**产品质量证明书**

**Quality Certificate**

产品名称

Name

产品编号

MFR S/N.

图 号

DWG

出厂日期

Date

编制/Prepared by：李乃理 审核/Checked by：朱龙

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| 编号Iden .No.钢 2018-07- | | | | | | | | | | | | | | | | 日期Date 2018 年07月04日 | | | | | | | | | | | | | | | | | | | | |
| 零 件 图 号  Drawing No | | 零 件 名 称  Part Name | | | | | | | | 材 质  Material | | | | | | | | 件 数  Qt’ y | | | | 交货状态  Delivery status | | | | | | | | | | 铸件重量Kg  Casting weight | | | | |
|  | |  | | | | | | | | ZG12Cr9Mo1VNbN | | | | | | | | 1 | | | | 粗加工 | | | | | | | | | |  | | | | |
| 零 件 标 记  Part Mark | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 化学成分%  Chemical Composition | | 熔炼炉号**:**  Heat No | | | | | | | | | | | | | | | | 报告编号**:**  Test Report No. | | | | | | | | | | | | | | | | | | |
| 元素  Element | | C | | Si | | Mn | | | P | | | S | | | Cr | | | Ni | | | Mo | | V | | | Nb | | | | N | | | AL | | | As |
| 要求含量（熔炼）  Ladle Analysis Specified | | 0.11  ~  0.14 | | 0.20  ~  0.50 | | 0.40  ~  0.80 | | | ≤0.020 | | | ≤0.010 | | | 8.00  ~  9.50 | | | ≤0.40 | | | 0.90  ~  1.05 | | 0.18  ~  0.25 | | | 0.05  ~  0.08 | | | | 0.04  ~  0.06 | | | ≤0.02 | | | / |
| 实测含量（熔炼）  Ladle Analysis Measured | |  | |  | |  | | |  | | |  | | |  | | |  | | |  | |  | | |  | | | |  | | |  | | | / |
| 检查员Examiner | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 热处理炉号  HeatTreatment Furnace No | | | 状态  Condition | | | | 正火  N ℃ | | | | 淬火  Q ℃ | | | | | 回火  T ℃ | | | | 晶粒度  G. S. | | | | 脆性夹渣物  B.I. | | | | | 塑性夹渣物  P.I. | | | | | | 总和  Total | |
| （正火)  （回火） | | |  | | | |  | | | |  | | | | |  | | | | / | | | | / | | | | | / | | | | | | / | |
| 机械性能 报告编号**:**  Physical Properties Test Report | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | ReL  MPa | Rm  MPa | | | A  % | | | Z  % | | | 冲击Akv（U）Impact Energy  V-notch(U-notch) J(kg—m) ≥35 | | | | | | | | | | | | | | | | | | | | | | | 硬 度  Hardness  HB | | |
| 室温  Room Temp. | | | | | | | | | | | ℃ | | | | | | | | | | | |  | | |
| 高  L | | 中  M | | | | 低  U | | 平均  Ave | | | 高  L | | | 中  M | | | 低  U | | | 平均  Ave | | |  | | |
| 要求数据  Value Required | ≥  500 | ≥  630~750 | | | ≥  16 | | | ≥  40 | | | / | | / | | | | / | | / | | | / | | | / | | | / | | | / | | | / | | |
| 实测数据  Value Measured |  |  | | |  | | |  | | |  | |  | | | |  | | / | | | / | | | / | | | / | | | / | | |  | | |
| 检查员Examiner | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 附化分报告 1 份 附探伤报告 2 份  附性能报告 1 份 附尺检报告 1 份  附热处理铸件明细表 1 份  附缺陷焊补记录 1 份  带试棒 / 块 | | | | | | | | 检 查 结 果 | | | | | | 尺寸外观检验（NTC联检签字） | | | | | | | | | | | | | 无损检测（NTC联检签字） | | | | | | | | | |
| 合 格 | | | | | |  | | | | | | | | | | | | |  | | | | | | | | | |

