification Check	产品标识完 整性、可追 溯性	目视检查 Visual inspection	公司标识管 理规定	100%	质量管理部
10	包装检查 Packaging Inspection	产品包装防 护、运输标 识	目视检查 Visual inspection	合同要求	100%	质量管理部



4.2 最终检验与试验实施 Final Inspection and Test Implementation

4.2.1 检验前准备 Pre-inspection Preparation

最终检验与试验实施前，应完成以下准备工作：

Before implementing the final inspection and test, the following preparations shall be completed:

- 确认产品已完成全部生产过程，具备出厂条件 Confirm that the product has completed all production processes and is ready for delivery
- 确认检验设备、量具、仪器处于有效检定/校准状态 Confirm that inspection equipment, measuring tools, and instruments are in valid verification/calibration status
- 准备检验记录表格，确保记录完整、准确 Prepare inspection record forms, ensure records are complete and accurate
- 确认检验环境满足标准要求（温度、湿度、照明等） Confirm that the inspection environment meets standard requirements (temperature, humidity, lighting, etc.)

4.2.2 外观检查 Visual Inspection

外观检查应包括以下内容：

Visual inspection shall include the following content:

- 堆焊层表面质量：检查是否存在裂纹、气孔、夹渣、未熔合、咬边等缺陷
- Cladding layer surface quality: check for cracks, porosity, slag inclusion, lack of fusion, undercut and other defects
- 堆焊层几何形状：检查堆焊层高度、宽度、过渡圆角是否符合图纸要求
- Cladding layer geometric shape: check whether cladding layer height, width, transition fillet meet drawing requirements
- 母材表面状态：检查堆焊区域外母材表面是否存在损伤、污染
- Base material surface condition: check whether the base material surface outside the cladding area has damage or contamination
- 产品整体外观：检查产品表面清洁度、标识清晰度
- Overall product appearance: check product surface cleanliness, identification clarity

外观检查标准：

Visual inspection criteria:

缺陷类型 Defect Type	允许程度 Acceptable Level	判定标准 Acceptance Criteria
裂纹 Crack	不允许 Not allowed	任何方向裂纹均为不合格
气孔 Porosity	按标准要求	单孔直径 $\leq \phi 1.5\text{mm}$ ，间距 ≥ 3 倍孔径



夹渣 Slag Inclusion	按标准要求	长度≤5mm，深度≤0.5mm
咬边 Undercut	按标准要求	深度≤0.5mm，连续长度≤50mm
未熔合 Lack of Fusion	不允许 Not allowed	任何未熔合均为不合格

4.2.3 尺寸检验 Dimensional Inspection

尺寸检验应包括以下内容：

Dimensional inspection shall include the following content:

- 堆焊层厚度：使用千分尺或超声波测厚仪测量，多点测量取平均值
- Cladding layer thickness: measure with micrometer or ultrasonic thickness gauge, take average value of multiple measurements
- 堆焊层宽度：使用卡尺测量，沿堆焊方向多点测量
- Cladding layer width: measure with caliper, measure at multiple points along cladding direction
- 产品整体尺寸：包括外径、内径、长度、圆度、平面度等
- Overall product dimensions: including outer diameter, inner diameter, length, roundness, flatness, etc.
- 配合尺寸：法兰堆焊产品的密封面尺寸、管件堆焊产品的连接尺寸等
- Mating dimensions: sealing surface dimensions of flange cladding products, connection dimensions of pipe fitting cladding products, etc.

尺寸检验公差要求：

Dimensional inspection tolerance requirements:

产品类型 Product Type	检验项目 Inspection Item	公差要求 Tolerance Requirement
法兰堆焊 Flange Cladding	堆焊层厚度	±0.5mm
	密封面平面度	≤0.1mm
	外径/内径	±0.3mm
管件堆焊 Pipe Fitting Cladding	堆焊层厚度	±0.5mm
	外径	±0.5mm
	长度	±1.0mm
钢管堆焊 Steel Pipe Cladding	堆焊层厚度	±0.5mm
	外径	±0.5mm



