

# Karara Mining Limited

卡拉拉矿业有限公司

**Diesel Light Tower Technical Agreement (170 – 240 K Lumens)**

柴油灯塔技术协议 (170-240K 流明)

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# 1 Introduction and Scope 引言与适用范围

This Technical Specification defines the minimum technical, safety, documentation, testing and certification requirements for diesel-powered LED light towers suitable for continuous and reliable operation at the Karara Mine Site in Western Australia.

本技术协议定义了适用于西澳卡拉拉矿区连续、可靠运行的柴油驱动 LED 灯塔的最低技术、安全、文件、测试和认证要求。

The purpose of this document is to:

本文件的目的是：

- Ensure that all diesel light towers procured through tenders comply with relevant Australian legislation and Western Australian mining safety standards  
确保通过招标采购的所有柴油灯塔均符合澳大利亚相关法律和西澳矿业安全标准
- Establish a set of binding technical benchmark documents for the tender process, tender evaluation, contract award and acceptance testing  
建立一套具有约束力的技术基准文件，用于招标过程、评标、合同授予及验收测试
- Define the design life, performance standards, durability, safety functions and compliance requirements in harsh mining environmental conditions  
明确在恶劣矿山环境条件下的设计寿命、性能标准、耐久性、安全功能及合规性要求

All equipment and components must be:

所有设备及组件须满足以下条件：

- New, unused, and free of defects in material and workmanship.  
全新、未使用，且在材料及工艺上无缺陷
- Designed for outdoor operation, with resistance to dust, UV, vibration, rain, and temperature extremes.  
适用于户外作业，具备防尘、防紫外线、抗振动、防雨及耐高低温性能
- Compliant with all relevant Australian and International Standards, and Western Australian Mine Spec and designed for fit-for-purpose operation.  
符合所有相关的澳大利亚及国际标准，确保其适用性

The scope of supply shall include one (1) complete diesel-powered LED light tower system, factory-assembled and tested, ready-to-use, and fully compliant with the specifications outlined in this document. All components and installation shall meet all

applicable Australian, ISO, and IEC standards, as well as the applicable Western Australian mining regulations and certifications requirement, to be able to use Western Australia mine site without further testing and certifying.

供货范围应包括— (1) 套完整的柴油驱动 LED 灯塔系统，应为工厂组装、测试合格、可直接投入使用，并完全符合本文件所列技术规范。所有组件及其安装须满足所有适用的澳大利亚标准、ISO 标准和 IEC 标准，并符合适用的西澳大利亚的矿业要求和认证要求，以确保在西澳矿区可直接投入使用，无需额外测试或认证。

Any deviation from this specification must be clearly identified in the Supplier's submission, accompanied by valid technical justifications to obtain written approval from the Company.

如供应商设计与本规范有任何偏离，必须在其技术提交文件中明确列出，并提供合理的技术说明，并需获得本公司书面批准。

## 2 Declaration of Conformity 符合性声明

A qualified and insured organisation or company based in Australia (not necessarily a third party) shall be responsible for reviewing, assessing, and certifying the design, manufacture, and installation of the proposed product, as well as the relevant documents supplied. This organisation or company shall be nominated and mutually agreed upon by both the Company and the Supplier prior to the issuance of the contract.

一家在澳大利亚注册的具备资质并投保的机构或公司（不必为第三方）应负责对拟供产品的设计、制造与安装、以及相关文件进行审核、评估和认证。该机构或公司应由双方（公司与供应商）在合同签署前共同指定并达成一致。

The final Declaration of Conformity, issued by this organisation or company for the supplied goods, shall serve as the primary certification confirming compliance with all applicable standards and regulations. The Company shall only accept the goods after this certification has been provided. Prior to the issuance of the final Declaration of Conformity, the Supplier shall, at their own cost, carry out all necessary modifications or rectifications to ensure full compliance with the system.

