



**KARARA MINING LIMITED**

# **Karara Mining Limited**

**Small Skid Steer Loader**

**小型滑移装载机**

JUL-2025

## KARARA MINING LIMITED

### SMALL SKID STEER LOADER 小型滑移装载机

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## SYNOPSIS

This document has been prepared for the procurement of the small skid steer loader to support production operations at the Karara Mining processing plant in Western Australia. The specification outlines the technical, operational, safety, and regulatory requirements for the equipment to ensure it meets both site-specific needs and applicable Australian standards.

本文件为采购小型滑移装载机而编制，用于支持西澳大利亚卡拉拉矿业选矿厂的生产运营。技术规范明确了该设备的技术、运行、安全及合规要求，以确保其满足现场特定需求并符合适用的澳大利亚标准。

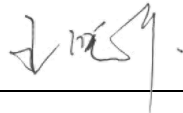
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#### SMALL SKID STEER LOADER – TECHNICAL SPECIFICATION

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| REV | DESCRIPTION          | ORIG                              | MANAGER<br>APPROVAL                                                                 | THIRD PARTY<br>APPROVAL | COMMERCIAL<br>DEPARTMENT<br>APPROVA | DATE    |
|-----|----------------------|-----------------------------------|-------------------------------------------------------------------------------------|-------------------------|-------------------------------------|---------|
| A   | Issued for<br>Review | JINDONG YAN<br><i>Jindong Yan</i> |  |                         |                                     | Jul- 25 |

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## 1 SCOPE OF APPLICATION

### 适用范围

This technical specification outlines the requirements for the procurement of the small skid steer loader to be used at the Karara Mining processing plant in Western Australia. The equipment is intended to support operational tasks in confined and restricted-access areas commonly found across the site, including gravel surfaces and muddy ground conditions.

- The scope of this specification includes, but is not limited to, the following:
- General design and performance criteria
- Compliance with Australian standards and Western Australian mining regulations
- Environmental adaptability and safety requirements
- Transport, installation, commissioning, and acceptance procedures
- Documentation, certification, and labelling expectations
- Reference to Karara's internal engineering standards and applicable industry codes

This specification serves as the technical basis for vendor selection, tender evaluation, and final equipment acceptance, ensuring the skid steer loader is fully suitable for deployment within Karara's operating environment.

本技术规范概述了采购小型滑移装载机的要求，该设备将用于西澳大利亚卡拉拉矿业选矿厂。该设备旨在支持在厂区内常见的狭小空间和受限区域内开展的各类作业任务，包括碎石地面和泥泞地面等工况环境。

- 本规范的适用范围包括但不限于以下内容：
- 一般设计与性能标准
- 对澳大利亚标准及西澳矿业法规的符合性要求
- 环境适应性与安全性要求
- 运输、安装、调试与验收流程
- 文件、认证及标签要求
- 参考卡拉拉内部工程标准及相关行业规范

本技术规范将作为供应商遴选、投标评估及设备最终验收的技术依据，确保所采购的滑移装载机完全适用于卡拉拉的实际运行环境。

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## 2 DESCRIPTION OF THE SKID STEER LOADER

### 滑移装载机描述

The small skid steer loader specified in this document is intended for use by the Processing Department at Karara Mining to carry out tasks in narrow, confined, or otherwise restricted spaces within the plant area. These operational zones are typically characterized by gravel roads, uneven surfaces, and muddy ground conditions, requiring a compact and maneuverable machine.

- The loader must be capable of performing general utility tasks such as:
- Material cleanup and transfer
- Light-duty lifting or loading operations
- Support of maintenance and housekeeping activities in hard-to-access areas

The equipment must be designed with robust mobility, operator protection, environmental resilience, and compliance with mine safety regulations in mind. Its dimensions and operational characteristics must ensure safe and effective performance within the spatial and environmental constraints of the Karara processing site.