直线度	$\leq 1.0\text{mm/m}$	
轴套管堆焊 Shaft Sleeve Cladding	堆焊层厚度	$\pm 0.3\text{mm}$
内径	$\pm 0.2\text{mm}$	
圆度	$\leq 0.05\text{mm}$	
模具堆焊修复 Mold Cladding Repair	堆焊层厚度	$\pm 0.3\text{mm}$
关键尺寸	按图纸要求	

4.2.4 化学成分分析 Chemical Composition Analysis

化学成分分析应按以下要求进行：

Chemical composition analysis shall be conducted as follows:

- 取样位置：堆焊层中部及堆焊层与母材界面处
- Sampling position: middle of cladding layer and interface between cladding layer and base material
- 分析方法：采用光谱分析仪进行化学成分分析
- Analysis method: use spectral analyzer for chemical composition analysis
- 分析项目：根据合同要求确定，通常包括 C、Si、Mn、Cr、Ni、Mo、V 等元素
- Analysis items: determined according to contract requirements, usually including C, Si, Mn, Cr, Ni, Mo, V and other elements
- 稀释率验证：通过界面处化学成分分析验证稀释率是否符合工艺要求
- Dilution rate verification: verify whether dilution rate meets process requirements through chemical composition analysis at interface

化学成分合格标准：

Chemical composition acceptance criteria:

元素 Element	堆焊层要求 Cladding Layer Requirement	稀释率要求 Dilution Rate Requirement
C	按合同/标准要求	$\leq 25\%$
Cr	按合同/标准要求	-
Ni	按合同/标准要求	-
Mo	按合同/标准要求	-



V	按合同/标准要求	-
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4.2.5 力学性能试验 Mechanical Property Test

力学性能试验应按以下要求进行：

Mechanical property test shall be conducted as follows:

- 取样要求：按照相关标准在堆焊层及堆焊层与母材界面处取样
- Sampling requirement: sample at cladding layer and interface between cladding layer and base material according to relevant standards
- 试验项目：
- Test items:

试验项目 Test Item	试验方法 Test Method	合格标准 Acceptance Criteria
抗拉强度 Tensile Strength	GB/T 228	≥合同/标准要求
硬度 Hardness	GB/T 230	按合同/标准要求
冲击韧性 Impact Toughness	GB/T 229	≥合同/标准要求
弯曲试验 Bend Test	GB/T 232	无裂纹

- 硬度分布测试：沿堆焊层厚度方向多点测试硬度分布
- Hardness distribution test: test hardness distribution at multiple points along cladding layer thickness direction

4.2.6 无损检测 Non-Destructive Testing

无损检测应按以下要求进行：

Non-destructive testing shall be conducted as follows:

- 检测时机：堆焊完成后、机加工前进行无损检测
- Testing timing: conduct NDT after cladding and before machining
- 检测方法选择：根据产品材质、堆焊层厚度、缺陷类型选择适当的检测方法
- NDT method selection: select appropriate NDT method according to product material, cladding layer thickness, defect type

检测方法 NDT Method	适用情况 Applicable Conditions	检测标准 Inspection Standard	合格级别 Acceptance Level
射线检测 RT	堆焊层厚度≤50mm	GB/T 3323	II 级及以上



超声波检测 UT	堆焊层厚度>50mm	GB/T 11345	II 级及以上
磁粉检测 MT	铁磁性材料表面/近表面	GB/T 15822	按标准要求
渗透检测 PT	非铁磁性材料表面	GB/T 18851	按标准要求

- 检测比例：根据合同要求确定，通常为 100%或按批次抽检
- Testing ratio: determined according to contract requirements, usually 100% or batch sampling

4.2.7 金相检验 Metallographic Inspection

金相检验应按以下要求进行：

Metallographic inspection shall be conducted as follows:

- 取样位置：堆焊层横截面
- Sampling position: cross-section of cladding layer
- 检验项目：
- Inspection items:

检验项目 Inspection Item	检验内容 Inspection Content	合格标准 Acceptance Criteria
堆焊层组织	组织均匀性、晶粒度	组织均匀，无异常组织
稀释率	堆焊层与母材界面稀释率	≤工艺要求
界面结合	堆焊层与母材结合质量	无未熔合、裂纹
层间结合	多层堆焊层间结合质量	无层间缺陷

