

CS02 Plant Engineer

1. Job role

TCF sub-sector	Cross Sector
Functional area	Engineering, Maintenance and Plant Operations
Job role	CS02 Plant Engineer
Job role description	Oversees the operation, maintenance and optimisation of plant systems and infrastructure within a TCF processing / manufacturing facility to ensure safe, reliable and efficient production. In the Australian manufacturing / processing industry—where high-volume, automated and resource-intensive processes are critical—the Plant Engineer manages mechanical, electrical, steam, water and automation systems, ensuring continuous plant performance, compliance with regulatory standards and ongoing improvement in efficiency, sustainability and operational reliability.
Performance expectations	• Overseeing performance and reliability of all plant equipment and systems • Managing preventive and corrective maintenance programs • Supervising maintenance teams and external contractors • Ensuring efficient operation of mechanical, electrical and automation systems • Monitoring plant performance, downtime and efficiency metrics • Managing utilities including steam, water, energy and waste systems • Ensuring compliance with WHS, environmental and regulatory standards • Diagnosing and resolving complex system faults • Supporting capital projects, upgrades and equipment installation • Driving continuous improvement in plant performance and sustainability
Specialisation	Plant engineering, maintenance management, automation systems, utilities management, process optimisation, reliability engineering
Application in other TCF sectors	• Commercial laundry and linen services supporting plant operations and engineering systems • Textile manufacturing and finishing supporting industrial plant and production systems • Apparel production and garment finishing supporting equipment and facility operations • Technical textile and specialty services supporting advanced processing and plant systems

	• Textile restoration services supporting specialised equipment and controlled processing environments • Leather and suede processing supporting plant systems and equipment maintenance • Manufacturing and processing industries supporting plant engineering and operations management
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2. Key tasks and critical work functions

Key tasks	• Managing plant equipment performance and operational systems • Developing and implementing maintenance schedules and programs • Monitoring plant systems including washing, drying and finishing equipment • Overseeing utilities such as boilers, steam systems and water treatment • Diagnosing and resolving mechanical, electrical and automation faults • Supervising maintenance teams and coordinating contractors • Managing equipment upgrades and installation projects • Ensuring compliance with safety, environmental and operational standards
Critical work functions	• Ensuring continuous and reliable plant operation • Minimising downtime and production disruption • Maintaining safety and compliance across all plant systems • Optimising efficiency of equipment and utilities • Managing risks associated with high-pressure, electrical and chemical systems • Coordinating across engineering, maintenance and operations teams

3. Technical skills

Mechanical / Mechatronic systems	Managing and maintaining industrial equipment, mechanical and mechatronic systems
Electrical systems	Overseeing electrical systems, controls and safety systems
Automation and control systems	Managing PLC, HMI and automated production systems
Maintenance management	Planning and executing preventive and corrective maintenance programs
Utilities management	Managing steam, water, energy and waste systems
Diagnostics and troubleshooting	Identifying and resolving complex system faults
Project management	Managing equipment installation and plant improvement projects

4. Generic Skills

Leadership	Leading maintenance teams and coordinating technical activities
Problem solving	Resolving complex operational and technical issues

Communication	Communicating across technical and operational teams
Decision making	Making informed decisions on plant operations and maintenance
Time management	Managing maintenance schedules and operational priorities
Adaptability	Responding to changing operational and technical demands
Safety awareness	Promoting and enforcing safe work practices

5. Emerging skills

Emerging skills	• Adopting Industry 4.0 and smart plant technologies • Using IoT and predictive maintenance systems • Applying data analytics for plant optimisation • Integrating automation and digital control systems • Enhancing energy efficiency and sustainability systems • Supporting advanced water recycling and resource management
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6. VET Qualifications and Skill Sets

Entry-level preparation	MEM30219 Certificate III in Engineering - Mechanical Trade or equivalent
Advanced development	MEM50222 Diploma of Engineering - Technical or equivalent and or higher VET qualification or bachelor's degree in Engineering (Mechanical, Electrical or Mechatronics)

7. Job progression

Possible job progression	Maintenance Technician → Senior Technician → Plant Engineer → Engineering Manager → Operations Director
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8. Classification

Australian Qualifications Framework	AQF Level 4-6
Australian Bureau of Statistics (ABS) Skill Levels	Skill Level 2-3
Open Source Classification of Occupations for Australia (OSCA)	Plant Engineer / Maintenance Engineer / Engineering Manager



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