本文件所指定的小型滑移装载机将由卡拉拉矿业选矿部使用，主要用于厂区内狭窄、封闭或其他受限空间内的各类作业。这些作业区域通常具有碎石道路、不平整地面及泥泞工况等特点，需配备一台结构紧凑、机动性强的设备。

- 装载机应能完成以下通用任务：
- 材料清理与转运
- 轻型举升或装载作业
- 在难以接近区域内支持设备检修与现场保洁工作

设备设计需具备良好的机动性、操作者保护能力、环境适应性，并符合矿山安全法规要求。其整体尺寸和作业性能必须确保在卡拉拉选矿厂的空间及环境条件下，能够安全、有效地运行。

## 3 BASIC REQUIREMENTS

### 基本要求

#### 3.1 Performance Parameters 性能参数

- Must comply with the Product Emissions Standards Act 2017 (Cth) and the Non-Road Diesel Engine Emissions Standards, requiring certification to US EPA Tier 4 Final, which is a mandatory requirement in Western Australia.  
必须符合《2017 年产品排放标准法》（联邦）和非道路柴油机排放标准，需获得美国 EPA Tier 4 Final 认证（西澳强制标准）。
- Engine Type: Diesel engine, meeting Australian non-road machinery emission standards (US EPA Tier 4 Final).  
发动机类型：柴油发动机，满足澳大利亚非道路机械排放标准（US EPA Tier 4 Final）。
- Operating Weight: Between 850 and 1,600 kg, to allow for ease of transport and on-site deployment.  
操作重量：850 至 1,600 公斤，便于运输和现场部署。
- Dimensions: Width 900 to 1,500 mm × Height no greater than 2,200 mm, suitable for operation in confined spaces.  
尺寸：宽度 900 至 1,500 毫米 × 高度 ≤2,200 毫米，适合在狭窄空间内作业。
- Fuel Tank Capacity: 50 to 60 Liters, enabling extended periods of continuous operation.  
油箱容量：50 至 60 升，支持长时间连续作业。
- Cabin Configuration: In accordance with AS 2985:2009, the cabin must maintain positive pressure and be equipped with a HEPA filtration system to protect operators from airborne contaminants and ensure a clean breathing environment.  
驾驶室配置：根据 AS 2985:2009 标准，驾驶室必须保持正压并配备 HEPA 过滤系统，此要求旨在保护操作人员免受空气中污染物的影响，保持洁净的呼吸环境。
- Fire Suppression: The unit must be fitted with an automatic fire suppression system that complies with AS 5062:2022, covering fire protection requirements for mobile and transportable equipment.  
灭火系统：自动灭火系统必须符合 AS 5062:2022（移动和可运输设备的防火保护）标准。

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### 3.2 Environmental Adaptability Requirements 环境适应性要求

- **Protection Rating:** Critical electrical components (e.g., ECU, controllers, sensors, junction boxes) and all wiring harness connectors shall be rated to IP67 protection level. All wiring harnesses shall be coated with flame-retardant insulation to ensure safe and reliable operation in harsh working environments characterized by dust, moisture, oil contamination, and high vibration.  
防护等级：车辆电气系统的核心部件（如 ECU、控制器、传感器、接线盒）和所有线束连接器应达到 IP67 防护等级。所有线束须采用阻燃绝缘材料，以确保在多尘、潮湿、油污及高振动等严苛工况下的安全可靠运行。
- **Corrosion Resistance:** Key components must be treated against corrosion in accordance with AS 4312:2008 to withstand exposure to dust, humidity, and salt spray typical of mining environments.  
耐腐蚀性：关键部件按 AS 4312:2008 标准进行防腐处理，适应矿区潮湿、多尘和盐雾环境。
- **Temperature Range:** The equipment must reliably operate in ambient temperatures ranging from  $-20^{\circ}\text{C}$  to  $+55^{\circ}\text{C}$ .  
工作温度范围： $-20^{\circ}\text{C}$  至  $+55^{\circ}\text{C}$ ，确保在极端温度条件下运行。

### 3.3 Standards Compliance 标准合规性

- **Structural Safety Standards**  
ISO 14397-1: Specifies calculation of rated operating capacity and tipping load for loaders.  
ISO 14397-1：规定了装载机的额定操作能力计算和倾覆载荷测试方法。
- **ISO 3471 & ISO 3449:** Define performance and testing methods for ROPS (Roll-Overprotective Structures) and FOPS (Falling Object Protective Structures).  
ISO 3471 & ISO 3449：规定翻滚保护结构（ROPS）和防落物保护结构（FOPS）的性能要求与测试方法。
- **Engine and Emission Standards**  
Emission Standard: Diesel engines must comply with US EPA Tier 4 Final regulations.  
排放标准：柴油发动机必须符合 US EPA Tier 4 Final 标准。

