FRANKI FOUNDATIONS MARTELLO PILING HIGH MEAD DEVELOPMENTS

LEAD MECHANICAL DESIGN ENGINEER ROLES AND RESPONSIBILITIES

Reporting to: Franki Group Resources Manager

Role Purpose

The Lead Mechanical Design Engineer is responsible for leading the design, development, modification and technical assurance of mechanical systems, plant, equipment and specialist engineering solutions across Franki Group UK.

The role ensures that mechanical designs are safe, compliant, practical, reliable and suitable for operational use. It also ensures that design decisions consider performance, buildability, maintenance, whole-life cost, programme and operational risk.

Reporting to the Franki Group Resources Manager, the role will work closely with Operations, Plant, Workshop, Health and Safety, Quality, Procurement, suppliers and site teams.
The Lead Mechanical Design Engineer is accountable for technical quality, design governance, engineering standards and the effective delivery of mechanical design work from concept through manufacture, installation, commissioning and operational handover.

KEY RESPONSIBILITIES

Mechanical Design Leadership

- Lead the mechanical design and development of plant, equipment, attachments, temporary works interfaces and specialist engineering solutions.
- Translate operational requirements into clear technical specifications and design outputs.
- Develop concept, detailed and production-ready designs.
- Ensure designs are practical, manufacturable, maintainable and suitable for site conditions.
- Review and approve drawings, calculations, specifications and technical documentation.
- Set and maintain consistent mechanical design standards across the Group.
- Provide technical leadership to engineers, technicians, workshop teams and external designers.

Design Development and Engineering Delivery

- Produce and review mechanical calculations, drawings, layouts, assemblies and component specifications.
- Select suitable materials, components, systems and manufacturing methods.
- Ensure designs account for loading, fatigue, vibration, wear, corrosion, access, guarding and maintenance.
- Develop solutions for plant upgrades, modifications, repairs and new equipment.
- Coordinate design activity from initial concept through manufacture and commissioning.
- Manage design changes and ensure revisions are clearly controlled.
- Ensure final designs reflect operational feedback and lessons learned.
- Deliver engineering work within agreed cost and programme requirements.

Safety and Technical Compliance

- Ensure mechanical designs comply with relevant legislation, standards, manufacturer requirements and Company procedures.
- Apply the requirements of PUWER, LOLER, machinery safety and other applicable regulations.
- Carry out and document design risk assessments.
- Ensure hazards are eliminated or reduced through design wherever reasonably practicable.
- Confirm that guarding, access, emergency controls and safety features are appropriate.
- Support CE or UKCA conformity processes where applicable.
- Prevent the manufacture or use of designs that have not been properly checked and approved.
- Escalate significant technical or safety concerns to the Franki Group Resources Manager.

Plant Modification and Engineering Change

- Review proposed modifications to plant and equipment before implementation.
- Assess the effect of modifications on safety, performance, certification, warranty and compliance.
- Ensure engineering changes are approved, documented and traceable.
- Produce revised drawings, calculations, instructions and technical files.
- Prevent unauthorised modification of plant and equipment.
- Support the safe introduction of modified equipment into service.
- Monitor the performance of modified equipment and implement corrective action where required.

Manufacturing, Fabrication and Workshop Support

- Provide technical support to workshops, fabricators and manufacturers.
- Prepare clear manufacturing drawings, bills of materials and technical specifications.
- Review fabrication methods, tolerances, weld details and assembly requirements.
- Resolve technical queries during manufacture and repair.
- Inspect completed work and confirm compliance with approved design.
- Support quality checks, testing and factory acceptance activities.
- Ensure non-conforming work is identified and corrected before use.
- Work with workshop teams to improve reliability, maintainability and manufacturing efficiency.

Testing, Commissioning and Handover

- Develop test, inspection and commissioning requirements for new or modified equipment.
- Witness functional, load and performance testing where required.
- Verify that equipment performs safely and in accordance with the design.
- Ensure defects and outstanding actions are resolved before operational release.
- Prepare technical manuals, maintenance requirements and user instructions.
- Support operator and maintenance team familiarisation.
- Provide technical handover information to Plant, Operations and site teams.
- Retain complete records of testing, approvals and final configuration.