该机构或公司出具的最终符合性声明（Declaration of Conformity），应作为证明所供货物符合所有适用标准和法规的主要合规性文件。在收到该合格声明之前，公司有权不予接收供货。在符合性声明出具前，供应商应自费对系统进行所有必要的修改或整改，以确保其完全符合要求。

### 3 Applicable Standards and Regulations 适用标准与规范

The complete diesel light tower shall comply with all applicable Australian Standards and Regulations. Where relevant Australian Standards are not available, equivalent IEC or ISO standards shall be referenced. The equipment shall also meet required certifications and all applicable Western Australian mining regulations to ensure it can be used on Western Australian mining sites without the need for further testing or certification.

整套柴油灯塔须符合所有适用的澳大利亚标准。若无相关澳大利亚标准，可参照等效的 IEC 或 ISO 国际标准。设备还须满足所需的认证要求及所有适用的西澳矿业法规，以确保可直接在西澳矿区使用，无需额外的测试或认证。

The following standards apply to this project and shall be adhered to as a minimum, but not limited to:

以下标准适用于本项目，并应至少遵守，但不限于：

- AS 1319 – Safety Signs for the Occupational Environment – 职业环境安全标志
- AS 1692 – Steel Tanks for Flammable and Combustible Liquids – 钢制储油罐
- AS/NZS 1841 – Portable Fire Extinguishers – 便携式灭火器规范
- AS 1940 – The Storage and Handling of Flammable and Combustible Liquids – 易燃与可燃液体的储存与处理
- AS/NZS 3000 – Electrical installations (Wiring Rules) 电气安装（布线规则）
- AS 4024 – Safety of machinery (General principles and risk assessment) 机械安全（通用原则与风险评估）
- AS 4991 – Lifting Devices – 吊装设备规范
- AS/NZS 60529 – Degrees of protection provided by enclosures (IP Code) 外壳防护等级（IP 代码）
- Relevant Environmental Protection Authority (EPA) and Dangerous Goods Safety legislation applicable in Western Australia. 适用于西澳的环境保护法规与危险品安全要求
- Vehicle Standards Bulletin 1 (VSB 1) – Building Small Trailers (ATM up to 4.5 tons) 《车辆标准公告第 1 号（VSB 1）——小型拖车制造指南（总质量不超过 4.5 吨）》

## 4 Environmental and Service Conditions 环境与运行条件

### 4.1 Environmental Conditions 环境条件

The Diesel Light Tower supplied under this specification shall be designed and manufactured to operate reliably and continuously under the following environmental conditions typical of remote Western Australian mining operations:

根据本协议提供的灯塔应具备在西澳偏远矿区典型环境条件下可靠、连续运行的能力。环境设计参数如下：

- Ambient Temperature: -15 to 50 degrees Celsius  
环境温度：-15 至 50 摄氏度
- Relative humidity: Maximum 95%  
相对湿度：最高 95%
- Altitude: less than 1000m  
海拔高度：低于 1000 米
- Maximum Solar Radiation Intensity: 1.1kW/m<sup>2</sup>  
最大太阳辐射强度：1.1 kW/m<sup>2</sup>
- Maximum Wind Loading: 28m/s  
最大风荷载：28m/s
- Pollution: Atmospheric dust with fine abrasive particles, slurry spillage and saline, high-pressure washdown water.  
环境污染：大气粉尘中含有细微磨蚀颗粒，伴有泥浆溅落和高压冲洗水，以及盐雾环境
- Location: outdoors, direct sunlight and rain, extremely dusty  
安装地点：户外，直接暴露于阳光、降雨与重尘环境
- Ground: unsealed ground  
地面状况：未铺装地面

### 4.2 Design Life & Durability 设计寿命与耐久性

The Diesel Light Tower shall conform to below design life and durability requirements:

柴油灯塔必须符合以下最低设计寿命及耐久性要求：

- **Minimum Design Life:** 10 years of continuous or standby operation  
**最小设计寿命：**连续运行或备用状态下，10 年

- **Construction Quality:** Highest-grade materials and assembly suited for rugged site conditions

**结构质量：**采用最优质材料与工艺制造，适应恶劣工地环境

- **Corrosion Protection 防腐蚀保护:**
  - Powder-coated or stainless-steel enclosures  
外壳应为粉末喷涂或不锈钢材质
  - Rust-proof base frame, painted or galvanized  
底座框架必须防锈，采用喷漆或热镀锌处理

- **Ingress Protection (IP) 防护等级 (IP) :**

The proposed product shall comply with AS/IEC 60529 in relation to ingress protection requirements. The complete unit set shall be suitable for outdoor usage in high-dust and wet environments, providing effective protection against wind-driven rain, airborne dust, and routine washdown exposure. All components shall have IP ratings appropriate to their location within the generator enclosure and service conditions.

