

CS66 - Instrumentation Technician

1. Job role

TCF sub-sector	Cross-sector
Job role	CS66 Instrumentation Technician
Job role description	Installs, calibrates, maintains and troubleshoots instrumentation systems used to monitor and control production processes in TCF environments. The role ensures accurate measurement and control of variables such as temperature, pressure, humidity, flow and chemical processes. It supports efficient, safe and compliant operation of production systems, particularly in automated and process-intensive environments such as textile manufacturing and industrial laundry operations.
Performance expectations	• Ensuring accurate operation of instrumentation systems • Calibrating and maintaining sensors and measurement devices • Diagnosing and resolving faults in instrumentation systems • Supporting process control and production stability • Maintaining compliance with safety and quality standards • Minimising downtime through effective maintenance • Supporting integration with automation and control systems • Maintaining accurate calibration records and documentation • Collaborating with engineering and production teams • Adhering to workplace safety and operational procedures
Specialisation	Process instrumentation, calibration systems, sensor technology, environmental monitoring, chemical dosing systems, industrial control integration
Application in other Textile, Clothing and Footwear (TCF) sectors	• Textile manufacturing supporting process control (temperature, pressure, chemical systems) • Apparel production supporting controlled finishing processes • Footwear production supporting adhesives and curing processes • Leather goods production supporting treatment and finishing systems • Dry cleaning and laundry supporting washing, drying and chemical dosing systems • Technical textiles supporting specialised process environments • Manufacturing industries supporting instrumentation and process control

2. Key tasks and critical work functions

Key tasks	• Installing and configuring instrumentation systems • Calibrating sensors and measurement devices • Monitoring process variables and system performance
-----------	--

	• Diagnosing and repairing faults in instrumentation systems • Maintaining calibration records and documentation • Integrating instrumentation with PLC and control systems • Conducting routine inspections and preventive maintenance • Supporting system upgrades and improvements
Critical work functions	• Ensuring accuracy and reliability of measurement systems • Maintaining stable and controlled production processes • Preventing errors in process control and output quality • Supporting safe operation of equipment and systems • Minimising production disruption through effective maintenance • Maintaining compliance with regulatory and quality standards • Ensuring integration with automation and control systems

3. Technical skills

Instrumentation systems	Installing and maintaining sensors and measurement devices
Calibration	Calibrating instruments to ensure accuracy
Process control	Monitoring and controlling production variables
Electrical and control systems	Understanding control circuits and integration
PLC integration	Connecting instrumentation with PLC systems
Fault diagnosis	Identifying and resolving instrumentation issues
Technical documentation	Maintaining calibration and system records

4. Generic Skills

Problem solving	Diagnosing and resolving technical issues
Attention to detail	Ensuring precision in measurement and calibration
Analytical thinking	Understanding system behaviour and data
Communication	Working with engineering and production teams
Time management	Managing maintenance and response tasks
Adaptability	Working with evolving technologies

5. Emerging skills

Emerging skills	• Using smart sensors and IoT-enabled instrumentation • Integrating instrumentation with digital manufacturing systems • Applying predictive maintenance techniques • Using data analytics for process optimisation • Supporting Industry 4.0 environments • Applying environmental monitoring and sustainability systems
-----------------	--

6. VET Qualifications and Skill Sets

Entry-level preparation	UEE30820 Certificate III in Electrotechnology Electrician
Advanced development	UEE40420 Certificate IV in Electrical - Instrumentation or equivalent

7. Job progression

Possible job progression	Maintenance Technician → Instrumentation Technician → Senior Technician → Engineering Supervisor → Plant Engineer
--------------------------	---

8. Classification

Australian Qualifications Framework	AQF Level 3-5
Australian Bureau of Statistics (ABS) Skill Levels	Skill Level 2-3
Open Source Classification of Occupations for Australia (OSCA)	Instrumentation Technician / Control Systems Technician



Skills Insight is a Jobs and Skills Council funded by the Australian Government Department of Employment and Workplace Relations.