### 3.4 Lifting Standards & Compliance Requirements 吊装标准与合规要求

- The machine must have dedicated lifting points on top to allow safe handling during transport and deployment at mining sites.  
设备顶部配备专用吊装点，便于在矿区安全吊装。



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- AS 4991-2004 (Lifting Devices): Specifies the design, manufacture, testing, and use of lifting devices.  
AS 4991-2004 《吊装装置》：规定吊装装置的设计、制造、测试和使用要求。
- AS 1418.8-2008: Details the requirements for lifting points on loaders.  
AS 1418.8-2008：装载机起吊点要求。

### 3.5 Certification Requirements 认证要求

- Application via ROVER system: Submit an application through the ROVER system for Concessional RAV Entry Approval, including all technical documents, an NTC emission certificate, and an asbestos compliance declaration.  
ROVER 系统申请：通过 ROVER 系统申请 Concessional RAV Entry Approval, 需提交技术文件、NTC 排放证书及石棉合规声明。
- Usage Restriction: The equipment must be restricted to use within Australian mining sites and is not permitted on public roads.  
使用范围限制：设备仅限澳洲矿区使用，禁止进入公共道路。

### 3.6 Warranty Period 质保期

- The machine must be covered by a full warranty of 12 months or 2,000 operating hours, whichever comes first.  
提供 12 个月或 2,000 小时的整机质保，以先到者为准。

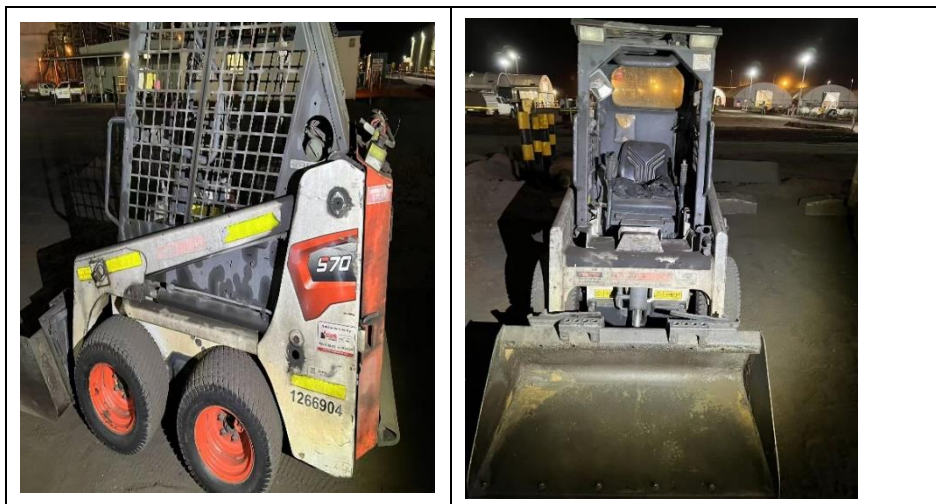
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### 3.7 Reference Brand 参考品牌: Bobcat S70



Reference picture 参考图片:



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### 3.8 Others 其他

#### 3.8.1 Bucket & Attachments 铲斗及附件

- ISO 7546:2010 (Earth-moving machinery – Volumetric ratings for loader and front-loading excavator buckets).  
ISO 7546:2010（工程机械——装载机铲斗——容积标定）。
- AS 4772:2008 (Ground engaging tools – Requirements for design, testing, and installation of wear parts used in WA mining).  
AS 4772:2008（矿用耐磨件——西澳矿区设计、测试及安装要求）。
- ISO 17091:2014 (Attachment mounting interfaces – Standardised dimensions and connection points).  
ISO 17091:2014（附件安装接口）

#### 3.8.2 Boom Support Device (Locking Mechanism) 臂架支撑装置（锁定机构）

- ISO 10262:2020 (Operator protection – Laboratory testing of falling-object protective structures).  
ISO 10262:2020（操作人员保护——防坠物保护结构实验室测试）。
- AS 1418.8-2008 (Cranes, hoists, and winches – Loader lifting point requirements).  
AS 1418.8-2008（起重机与提升设备——装载机吊点要求）。
- WA Compliance: Must be fitted with a dual-redundant mechanical safety lock to prevent accidental release, as required under the Work Health and Safety (Mines) Regulations 2022.