拟供产品组应符合 AS/IEC 60529 标准关于防护等级的要求。整机应适用于高粉尘、潮湿环境下的户外使用，并能有效防止风雨、粉尘及日常冲洗造成的内部侵入。其它所有部件的防护等级应与其在发电机机罩内的安装位置及实际使用工况相适配。

### 4.3 Structural Strength 结构强度

All Diesel Light Towers shall be structurally capable of:

所有柴油灯塔的结构设计必须确保：

- Withstanding the forces associated with transportation, including loading and unloading via tilt-tray truck or forklift.  
运输过程中承载能力：能承受装卸（如通过平板车或叉车）时产生的机械载荷
- Supporting their full operational weight without deformation or failure.  
操作时结构完整性：在满载运行下，不发生变形或结构破坏
- Lifting via integrated certified lifting points in accordance with AS 4991 and AS 4024, without risk to personnel or damage to the equipment.  
吊装能力：集成吊点应经过认证，确保吊运安全，不造成设备损坏或人员伤害
- Withstanding shock, vibration, and minor impact loads encountered in transit and during repositioning on-site.  
抗震与抗冲击：能够承受现场搬运过程中的震动与轻度冲击载荷

## 4.4 Noise 噪声

The diesel light tower shall not exceed 75 dB sound pressure level measured at 7 meters in free field conditions at full load. Sound insulation must be included in the canopy or enclosure. The system must comply with applicable occupational noise exposure limits under Safe Work Australia. Noise test reports shall be provided in the final technical data package for Goods acceptance.

柴油灯塔在满负荷运行、自由场地条件下，距设备 7 米处的噪声声压级不得超过 75 dB。机组外壳或机罩应配备有效的隔音材料。整套系统必须符合澳大利亚职业安全法规（Safe Work Australia）职业噪声暴露限值要求。噪声测试报告须包含在最终技术资料包中，作为设备验收的必要文件。

## 5 Functional and Technical Requirement 功能与技术要求

Each diesel light tower set should be an integrated, independent, complete power system component with weatherproof and soundproofing, suitable for long-term outdoor deployment in remote mining areas in Western Australia. Each diesel-powered light tower unit shall meet or exceed the following functional performance requirements.

每套柴油灯塔组应为一体化、独立、具备防风雨与隔音处理的完整动力系统组件，适用于西澳偏远矿区长期户外部署。每个柴油动力灯塔装置应满足或超过以下功能性能要求。

### 5.1 Lighting System 照明系统

- Total luminous output: 240,000 lumens across all fixtures  
总光通量：所有灯具总和达到 240,000 流明
- Lighting modules: Minimum 4 LED floodlights  
光源模块：至少 4 个高亮 LED 泛光灯
- Colour temperature: 5000K–6000K (daylight grade for optimal visibility)  
色温范围：5000K–6000K（昼光等级，提高作业可视性）
- Modular, individually aimable fixtures with anti-glare hoods and beam control lenses  
模块化设计，每个灯具可独立调节方向，配备防眩光罩与透镜控光系统
- LED lifespan  $\geq$  50,000 hours with integrated thermal management  
LED 寿命  $\geq$  50,000 小时，具备散热系统

## 5.2 Light Mast 升降灯塔

- Type: Hydraulic telescopic mast with auto-braking system  
类型：液压伸缩式带自动刹车系统
- Maximum height:  $\geq 7$  meters when fully extended  
最大高度： $\geq 7$  米完全伸展
- Full 340° mast rotation with mechanical locking system  
旋转功能：340°旋转，配机械锁定装置
- Wind-rated to 28 m/s when fully deployed with outriggers engaged  
稳定性：完全展开时，配合支腿可抗 28m/s 风速
- Lockable stowed position with vibration isolation clamps  
锁定收纳，配减震夹具
- The mast shall automatically lower and lock when the trailer is moved or not fully stabilised, ensuring safe transport.  
灯塔升降系统须在拖车移动或未稳定部署时自动降下并锁定，以确保运输过程中的安全。