4.2.8 耐磨/耐腐蚀性能试验 Wear/Corrosion Resistance Test

耐磨/耐腐蚀性能试验应按以下要求进行：

Wear/corrosion resistance test shall be conducted as follows:

- 试验时机：根据合同要求，通常在最终检验阶段进行
- Testing timing: according to contract requirements, usually conducted at final inspection stage
- 试验方法：
- Test methods:

试验类型 Test Type	试验方法 Test Method	合格标准 Acceptance Criteria
耐磨试验 Wear Test	磨损失重法	磨损量≤合同要求



耐腐蚀试验 Corrosion Test	浸泡试验/电化学试验	腐蚀速率≤合同要求
高温性能试验 High Temperature Test	高温拉伸/蠕变试验	性能≥合同要求

4.2.9 焊接工艺参数确认 Welding Process Parameter Confirmation

焊接工艺参数确认应包括以下内容：

Welding process parameter confirmation shall include the following content:

- TIG 堆焊工艺参数：焊接电流、电压、焊接速度、保护气体流量、钨极直径等
- TIG cladding process parameters: welding current, voltage, welding speed, shielding gas flow, tungsten electrode diameter, etc.
- MIG 堆焊工艺参数：焊接电流、电压、焊接速度、送丝速度、保护气体流量、焊丝直径等
- MIG cladding process parameters: welding current, voltage, welding speed, wire feed speed, shielding gas flow, wire diameter, etc.
- 电弧增材制造工艺参数：层间温度、道间温度、扫描策略等
- Arc additive manufacturing process parameters: interlayer temperature, interpass temperature, scanning strategy, etc.
- 参数符合性确认：实际工艺参数与焊接工艺规程的符合性
- Parameter compliance confirmation: compliance of actual process parameters with welding procedure specification

4.2.10 产品标识检查 Product Identification Check

产品标识检查应包括以下内容：

Product identification check shall include the following content:

- 产品编号：与生产记录、检验记录一致
- Product number: consistent with production records and inspection records
- 客户标识：按合同要求标识客户名称、合同号等
- Customer identification: mark customer name, contract number, etc. according to contract requirements
- 材质标识：堆焊材料牌号、母材材质
- Material identification: cladding material grade, base material
- 生产日期：产品完成日期
- Production date: product date
- 检验标识：检验状态标识（合格/不合格/待检）



- Inspection identification: inspection status identification (qualified/unqualified/pending)

4.2.11 包装检查 Packaging Inspection

包装检查应包括以下内容：

Packaging inspection shall include the following content:

- 包装防护：产品包装是否满足运输防护要求
- Packaging protection: whether product packaging meets transportation protection requirements
- 防锈处理：产品表面防锈处理是否到位
- Anti-rust treatment: whether anti-rust treatment of product surface is adequate
- 运输标识：运输方向、易碎品、防潮等标识
- Transportation identification: transportation direction, fragile, moisture-proof, etc.
- 装箱清单：装箱清单与实物一致
- Packing list: packing list consistent with actual goods

4.3 检验结果评定 Inspection Result Evaluation

4.3.1 合格判定 Qualified Determination

产品同时满足以下条件时，判定为合格：

The product is determined as qualified when all of the following conditions are met:

- 所有必检项目检验结果符合合同、技术协议及标准要求
- All mandatory inspection items meet contract, technical agreement and standard requirements
- 无影响产品使用性能的重大缺陷
- No major defects affecting product performance
- 产品标识完整、准确
- Product identification is complete and accurate
- 检验记录完整、可追溯
- Inspection records are complete and traceable

4.3.2 不合格处理 Nonconforming Handling

检验发现不合格时，应按以下程序处理：

When nonconformity is found during inspection, it shall be handled according to the following procedure:

- 标识隔离：对不合格品进行标识并隔离存放
- Identification and segregation: identify and segregate nonconforming products
- 不合格评审：由质量管理部组织技术部、生产部、焊接工程师进行不合格评审



