



## Principal Engineer, Production Engineering – Job Description

(Job Code and Level: EPRE004.2)

### **Definition:**

Production Engineering defines and works out how the product will be assembled on the production line including the design packaging enabling the right quantity of components/product are delivered to support the speed of the production line. Review efficiencies and eliminate waste within the manufacturing process. Deliver high quality products/components to clearly defined standards.

### **Overall Purpose of the Role:**

Responsible for developing, delivering and improving manufacturing assets, ensuring that machinery downtime is kept to a minimum and that all work is planned in advance to avoid production disruption. Other responsibilities will include driving continuous improvement, ensuring that the implementation of systems comply with agreed goals, ensuring modifications to systems are controlled appropriately. Responsible for the operation of a section, supporting the Manager in achieving business targets. Provide leadership and line management to the team, coordinating and overseeing their workloads, providing support to ensure that the team delivers, monitoring any issues, and ensuring timescales, KPIs and deadlines are met in order to meet the requirements of the customer. Develop the team by focusing on individual performance and support requirements to achieve high standards. Act independently at the organisational level. Outcomes reviewed by organisational head. Decisions and results have a prolonged impact on the current and future direction of the function/ projects and their success. Performance affects the function's image.

### **Key Responsibilities:**

#### **General and Task Management**

- Design new systems and processes for the introduction of new products or for the improvement of existing ones
- Ensure all product and system requirements are taken into account from the initial product conception to the finished result

- Ensure product and process quality to meet specifications required
- Manage budgets and time deadlines
- Tender for equipment to ensure the best quality for best price
- Oversee installation of machinery and equipment
- Maintain statistical and financial records
- Improve manufacturing efficiency by analysing and planning work flow, space requirements and equipment layout
- Remove waste from the processes
- Organise plant start-up and shut-down schedules to ensure minimum loss of production time
- Plan and organise maintenance
- Respond to breakdowns
- Analyse down time and identify trends
- Support and lead continuous improvement, problem solving and process improvement activities
- Carry out FMEAs (Failure Mode Effects Analysis), process documentation and implement improvements
- Poka Yoke (error proofing) where possible to prevent errors
- Investigate production and process issues
- Provide technical support and training
- Keep up with current and developing manufacturing and engineering trends
- Write reports and present progress at project meetings and to clients
- Quality control of work by appropriate reviews
- Apply specific technical skills as required to support the customer or colleagues
- Proactively seek out opportunities for new or repeat business
- Conduct benchmarking studies to determine best practices/designs and future trends
- Lead on complex major projects requiring forefront-of-the-field, innovative, original solutions, provide technical expertise to the team
- Plan longer range for the project, tracking and completing projects on time within budget. Results have a critical impact on objectives and goals
- Manage activities of a complex nature where there are limited precedents available
- Lead the development of innovative solutions to unique problems
- Undertake continuous training and development
- Perform root cause analysis and resolve problems
- Identify business improvement opportunities within the organisation
- Identify and deploy the technical skill sets, resource levels and systems to deliver projects, including the engagement of external resources as required
- Monitor the completion of tasks and ensure good performance and record on appropriate systems
- Develop, implement and manage key performance indicators (KPIs) for each area of responsibility
- Ensure KPIs are met by working to the overall plan, including management of, and reporting

- Conduct risk assessments of processes and tasks in the department

### **People Management**

- Manage contractors on site to ensure they meet legal and company requirements
- Provide leadership and guidance to a group of engineers and technicians
- Provide technical expertise to the team
- Consistently promote high standards through personal example and roll out through the team so that each member of the team understands the standards and behaviours expected of them
- Review, implement and update company records e.g. training matrices, performance reviews, risk assessments
- Manage and lead the team, ensuring adequate staffing levels, managing holiday allowances, recruitment, training, development, appraisal, attendance, disciplinary issues and daily supervision to maximise efficient productivity
- Motivate and coach the team to operational success
- Train both team and broader organisation members and provide guidance to several groups of the organisation.

### **Relationship Management**

- Be an effective team member, working with supervisor and colleagues to ensure smooth workflow with maximum output
- Ensure an effective interface with other departmental staff is maintained
- Liaise and communicate with other departments, customers, suppliers and other service providers
- Feedback to the Management team to share ideas and improve operation, recommending, supporting and implementing continuous improvement activities and process and procedure improvements to optimise results and improve quality of delivery, in line with quality standards requirements delivery in line with Company and Customer requirements

### **Self Management**

- Support, comply and ensure complicity with Health & Safety regulations, the Company Handbook, Quality and Environmental standards, and all other Company policies and procedures
- Embraces personal challenge
- Confident, rounded thinking
- Is self aware
- Is resilient, assertive, optimistic and open to change
- Engages interest and participation of others and has a collaborative approach to working with others
- Actively Committed to team development
- Proactive and anticipates challenges

### **Skills and Attributes:**

- Exercise considerable initiative/judgement in work methods and in interpreting and delegating work requirements/goals
- Work independently and is reviewed infrequently with minimal supervision
- Self-supervising within the guidance and expectations of divisional management
- Understanding of manufacturing processes, Lean, engineering, scientific and other technical information
- Ability to work in a diverse and dynamic environment
- Planning and prioritising activities
- Good communication and interpersonal skills
- Ability to present data effectively
- Problem-solving skills
- Understanding of Health and Safety practices
- Team working and leading skills
- Analytical skills
- Negotiation skills
- Ability to effectively train people inside and outside their work group
- Leadership and people management skills
- Demonstrates high levels of technical knowledge, ingenuity and creativity
- Develops and applies advanced technologies, engineering principles, theories and concepts
- Exercises independent initiative/judgement in setting and implementing goals
- Ability to negotiate complex arrangements with service providers, collaborators and vendors

### **Qualifications and Experience Levels:**

- Relevant manufacturing/engineering degree is preferred, or HNC, BTec Professional Level 4 Award or equivalent NVQ Level 4 qualifications.
- Membership of an Industry related Professional Body would be advantageous
- Ability to use CAD
- Ability to design processes and layouts
- Experience of FMEA (Failure Mode Effects Analysis), Kaizen/A3 (continuous improvement and problem solving) process improvement and Poka Yoke (error proofing) techniques
- Extensive work experience in a high volume manufacturing environment, preferably automotive
- Consistently demonstrates extremely high levels of technical knowledge, ingenuity and creativity.
- Broad knowledge about the design and operation of systems outside of speciality.
- Leadership and people management training
- Proven management experience

### **Example roles this job description may cover:**

- Industrial Engineer
- Process Engineer
- Manufacturing Engineering
- Team Leader
- Supervisor