## 5.3 Power System 动力系统

- The entire electrical system shall be classified as an Extra Low Voltage (ELV) system, where all voltages are less than 120 V DC, in accordance with AS/NZS 3000.  
整套电气系统应被归类为特低电压（ELV）系统，所有电压应低于 120 伏直流，符合 AS/NZS 3000 标准。
- Diesel engine: 2-cylinder or 3-cylinder, water-cooled, automatic throttle control, shall comply with a minimum of US EPA Tier 3 or EU Stage IIIA emission standards. Alternatively, engines from other international brands may be accepted if they have test reports issued by an ISO 9001-certified organisation, demonstrate equivalent or superior performance, and have a service centre located in Western Australia.  
柴油发动机：2 或 3 缸，水冷型，自动油门控制，应至少符合美国 EPA Tier 3 或欧盟 Stage IIIA 非道路移动机械排放标准，或者可接受由具备 ISO 9001 认证的机构出具测试报告、性能等同或优于原规范，并在西澳设有维修服务点的其他国际品牌发动机。
- Electrical generator: Permanent magnet ELV DC generator  
发电机：永磁式超低压直流发电机
- Charging system: Integrated DC controller with overload protection, low voltage disconnects, and efficiency control  
电控系统：一体化 DC 控制器，具备过载保护、低压断开、效率控制等功能

## 5.4 Control System 控制系统

- Key-switch ignition, digital hour meter, fuel level indicator, battery voltage meter, and fault indicators  
钥匙启动开关、数字工作计时器、燃油液位指示、电池电压显示、故障指示
- Auto start/stop timer functionality with dusk-to-dawn photocell override  
内置定时开关，具光感器实现黄昏至黎明自动启停
- Visual indicator for each lamp circuit  
每路灯具配置独立状态指示

## 5.5 Fuel System 燃油系统

- Bunded steel fuel tank with 110% containment capacity of usable volume  
带围堰的钢制油箱，其围堰有效容积不低于油箱可用容积的 110%
- Capacity: Minimum supporting 24-hour runtime at full output  
容量：最低支持满负荷输出运行 24 小时
- Lockable filler cap, level indicator, venting, and overflow return  
可上锁注油口、液位计、通风孔及溢油回流口

## 5.6 Chassis and Mobility 底盘与移动性

- The light tower shall be mounted on a robust, road-towable trailer chassis engineered for off-road and mining site conditions. The trailer shall be constructed from heavy-duty steel and treated with hot-dip galvanizing or powder coating for corrosion resistance. It shall be fitted with a 50 mm ball hitch and equipped with heavy-duty off-road-rated tyres suitable for uneven and rugged terrain. The trailer and its components shall be designed and constructed in accordance with Vehicle Standards Bulletin VSB 1 (Building Small Trailers) under the applicable Australian Design Rules (ADRs).  
灯塔应安装在坚固、可上路拖行的拖车底盘上，该底盘须专为崎岖地形和矿区工况设计。拖车结构应采用重型钢材制造，并经热浸镀锌或粉末涂层处理，以提供优异的防腐蚀性能。拖车应配备 50 mm 球头牵引装置，并安装适用于不平整和恶劣地形的重载越野轮胎。拖车及其所有部件须符合澳大利亚澳大利亚车辆设计规则（ADR）下的车辆标准公告 VSB 1 — 小型拖车制造指南所规定的设计和制造要求。
- Certified lifting lugs are in place, compliant with Australian Standard, clearly rated and labelled.  
设有吊装点，符合澳洲标准，具有额定载重标识与标签

- 4 x heavy-duty extendable outriggers with locking pins, suitable for uneven ground, features high-visibility reflective strips (visible when extended or retracted)  
配有 4 个重型可伸缩支腿，具有定位销，适用于不平地形，有高可见度反光条（延伸或收缩状态下都清晰可见）
- Tie-down points are in place, clearly labelled.  
应设置系固点，并有清晰标识。