Reliability and Continuous Improvement

- Review breakdown, defect and maintenance data to identify recurring engineering issues.
- Carry out root-cause analysis on significant or repeated failures.
- Develop practical engineering solutions to improve reliability and reduce downtime.
- Support preventative maintenance and life-extension strategies.
- Identify opportunities to standardise equipment and components.
- Use operational feedback to improve future design decisions.
- Measure the effectiveness of engineering improvements.
- Support whole-life asset performance and cost reduction.

Procurement and Supplier Management

- Prepare technical specifications for components, systems and externally designed equipment.
- Support supplier selection and technical evaluation.
- Review supplier drawings, calculations and technical submissions.
- Challenge proposals that do not meet safety, performance or quality requirements.
- Liaise with manufacturers and specialist consultants to resolve technical issues.
- Support technical negotiations, warranty discussions and defect resolution.
- Monitor supplier technical performance.
- Ensure purchased equipment and components meet the approved specification.

Design Governance and Document Control

- Maintain accurate and complete design records.
- Ensure drawings, calculations, risk assessments and specifications are checked and approved.
- Apply effective revision and change-control processes.
- Maintain technical files and asset-specific engineering records.
- Ensure only current and approved information is issued for manufacture or use.
- Support internal and external audits.
- Protect confidential and commercially sensitive technical information.
- Ensure design records remain accessible and auditable throughout the asset life cycle.

Operational and Site Support

- Provide technical advice to Plant, Operations and site teams.
- Investigate mechanical faults, damage and performance concerns.
- Attend sites, yards and workshops where technical input is required.
- Support urgent engineering decisions while maintaining appropriate safety and approval controls.
- Assess whether equipment remains safe and suitable for continued use.
- Recommend repair, modification, restriction or withdrawal from service where necessary.
- Support incident investigations involving plant or mechanical systems.
- Communicate technical findings clearly to operational stakeholders.

People Leadership and Development

- Lead and support mechanical engineers, technicians and other technical team members.
- Set clear objectives, priorities and performance standards.
- Review technical work and provide constructive feedback.

- Develop team capability in design, analysis, compliance and engineering judgement.
- Support recruitment, succession planning and professional development.
- Complete PDRs and development plans within required timescales.
- Share technical knowledge across Plant, Workshop and Operations teams.
- Promote accountability, collaboration and safe engineering practice.

Cost, Programme and Resource Control

- Plan and manage the delivery of mechanical design activities.
- Monitor engineering workload, priorities and deadlines.
- Prepare cost estimates for design, manufacture, modification and testing.
- Support capital expenditure and equipment investment proposals.
- Consider whole-life cost when evaluating design options.
- Control external engineering and specialist consultancy spend.
- Escalate programme, cost or resource pressures promptly.
- Ensure engineering resources are focused on business-critical priorities.

BEHAVIOURAL COMPETENCIES

Leadership and Accountability

- Takes ownership of technical decisions and engineering outcomes.
- Sets clear standards and holds others accountable for technical quality.
- Makes timely and evidence-based decisions.
- Escalates risk early and does not allow unresolved concerns to drift.
- Acts with integrity and prioritises safety over convenience or cost.

Strategic and Commercial Thinking

- Understands how engineering decisions affect reliability, downtime, cost and operational performance.
- Balances technical quality with practical and commercial requirements.
- Considers whole-life asset value rather than initial cost alone.
- Uses reliable data to support design and investment decisions.
- Identifies opportunities to improve standardisation and efficiency.

Delivering Results

- Delivers accurate, compliant and practical designs within agreed timescales.
- Maintains control of multiple engineering priorities.
- Resolves technical issues promptly and effectively.
- Drives testing, approvals and handover to completion.
- Produces measurable improvements in reliability and performance.