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西澳法规要求：必须配备双冗余机械安全锁（符合 2022 年矿山工作健康与安全条例）。

#### 3.8.3 Reverse Alarm 倒车警报

- AS 1319:1994 (Acoustic signals for mobile machinery).  
AS 1319:1994（移动机械声响信号）
- The reverse alarm must emit a pulsed signal of 105–110 dB(A) at a distance of 1 meter, clearly distinguishable from background noise, in compliance with AS/NZS 1269.3:2005.  
1 米距离处 105–110 dB(A)脉冲报警，声频与环境噪音显著区分（符合 AS/NZS 1269.3:2005）。
- Distinctive dual-tone pulse pattern is required, such as 0.5 seconds on / 0.5 seconds off.  
特征性间歇双音调（如 0.5 秒开/0.5 秒关）。

#### 3.8.4 Rotating Warning Light 旋转警示灯

- AS/NZS 1906.4:2010 (Retroreflective devices for heavy vehicles).  
AS/NZS 1906.4:2010（重型车辆逆反射装置）
- Must provide 360-degree visibility with intensity of at least 1.0 candela/lux/m<sup>2</sup>.  
360 度可见，亮度≥1.0 坎德拉/勒克斯/平方米。
- Amber in colour, meeting Class RB requirements.  
琥珀色（RB 级）。
- Surface use: Must meet IP67 rating with additional anti-dust coating.  
地面使用：IP67 防护等级+防尘涂层

#### 3.8.5 "Etc." Items (Critical Additions for WA Mines)

“其他”项目（西澳矿山关键补充项）

- Fire Extinguisher 便携式灭火器  
AS 1851:2021 (Portable fire extinguishers) – ABE class dry powder type, minimum 5kg capacity.  
AS 1851:2021（便携式灭火器）——至少 5 公斤 ABE 类干粉型。
- Seatbelts 安全带  
AS 2593:2021 (Seatbelt systems for earth-moving machinery).

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AS 2593:2021（工程机械安全带）。

- Lighting 照明

ISO 12508:2017, colour temperature 5,000K  $\pm 10\%$ .

ISO 12508:2017（色温 5,000K $\pm 10\%$ ）。

WA Mandatory: LED work lights must be installed at both front and rear, with an initial luminous output of  $\geq 3,000$  lumens, and rated to IP68K for high-pressure cleaning environments.

西澳强制要求：前后 LED 工作灯（初始光通量 $\geq 3,000$  流明，IP68K 防护等级）。

## 4 TRANSPORTATION, INSTALLATION, COMMISSIONING, AND ACCEPTANCE

### "运输、安装、调试与验收

#### 4.1 Transportation 运输

##### 4.1.1 Ocean Freight & Customs Clearance 海运与清关

- The supplier shall arrange sea transportation to Western Australia Port and provide real-time access to a logistics tracking system.
- Suppliers must complete Australian biosecurity inspections, including AQIS BMSB treatment, and submit customs duty exemption applications under Section 123 of the Mining Act 1978 (Mining Equipment Exemption).
- 供应商应安排海运至西澳港口并提供物流追踪系统的实时访问权限。
- 必须完成澳大利亚生物安全检验（包括 AQIS BMSB 处理），并根据《1978 年采矿法》第 123 条提交采矿设备关税豁免申请。

##### 4.1.2 Inland Transport 内陆运输

- Main Roads WA Oversize Transport Permit must be obtained, including full dimensional and weight details.
- Transport route must avoid Aboriginal heritage areas per the Aboriginal Heritage Act 1972, with submission of route plans.
- 须取得 Main Roads WA 颁发的超限运输许可（包括设备尺寸与重量说明）。
- 运输路线应避开土著文化保护区，并根据《1972 年土著文化遗产法》提交路线图纸。

#### 4.2 Installation 安装

- The supplier shall supervise unloading and mechanical positioning of the equipment at the designated mine site installation area.
- Lifting operations must follow AS 1418.8-2008 for loader lifting points and AS 4991-2004 for lifting devices.
- Electrical connections must comply with AS/NZS 3000:2018 and be inspected by Western Power prior to energisation.