## 6 Safety Provisions 安全设计要求

The Diesel Light Tower shall be designed and fitted with safety devices in accordance with AS 4024 and ISO 13850 including:

柴油灯塔应配备以下符合 AS 4024 及 ISO 13850 标准的安全功能与防护：

- Mechanical guarding for all moving, rotating, or high-temperature components  
对所有转动、移动或高温部件设置符合标准的机械防护罩装置
- Emergency stop device mounted on the equipment outer casing, clearly marked, manually latched, and non-resettable without manual intervention  
在设备外壳上设置急停按钮，应清晰标识、手动保持、不可自动复位
- Mast movement limit switches or interlocks to prevent mast operation during transport  
灯塔在运输状态下必须设置限位开关或互锁机构以防升降杆升起
- Load-rated mechanical safety pins or locks for mast and stabiliser deployment  
所有升降机构与支腿装置须设置机械锁销，具额定载荷标识
- Exhaust components and other hot surfaces shall be shielded with thermal guards to prevent accidental contact and meet personnel safety requirements.  
排气部件和其他热表面应采用隔热装置进行防护，以防止意外接触，并满足人员安全要求。
- Fire extinguisher: 4.5 kg dry chemical powder type, Australian Standard certified, externally mounted.  
外置灭火器：干粉灭火器，容量 4.5 公斤，符合澳洲标准及认证，并外部固定安装

## 7 Labeling and Identification 标签与标识

All diesel light tower units shall be permanently labelled in English using UV-resistant, non-fading, and weatherproof materials. Labels shall comply with AS 1319 for safety signage.

所有柴油照明塔装置应使用耐紫外线、不褪色、耐候的材料，永久性地以英文标识。标签应符合 AS 1319 职业环境安全标志标准的要求。

Labels shall include, but not limited to:

标签应包括:

- Equipment Nameplate  
设备铭牌
- Voltage and current ratings.  
电压与电流等级
- Engine and alternator make, model, and serial numbers.  
发动机与发电机型号与序列号
- Diesel fuel designation and maximum volume.  
柴油燃料种类与最大容量
- Net wet weight (kg) and lifting point indications.  
湿重（公斤）及吊点位置标注
- Warnings: "DANGER – LIVE VOLTAGE", "EMERGENCY STOP", "HOT SURFACE"安全警示语：“DANGER – LIVE VOLTAGE”，“EMERGENCY STOP”，“HOT SURFACE”等
- IP rating  
IP 等级
- High-visibility reflective strips  
高辨识反光带
- Operating instruction and Servicing Information  
操作指南及维护信息

## 8 Warranty and Support 质保与支持

### 8.1 Performance Acceptance Testing 性能验收测试

Within sixty days of Good Acceptance, the Company shall conduct a Performance Acceptance Test to confirm full compliance with contractual specifications.

在接收货物后六十天内，公司应进行性能验收测试，以确认完全符合合同规范。

If the Company is unable to conduct the test within the specified period due to internal reasons, successful commissioning shall be deemed to satisfy acceptance.

如果公司因内部原因无法在规定期限内进行测试，则调试成功应视为验收合格。

In the event of failure in performance test, the Supplier shall make all necessary corrections at their cost and repeat the test until compliance is achieved.

如测试不合格，供应商应自费进行所有必要的纠正，并重新进行测试，直至符合要求。

## 8.2 Warranty 质保

The Diesel Light Tower shall be covered by a minimum warranty period of six months commencing from the date of the site acceptance. The actual warranty terms and period shall be as specified in the Contract.

柴油灯塔的保修期至少为自现场验收之日起六个月。实际质保期限及相关条款以合同中约定的条款和条件为准。

During the warranty period, the Supplier shall:

在质保期内，供应商须满足以下服务要求：

- Respond within twelve hours of any service request  
在收到服务请求后 24 小时内响应
- Provide remote technical support as required  
提供必要的远程技术支持
- Replace or repair defective parts with original parts  
使用原厂配件进行故障更换或维修

The Supplier shall nominate a Western Australia-based service provider to perform all servicing and repairs for the supplied diesel light tower within the warranty period.