Building Relationships and Collaboration

- Works effectively with Plant, Operations, Workshop, Safety, Quality and Procurement teams.
- Communicates complex engineering matters clearly.
- Builds professional relationships with manufacturers, suppliers and consultants.
- Challenges unsafe or technically weak proposals constructively.
- Seeks operational input and avoids designing in isolation.

Developing People

- Sets clear technical expectations.
- Coaches engineers and technicians.
- Shares knowledge and good engineering practice.
- Supports professional development and succession.

- Recognises strong performance and addresses underperformance fairly.

Continuous Improvement
- Reviews failures and applies lessons learned.
- Improves design standards, templates and technical processes.
- Uses data to improve reliability and maintainability.
- Challenges outdated or inefficient engineering practices.
- Measures whether improvements have delivered sustainable benefits.

PERFORMANCE AND BONUS MEASURES

Technical Quality and Design Delivery – 30%
Measured against:
- accuracy and completeness of designs;
- compliance with engineering standards;
- quality of calculations and technical documentation;
- delivery against programme;
- reduction in design errors and rework; and
- quality of technical handover.

Safety and Compliance – 25%
Measured against:
- quality of design risk assessments;
- compliance with PUWER, LOLER and machinery safety requirements;
- completion of approvals and technical files;
- reduction in safety-critical design issues;
- closure of audit actions; and
- effective control of engineering change.

Reliability and Operational Performance – 20%
Measured against:
- reduction in plant breakdowns and recurring failures;
- improvement in equipment availability;
- reduction in avoidable downtime;
- effectiveness of engineering modifications;
- quality of root-cause analysis; and
- operational feedback.

Cost, Programme and Supplier Performance – 10%
Measured against:
- engineering delivery within agreed cost and timescale;
- whole-life cost improvements;
- control of external engineering spend;
- supplier technical performance;
- reduction in avoidable repair or modification cost; and
- delivery of agreed engineering improvements.

Leadership Behaviours – 15%
Measured against:
- accountability;
- technical judgement;
- decision-making;

- collaboration;
- communication;
- development of others;
- integrity; and
- continuous improvement.

A serious failure in safety, design governance, technical integrity, compliance or engineering approval may reduce or remove the behavioural element and may affect the overall bonus outcome.

BONUS GOVERNANCE

Any bonus should remain non-contractual and discretionary. Assessment should take account of individual performance, agreed objectives, behavioural contribution, business performance, profitability, affordability, cash flow and the Group's overall financial position.

ESSENTIAL EXPERIENCE AND CAPABILITY

The successful candidate should have:

- substantial mechanical design engineering experience within construction plant, heavy engineering, manufacturing, lifting, piling or a related sector;
- experience designing or modifying plant, machinery, attachments or mechanical systems;
- strong knowledge of engineering calculations, materials, fabrication and mechanical design;
- experience with CAD and engineering design software;
- sound understanding of PUWER, LOLER and machinery safety requirements;
- experience managing design change, testing and technical approval;
- experience supporting workshops, suppliers and operational teams;
- strong problem-solving and root-cause analysis capability;
- experience leading or reviewing the work of other engineers; and
- strong written and verbal technical communication skills.

DESIRABLE

- Degree, HNC, HND or equivalent qualification in mechanical engineering.
- Chartered Engineer status or progress toward professional registration.
- Experience in piling, foundations, drilling, lifting or heavy construction equipment.
- Knowledge of hydraulic systems, structural steelwork, welded fabrication and rotating equipment.
- Experience with finite element analysis or specialist engineering software.
- Experience supporting UKCA or CE conformity assessment.
- Knowledge of asset-management and maintenance systems.

ROLE REVIEW AND ACKNOWLEDGEMENT

This document sets out the principal accountabilities and expected standards of the role. It is not intended to be an exhaustive list of every task or objective. Responsibilities, priorities and performance measures may be reasonably adjusted to reflect business requirements, development and project allocation, provided any material change to the fundamental nature of the role or contractual terms is managed appropriately.

Employee name	
Employee signature / date	
Manager signature / date	