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- 供应商需负责监督设备在矿区指定安装区域的卸载与就位。
- 吊装作业需符合《AS 1418.8-2008 装载机吊点要求》及《AS 4991-2004 吊装装置》标准。
- 电气连接须符合《AS/NZS 3000:2018》规范，并由 Western Power 检验通过后方可通电。

### 4.3 Commissioning 调试

- The equipment shall undergo initial commissioning including hydraulic system validation, engine parameter calibration, and safety interlock checks.
- Real-time emission interface shall be connected to the mine monitoring system for verification.
- Mechanical guarding for all rotating parts must be in place as per *Work Health and Safety (Mines) Regulations 2022*, Clause 47.
- 设备需完成初始调试，包括液压系统验证、发动机参数校准及安全联锁测试。
- 实时排放数据接口应接入矿区监控系统并完成验证。
- 所有旋转部件必须安装机械防护罩，符合《2022 年矿山健康与安全条例》第 47 条。

### 4.4 Acceptance 验收

In addition to complying with applicable Australian standards and certifications, the skid steer loader must also meet the regulatory requirements of the state government where the mine is located. These include, but are not limited to: the *Product Emissions Standards Act 2017*, the *Product Emissions Standards (Customs) Charges Act 2017*, and the *Product Emissions Standards (Excise) Charges Act 2017*.

该滑移装载机除需满足澳大利亚相关标准及认证外，还必须符合矿区所在地州政府的法规要求，包括但不限于：《2017 年产品排放标准法》、《2017 年产品排放标准（海关）收费法》及《2017 年产品排放标准（消费税）收费法》等。



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|                                               |                                                                                                                                                                                                                      |                                                                                         |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| <p>Factory Acceptance Test (FAT)<br/>工厂验收</p> | <ul style="list-style-type: none"> <li>• Tipping Load Test (ISO 14397-1)</li> <li>• Hydraulic Peak Pressure Test <math>\geq 110\%</math> of design pressure</li> </ul>                                               | <p>FAT report signed by third-party laboratory (English)<br/>第三方实验室签署的英文报告</p>          |
| <p>Site Acceptance Test (SAT)<br/>现场验收</p>    | <ul style="list-style-type: none"> <li>• 72-hour continuous operation test (<math>\leq 1</math> failure)</li> <li>• CAT Mine System integration check</li> </ul>                                                     | <p>SAT log + compatibility certificate<br/>试运行记录+系统兼容性证明</p>                            |
| <p>Regulatory Certification<br/>合规认证</p>      | <ul style="list-style-type: none"> <li>• ROPS/FOPS compliance</li> <li>• Noise level <math>\leq 82</math> dB(A)</li> <li>• Audit Tier 4 Final emissions data against Product Emissions Standards Act 2017</li> </ul> | <p>Certificates issued by WorkSafe WA-authorised body<br/>由 WorkSafe WA 授权机构出具的合规证书</p> |

## 4.5 Notes 说明

### 4.5.1 Third-Party Verification Framework 第三方验证框架

#### Verification Authority 验证机构资质

- Must hold NATA accreditation (ISO/IEC 17025) and WorkSafe WA authorization for mining equipment certification.  
需持有 NATA 认证（ISO/IEC 17025）及 WorkSafe WA 矿山设备授权。
- Scope includes Design review, FAT/SAT witnessing, compliance auditing.  
服务范围涵盖：设计审查、工厂/现场验收见证、合规审计。



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**4.5.2 Contractual Obligations 合同义务**

Third Party as Karara's Technical Agent 第三方作为卡拉拉技术代理

- Review all design documents for AS 1418.10:2025 compliance.  
审核全部设计文件是否符合 AS 1418.10:2025 标准。
- Hold veto power on SAT approval if safety standards are breached.  
若违反安全标准，第三方对 SAT（现场验收测试）拥有一票否决权。

Deliverables 交付物

- Signed FAT/SAT certificates with NATA logo.  
提供经签署并带有 NATA 标识的 FAT/SAT（工厂/现场验收测试）证书。
- ROVER registration package submitted to DMIRS within 30 days.  
在交付后 30 日内向西澳 DMIRS（矿业工业监管部门）提交 ROVER 注册资料包。

Cost & Liability 费用与责任

- Verification costs borne by supplier (per WA Mines Regulation 12A).  
验证费用由供应商承担，依据西澳矿山条例第 12A 条。
- Third party liable for negligent certification (Civil Liability Act 2002).  
第三方对认证过失承担法律责任，依据《2002 年民事责任法》。

## 5 DOCUMENTATION AND LABELLING 文档与标识

All product nameplates and labels shall be in English. All relevant technical documentation shall be provided in English. All products shall be accompanied by English labels that comply with regulatory requirements.