供应商应指定一家持牌且位于西澳大利亚的服务机构，在保修期内负责对所提供的柴油灯塔进行所有的维护和维修工作。

If a part fails due to manufacturing or material defects, the Supplier shall replace it free of charge.

如因制造缺陷或材料问题导致部件故障，供应商应免费更换。

Following the warranty period, the Supplier shall offer continued technical and spare parts support.

质保期结束后，供应商仍须持续提供技术与备件上的支持。

### 8.3 Commissioning and Training 调试与培训

The Supplier shall provide technical assistance for installation, commissioning, and verification testing. The Supplier shall conduct at least two (2) full days of operation and maintenance training for the Company's personnel. Training shall include:

公司有权要求供应商提供安装调试技术支持与性能验证测试协助。并须为公司人员提供不少于两（2）天的操作与维护培训，内容包括：

- Theoretical instruction 理论教学
- Hands-on operation 实操演练
- Fault diagnostics and maintenance procedures 故障诊断与维护流程

## 9 Supplier Document Submission Requirement 供应商文件提交要求

### 9.1 Technical Qualification Submission 技术资质文件递交

To ensure that all bidders possess the necessary technical capability, quality assurance systems, and regulatory compliance required for the manufacture, supply, and servicing of the proposed product for use on Western Australian mine sites, each bidder shall submit a package of Qualification Review Materials. The following sections set out the preferred documents and information to be provided.

为确保投标人具备为西澳矿山现场制造、供应及服务拟供产品所需的技术能力、质量保证体系及法规合规能力，每一投标公司应提交一份资质审查文件包。以下各节列出了建议的文件和信息清单。

#### 9.1.1 Compliance Qualification 合规资质

##### 1. Nominated Australian Compliance Entity

指定的澳大利亚合规实体

- Details of the appointed Australian company (may be internal or external to the bidder) responsible for issuing the Declaration of Conformity to all applicable Australian Standards, WA Mines Safety and Inspection Regulations, and other statutory requirements.

提供负责出具符合所有适用澳大利亚标准、西澳矿业安全及监察条例及其他法规要求的符合性声明的澳大利亚公司的详细信息（该实体可以是投标人自身或外部合作方）。

- Confirmation of the involvement by the nominated entity (If external to the bidder)

如为投标人外部实体，需提供该指定实体参与本项目的确认文件。

2. List of Compliance

合规性清单

A list of the standards, regulations, and codes to which the proposed product complies.

提供一份清单，列明拟供产品所符合的所有标准、法规及规范。

3. ISO Certification

ISO 认证

Valid ISO 9001 Quality Management System or equivalent certificate, issued by a recognised accreditation body.

提供有效的 ISO 9001 质量管理体系或同等体系认证证书，该证书须由认可的认证机构颁发。

### 9.1.2 Technical Capability and Product Documentation 技术能力及产品文件

1. Product and Service Conformance Statement

产品与服务符合性声明

Confirmation that the proposed diesel lighting tower meets each technical requirement, performance specification, and any service and support outlined in this document, and state any variations.

确认拟投标的柴油照明灯塔满足本文件中列明的各项技术要求、性能指标及服务与支持要，并指明任何偏差变动。

2. Technical Specification Package

技术规格文件包

- Complete technical datasheet of the offered product, covering all mechanical, electrical, and safety aspects.

提供拟供产品的完整技术数据表，涵盖所有机械、电气及安全相关参数

- Fuel tank specifications, mast specifications, lighting output parameters, and noise levels.

包括油箱规格、灯塔桅杆规格、照明输出参数及噪声水平等

3. Draft Bill of Material (BOM)

物料清单 (BOM) 初稿

- A list of proposed product major components bill of materials with make, model, quantity

提供拟投产品的主要组件物料清单，应包括：品牌、型号及数量。

4. Product IOM Manual (Installation, Operation & Maintenance)

完整产品说明书手册（安装、运行与维护手册）

- IOM manual for the lighting tower assembly.  
提供灯塔整机的说明书手册
- Engine and generator manuals  
发动机及发电机的说明书手册
- Controller manual  
控制器说明书手册

4. Full Product Visual Display

产品全方位展示资料

Photographs or drawings showing all sides of the product:

提供展示产品各个方向的照片或图纸：

- Front, rear, left, right  
前、后、左、右视图
- Fully deployed and retracted  
设备完全部署及收回状态
- Control panel and electrical design  
控制面板及电气设计
- Trailer design  
拖车结构设计

### 9.1.3 Quality and Service Capability 质量及服务能力

- Summary of the Supplier's Quality Assurance and Quality Control Procedure relevant to design, manufacture, inspection and testing of proposed product, and factory acceptance inspection and test report template.  
提供与拟供产品设计、制造、检验及测试相关的供应商质量保证与质量控制程序概要及出厂检查和测试报告模板
- Details of the appointed service, repair, and warranty support agent and the lead time to provide any of these services.  
指定服务、维修及质保支持代理的详细信息及上述各项服务的响应/到场前置时间。
- Outline of typical spare parts availability, lead time to Western Australia, and support arrangements.  
提供典型备品备件供应能力说明，包括运至西澳的交货周期及服务保障方案

### 9.1.4 Supporting Information 支持信息

- Any additional product design information and qualification information the Supplier is willing to disclose  
任何供应商愿意披露的、与产品设计及质量保证相关的补充资料

## 9.2 Design Submission and Approval 设计递交和批准

The Supplier shall submit a full design package for approval by the Company after signing the contract. The package shall include, but not be limited to:

- Equipment complete datasheet
- Final Bill of Materials (BOM) of all major components
- General arrangement drawings and dimensions
- Electrical schematics and wiring diagrams
- Draft Declaration of Conformity issued by the Nominated Australian Compliance Entity

供应商应在合同签署后提交完整的设计方案供公司审批。该方案应包括但不限于：

- 设备完整的数据表
- 最终主要组件材料清单（BOM）
- 总体布置图及尺寸
- 电气原理及接线图
- 由指定的澳大利亚合规实体给出的符合性声明初稿

No manufacturing shall commence prior to the Company's written approval of the design documentation. The Supplier shall revise and resubmit any non-compliant design at its own cost until full compliance is achieved.

未经公司书面批准设计文件，不得开始任何生产。供应商应自行承担费用，修改并重新提交任何不合规的设计，直至完全合规。

Failure to obtain design approval prior to fabrication shall constitute a breach of contract and may result in termination without compensation.

制造前未能获得设计批准将构成违约，并可能导致终止合同且不予赔偿。

## 9.3 Document Submission Before Delivery 交付前文件递交

The Supplier shall provide a complete documentation package for review and approval prior to delivery. This package shall demonstrate full compliance with all specified technical, functional, and regulatory requirements applicable to the diesel light tower and its components. The documentation shall include:

供应商应在交付前提供一套完整的文件资料供采购方审核与批准。该资料应充分证明拟供柴油灯塔及其各组成部分满足所有规定的技术、功能及法规要求。文件资料至少应包括：


- Declaration of Conformity – issued and signed by the nominated Australian entity  
由指定澳大利亚合规实体签发的符合性声明
- FAT Inspection and Test Report  
出厂检查和测试报告
- As-built General arrangement and electrical schematic drawings  
与实物一致的总体布置图和电气原理图
- Final warranty certification and contact for service in WA  
最终保修单及西澳地区服务点联络信息
- Site Acceptance Checklist  
现场验收检查清单
- Daily Pre-start Checklist  
日常启动前检查清单

The Supplier shall remain responsible for promptly submitting any missing or supplementary documents necessary for acceptance, installation, repair, commissioning, or maintenance, even if such documents are not expressly listed in the original specification.

供应商应承担持续资料提交义务：即便某类文档未在本协议中明确列出，若其对设备验收、安装、调试、运行或维修维护构成必要支持，供应商亦应在合理时间内主动提供，且不得额外收费。

Review & Approval

审批

REQUESTED BY 申请人	Name 姓名	Signature 签名	Date 日期
Engineer 工程师	Tianpei Zhao		01/12/2025
Superintendent HST 安全主管			
Requesting Party Manager 需求方经理			
Equipment Department Manager 设备部门经理			
Deputy Manager 分管副总经理			