质量保证工程师 检查工程师

Examination Engineer

代号Abbreviations Q---淬火 Quenching PT----渗透探伤 Penetrant Testing

A---退火Annealing G. S----晶粒度 Grain Size UT.---超探 Ultrasonic Testing

N---正火Normalizing B.I-----脆性夹渣物 Brittle Inclusion MT---磁探 Magnetic Particle Testing

T----回火Tempering P.I.-----塑性夹渣物 Plastic Inclusion RT----射线探伤 Radiographic Testing

铸 件 热 处 理 明 细 表

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| --- | --- | --- | --- | --- | --- |
| **送 检**  **代 表**  **铸 件** | 图 号 |  | | **材 质** | ZG12Cr9Mo1VNbN |
| 名 称 |  | | 送检试样  及铸号 |  |
| 冶炼炉次号 |  | | 热处理炉次号 |  |
| **其**  **余**  **铸**  **件** | 图 号 | | 名 称 | **铸 号** | 备 注 |
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| 毛坯终检：朱龙 | | | 检查员：张斌 | | 操作者：李文胜 |

尺 寸 划 线 记 录 报 告

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| 订货单位 | |  | | | | 零件名称 | |  | | |
| 公差标准 | | GB/T6414-1999 CT13级 | | | | 零件图号 | |  | | |
| 数量 | | 1件 | | | | 材质 | | ZG12Cr9Mo1VNbN | | |
| 验收标准 | | NB2069 | | | | 铸号 | |  | | |
| 测 量 值： | | | | | | | | | | |
| 序号 | 图区位置 | | | 图 纸 尺 寸 | | | 实 测 尺 寸 | | 结论 | |
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| 联检 |  | | 审 核 | |  | | 检 查 员 | | 王 志 | 委托加工单位 |
| 日期 |  | | 日 期 | | 2016.10.26 | | 日 期 | | 2016.10.26 |  |

铸 件 缺 陷 记 录

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| 名称： | | | | 图号： | | | |
| 材质：ZG12Cr9Mo1VNbN | | | | 铸号： | | | |
| 缺 陷 记 录 表 | | | | | | | |
| 缺陷  序号 | 缺陷  类型 | 长（㎜） | 宽（㎜） | | 深（㎜） | 探伤方法 | 焊后结果 |
| 1 |  |  |  | |  | MT | 合格 |
| 2 |  |  |  | |  | MT | 合格 |
| 3 |  |  |  | |  | MT | 合格 |
| 4 |  |  |  | |  | MT | 合格 |
| 5 |  |  |  | |  | MT | 合格 |
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| 注A：缩松 B；气孔 C：砂眼 D；裂纹 E：割伤 F：缺肉 | | | | | | | |

检查员：张斌

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| 四、其他项目检查结果  合 格 | | | | | | | | | |
| 五、附带试棒：3 | | | | | | | | | |
| 试棒数量 | | | 1 | | / | | | / | |
| 六、附带其它质量证明资料： | | | | | | | | | |
| 资料名称 | 化学成分报告 1份 | | | | | | | | |
| 力学性能报告 1份 | | | | | | | | |
| 探伤报告 2 份 | | | | | | | | |
| 热处理铸件明细表1份 附热处理曲线 2 份 | | | | | | | | |
| 尺检报告 1份 缺陷焊补记录 1份 | | | | | | | | |
| 该零件经检查符合图纸，技术标准(JB/T11018-2010)技术协议，同意发货。 | | | | | | | | | |
| 七、NTC联检 | | | | | | | | | |
|  | | | | | | | | | |
| 尺寸外观检验（签字） | | |  | | 无损检测（签字） | | |  | |
| 日期 | | |  | | 日期 | | |  | |
| 备注： | | | | | | | | | |
| 质量保证工程师 | |  | | 检查工程师 | |  | 检查员 | |  |