所有产品的铭牌、标识均应用英文标示。所有相关的技术文档均应提供英文版本。所有产品均应附带符合法规要求的英文标识。

### 5.1 Nameplates & Labels 铭牌与标签

All nameplates and safety labels shall be written in 100% English, in compliance with Chapter 2.6 of the *Competition and Consumer Act 2010*.

语言：

所有铭牌及安全标签必须为 100%英文，符合《2010 年竞争与消费者法》第 2.6 章要求。

Mandatory Contents:

- Equipment serial number and date of manufacture
- ROPS/FOPS certification number (per ISO 3471 & ISO 3449)
- NTC emission compliance code (Tier 4 Final)
- Electrical safety rating (IP67 + AS/NZS 3000:2018)
- WA registration mark (RAV Entry Approval No.)

强制内容：

- 设备序列号、出厂日期
- ROPS/FOPS 认证编号（符合 ISO 3471 与 ISO 3449）
- NTC 排放认证码（Tier 4 Final）
- 电气安全等级（IP67 + AS/NZS 3000:2018）
- 西澳注册标识（RAV Entry Approval No.）

**KARARA MINING LIMITED****SMALL SKID STEER LOADER 小型滑移装载机****Durability:**

All plates must be laser-etched on stainless steel, resistant to salt spray corrosion per AS 4312:2008.

**耐久性:**

铭牌必须使用不锈钢激光蚀刻工艺，具备抗盐雾腐蚀能力，符合 AS 4312:2008 标准。

**5.2 Technical Documentation 技术文档**

Documentation shall be provided in English as the primary language. A Chinese version may be provided as a reference only and shall have no legal effect.

**语言:**

技术文档以英文为主，中文仅作为参考辅助，不具备法律效力。

**Submission Timeline:**

- Draft version: Due at least 45 days before Factory Acceptance Test (FAT)
- Final version: Due 7 days before delivery

**交付时效:**

- 初稿：需在工厂验收（FAT）前 45 天提交
- 终稿：需在交付前 7 天提交

**5.3 Required Document List 核心文件清单**

| <b>Document Type 文档类型</b>              | <b>Additional Compliance Requirement 新增合规要求</b>                                                | <b>Reference 依据</b>                    |
|----------------------------------------|------------------------------------------------------------------------------------------------|----------------------------------------|
| <b>Declaration of Conformity 符合性声明</b> | Must be signed by a licensed Australian engineer, covering AS/NZS 3000, ISO 3471, AS 5062:2022 | <i>Work Health and Safety Act 2020</i> |
| <b>Factory Acceptance</b>              | Must include video of tipping load test (ISO                                                   | <i>DEMIRS MDG</i>                      |

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|                                  |                                                                                                                   |                                     |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| <b>Procedure</b> 工厂验收程序          | 14397-1) and hydraulic peak pressure curve                                                                        | 41                                  |
| <b>Inspection Report</b> 检验报告    | Corrosion coating to be tested via $\geq 1,000$ -hour salt spray test per AS 4312:2008                            | <i>WA Mine Corrosion Guidelines</i> |
| <b>Noise Test Report</b> 噪音测试报告  | Must be issued by WorkSafe WA accredited lab and include full-condition sound profiles (unloaded/loaded/steering) | <i>AS/NZS 1269.1:2005</i>           |
| <b>IOM Manual</b> 使用维护手册         | Dedicated section on maintenance in high-dust WA environments (HEPA filter change cycle $\leq 250$ hours)         | <i>AS 2985:2009</i>                 |
| <b>Maintenance Strategy</b> 维护策略 | Include critical component life prediction based on AS 4457.1-2018 mining equipment lifecycle model               | <i>AS 4457.1</i>                    |

## 5.4 Specific Supplementary Clauses 补充条款

### 5.4.1 Electrical Safety Certification 电气安全认证

- Requirement:  
All electrical schematics must bear a Western Power compliance stamp as required by the *WA Electricity Regulations 1991*.
- 要求:  
所有电路图须加盖 Western Power 合规印章, 符合《1991 年西澳电气法规》(*WA Electricity Regulations 1991*) 要求。

### 5.4.2 Documentation Upload Obligations 文件注册义务

Requirement:

The supplier shall assist in uploading the following documents into the DEMIRS ROVER system as part of equipment registration:

- Noise test report (PDF format and original .CSV data file)
- Fire suppression system certificate compliant with *AS 5062:2022*

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要求:

供应商需协助将以下文件上传至 DEMIRS ROVER 系统作为设备注册材料之一:

- 噪音测试报告 (PDF 格式及原始.CSV 数据文件)
- 灭火系统合规证书 (符合 *AS 5062:2022* 标准)

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## 6 OTHERS 其他

The supplier must possess ISO 9001 Quality Management System certification.