- Nonconforming review: Quality Management Department organizes Technical Department, Production Department, Welding Engineer to conduct nonconforming review
- 处置决定：根据评审结果确定处置方式（返工、返修、让步接收、报废）
- Disposition decision: determine disposition method based on review results (rework, repair, concession acceptance, scrap)
- 返工/返修：对可返工/返修的不合格品进行返工/返修，返工/返修后重新检验
- Rework/repair: rework/repair nonconforming products that can be reworked/repared, re-inspect after rework/repair
- 让步接收：对不影响使用性能的不合格品，经客户同意后让步接收
- Concession acceptance: for nonconforming products that do not affect performance, concession acceptance after customer approval
- 报废：对无法返工/返修且不允许让步接收的不合格品予以报废
- Scrap: scrap nonconforming products that cannot be reworked/repared and are not allowed for concession acceptance

4.3.3 不合格品评审记录 Nonconforming Product Review Record

不合格品评审应形成记录，记录内容包括：

Nonconforming product review shall form records, including:

- 不合格品编号、名称、规格
- Nonconforming product number, name, specification
- 不合格项目、不合格描述
- Nonconforming items, nonconforming description
- 不合格原因分析
- Nonconforming cause analysis
- 处置决定及依据
- Disposition decision and basis
- 返工/返修方案（如适用）
- Rework/repair plan (if applicable)
- 评审人员签字
- Review personnel signatures

4.4 合格证签发 Certificate of Conformity Issuance

4.4.1 合格证签发条件 Certificate Issuance Conditions

产品满足以下条件时，方可签发合格证：



The certificate of conformity shall be issued only when the product meets the following conditions:

- 最终检验与试验全部合格
- All final inspection and test items are qualified
- 检验记录完整、准确
- Inspection records are complete and accurate
- 产品标识完整、准确
- Product identification is complete and accurate
- 包装符合要求
- Packaging meets requirements
- 相关文件齐全（检验报告、材质证明等）
- Relevant documents are complete (inspection report, material certificate, etc.)

4.4.2 合格证内容 Certificate Content

合格证应包含以下内容：

The certificate of conformity shall include the following content:

项目 Item	内容 Content
合格证编号 Certificate No.	CLADDING-COC-XXXXXX
产品名称 Product Name	堆焊产品名称
产品编号 Product No.	与产品标识一致
规格型号 Specification	产品规格型号
数量 Quantity	产品数量
客户名称 Customer Name	客户名称
合同号 Contract No.	合同编号
堆焊材料 Cladding Material	堆焊材料牌号
母材材质 Base Material	母材材质
检验日期 Inspection Date	最终检验日期
检验结论 Inspection Conclusion	合格
签发人 Issuer	质量负责人签字
签发日期 Issue Date	合格证签发日期
公司印章 Company Seal	公司质量检验专用章



4.4.3 合格证签发流程 Certificate Issuance Procedure

合格证签发流程如下：

The certificate of conformity issuance procedure is as follows:

- 质量管理部检验员完成最终检验与试验，填写检验记录
- Quality inspector completes final inspection and test, fills in inspection records
- 质量管理部检验员编制检验报告
- Quality inspector prepares inspection report
- 质量管理部负责人审核检验记录、检验报告
- Quality Management Department head reviews inspection records and inspection report
- 质量管理部负责人签发合格证
- Quality Management Department head issues certificate of conformity
- 合格证随产品交付客户
- Certificate of conformity delivered to customer with product

4.4.4 特殊情况下合格证签发 Special Certificate Issuance

特殊情况下合格证签发规定：

Special certificate issuance regulations:

- 让步接收产品：经客户书面同意后，可在合格证中注明让步接收项目及内容
- Concession accepted products: after written customer approval, concession accepted items and content may be noted in the certificate
- 紧急放行产品：经总经理批准，可先签发合格证，但须在产品交付后补全检验记录
- Emergency release products: after General Manager approval, certificate may be issued first, but inspection records must be completed after product delivery
- 不合格品：不合格品不得签发合格证
- Nonconforming products: certificate of conformity shall not be issued for nonconforming products

4.5 检验记录与报告 Inspection Records and Reports

4.5.1 检验记录要求 Inspection Record Requirements

检验记录应满足以下要求：

Inspection records shall meet the following requirements:

- 记录内容完整、准确、清晰



- Record content is complete, accurate, clear
- 记录及时填写，不得事后补填
- Records filled in promptly, no post-filling allowed
- 记录修改规范，修改处有修改人签字及日期
- Record modifications are standardized, with modifier signature and date at modification location
- 记录保存期限不少于产品质保期
- Record retention period not less than product warranty period

4.5.2 检验报告内容 Inspection Report Content

检验报告应包含以下内容：

Inspection report shall include the following content:

- 产品基本信息（名称、编号、规格、数量等）
- Basic product information (name, number, specification, quantity, etc.)
- 检验依据（合同、标准、技术条件等）
- Inspection basis (contract, standard, technical conditions, etc.)
- 检验项目、检验方法、检验结果
- Inspection items, inspection methods, inspection results
- 检验结论
- Inspection conclusion
- 检验人员签字、日期
- Inspector signature, date
- 审核人员签字、日期
- Reviewer signature, date

4.5.3 记录保存 Record Retention

检验记录、检验报告、合格证等文件应按以下要求保存：

Inspection records, inspection reports, certificates of conformity and other documents shall be retained according to the following requirements:

- 纸质文件：由质量管理部统一归档保存
- Paper documents: uniformly archived and retained by Quality Management Department
- 电子文件：由质量管理部电子档案系统保存
- Electronic documents: retained by Quality Management Department electronic archive
- 保存期限：不少于产品质保期，且不少于 10 年
- Retention period: not less than product warranty period, and not less than 10 years



5 监督考核 Supervision and Assessment

5.1 监督检查 Supervision and Inspection

质量管理部应定期对本程序的执行情况进行监督检查，检查内容包括：

The Quality Management Department shall regularly supervise and inspect the implementation of this procedure, including:

- 最终检验与试验计划的执行情况
- Implementation of final inspection and test plan
- 检验记录的完整性、准确性
- Completeness and accuracy of inspection records
- 合格证签发的规范性
- Standardization of certificate issuance
- 不合格品处理的及时性
- Timeliness of nonconforming product handling

5.2 考核指标 Assessment Indicators

考核指标 Assessment Indicator	目标值 Target Value	考核周期 Assessment Period
最终检验一次合格率	≥95%	月度
检验记录完整率	100%	月度
合格证签发及时率	≥98%	月度
客户投诉率（质量相关）	≤2%	年度

5.3 奖惩措施 Reward and Punishment Measures

- 对严格执行本程序、确保产品质量的个人或部门给予表彰奖励
- Reward individuals or departments that strictly implement this procedure and ensure product quality
- 对违反本程序、造成质量事故的个人或部门进行处罚
- Punish individuals or departments that violate this procedure and cause quality incidents



6 附则 Supplementary Provisions

6.1 相关文件 Related Documents

- 质量管理手册 Quality Management Manual
- 焊接工艺规程 Welding Procedure Specification
- 不合格品控制程序 Nonconforming Product Control Procedure
- 标识和可追溯性控制程序 Identification and Traceability Control Procedure
- 检验和试验控制程序 Inspection and Test Control Procedure

6.2 相关记录 Related Records

- 最终检验与试验计划 Final Inspection and Test Plan
- 外观检查记录 Visual Inspection Record
- 尺寸检验记录 Dimensional Inspection Record
- 化学成分分析报告 Chemical Composition Analysis Report
- 力学性能试验报告 Mechanical Property Test Report
- 无损检测报告 Non-Destructive Testing Report
- 金相检验报告 Metallographic Inspection Report
- 耐磨/耐腐蚀性能试验报告 Wear/Corrosion Resistance Test Report
- 焊接工艺参数确认记录 Welding Process Parameter Confirmation Record
- 不合格品评审记录 Nonconforming Product Review Record
- 检验报告 Inspection Report
- 合格证 Certificate of Conformity

6.3 文件修订记录 Document Revision Record

版本号 Version	修订日期 Revision Date	修订内容 Revision Content	修订人 Reviser
A/0	2025 年 1 月 1 日	首次发布 First Issue	质量管理部

文件结束 End of Document