供应商需具备 ISO9001 质量管理体系认证。

This specification ensures that the design, manufacturing, installation, and commissioning of the skid steer loader fully comply with the safety and environmental regulations of the Australian mining area. For any other unspecified requirements related to design, installation, certification, etc., the supplier must clarify with the owner's senior project engineer or technical personnel of equivalent or higher qualification.

本规范确保滑移装载机的设计、制造、使用全面符合澳大利亚矿区的安全和环保法规。其它未尽的设计、安装、认证等的要求供应商须与业主方项目高级工程师或以上资格的技术人员澄清。

The equipment needs to comply with Australian standards and Australian mining area usage standards, including but not limited to:

该设备需符合澳大利亚相关标准及澳大利亚矿区使用标准，包括但不限于：

| <b>Document No.<br/>文件编号</b> | <b>Document Title<br/>文件名称</b>                                                                               |
|------------------------------|--------------------------------------------------------------------------------------------------------------|
| <b>AS 4024:2019</b>          | focuses on the safety of machinery                                                                           |
| <b>AS 2294</b>               | Earth-moving machinery-Protective structures                                                                 |
| <b>ISO 3471</b>              | Earth-moving machinery – Roll-overprotective structures – Laboratory tests and performance requirement       |
| <b>ISO 3449</b>              | Earth-moving machinery – Falling-object protective structures – Laboratory tests and performance requirement |
| <b>AS 3000:2018</b>          | focuses on ensuring safe work practices for electrical and refrigeration/air-conditioning workers            |
| <b>AS 3820</b>               | standard for suppliers of electrical equipment, including compressors                                        |

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|                       |                                                                                                                                                                    |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>AS 3760</b>        | focuses on the safety of portable electrical equipment. This is relevant for any electrical tools or equipment used in conjunction with a skid loader.             |
| <b>ISO 20474-3</b>    | provides safety requirements for earthmoving machinery                                                                                                             |
| <b>AS 1418.8-2008</b> | focuses on cranes, hoists, and winches, and includes specific provisions for wheel loaders used to lift suspended loads, relevant to some skid loader applications |
| <b>AS 4772:2008</b>   | Earth-moving machinery – Quick hitches for excavators and backhoe loaders                                                                                          |
| <b>AS 5062-2022</b>   | Fire prevention and protection for mobile and transportable equipment                                                                                              |
|                       | <i>Mines Safety and Inspection Act 1994 (WA)</i>                                                                                                                   |
|                       | <i>Work Health and Safety (Mines) Regulations 2022 (WA)</i>                                                                                                        |

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## 7 KML STANDARD 卡拉拉设备标准列表

| Document No.<br>文件编号 | Document Title<br>文件名称                                                        |
|----------------------|-------------------------------------------------------------------------------|
| CORP-GE-SPC-1001_1   | EQUIPMENT LABELLING SPECIFICATION                                             |
| CORP-GE-SPC-1002_0   | SPECIFICATION FOR PACKING, MARKING AND DOCUMENTATION REQUIREMENTS             |
| CORP-GE-SPC-1004_1   | SPECIFICATION FOR SURFACE TREATMENT OF STRUCTURAL STEELWORK AND PIPEWORK      |
| CORP-GE-SPC-1005_0   | TECHNICAL SPECIFICATION FOR SHOP DETAILING OF STRUCTURAL AND MECHANICAL ITEMS |
| CORP-EL-SPC-1008_0   | SPECIFICATION FOR ELECTRIC MOTORS                                             |
| CORP-IN-SPC-1001_0   | SPECIFICATION FOR GENERAL INSTRUMENTS                                         |
| CORP-IN-SPC-1002_0   | SPECIFICATION FOR CONTROL AND INSTRUMENTATION FOR PACKAGES                    |
| CORP-IN-SPC-1007_0   | SPECIFICATION FOR INSTRUMENTATION INSTALLATION                                |
| CORP-IN-SPC-1016_0   | SPECIFICATION FOR CONTROL SYSTEM HARDWARE                                     |
| CORP-IN-SPC-1018_0   | SPECIFICATION FOR CONTROL SYSTEM SOFTWARE                                     |