

Instrument Technician – Gold Processing Plant

Position Overview

The Instrument Technician is responsible for the installation, calibration, maintenance, and troubleshooting of instrumentation and control systems used throughout the gold processing plant. This role ensures optimal plant performance by keeping measurement and control equipment accurate, reliable, and compliant with safety and operational standards.

Key Responsibilities

Instrumentation Maintenance & Calibration

- Perform routine maintenance, calibration, and verification of critical plant instruments, including:
 - Flow meters (mag, ultrasonic, coriolis)
 - Pressure and temperature transmitters
 - Level instruments (radar, ultrasonic, differential pressure)
 - Weightometers and belt scales
 - pH, ORP, and other process analytical instruments
- Maintain accuracy and functionality of PLC, DCS, and SCADA-connected devices.

Troubleshooting & Diagnostics

- Diagnose faults on field instruments and control loops promptly.
- Respond to plant breakdowns and provide corrective actions to minimize downtime.
- Use diagnostic tools (HART communicators, multimeters, loop calibrators) to identify and resolve issues.

Installation & Commissioning

- Install and commission new instruments, control panels, and associated wiring.
- Interpret P&IDs, loop drawings, wiring diagrams, and control philosophies.
- Assist in commissioning new plant expansions, upgrades, and shutdown projects.

Control Systems Support

- Support PLC/DCS operations by assisting automation engineers as needed.
- Verify signal integrity from field devices to control systems.
- Perform loop checks and functional testing for control logic.

Safety & Compliance

- Follow all site safety procedures, including LOTO, confined-space, and hazard protocols.

- Comply with gold plant metallurgical, chemical handling, and process safety requirements.
- Ensure instruments meet regulatory standards for environmental and metallurgical compliance.

Documentation & Reporting

- Maintain accurate calibration records and maintenance logs.
- Update asset registers and instrument databases.
- Provide technical reports on failures, root-cause analysis, and improvements.

Skills & Competencies

- Strong understanding of process control instrumentation.
- Ability to read and interpret technical diagrams and documentation.
- Excellent troubleshooting and problem-solving skills.
- Familiarity with PLC systems (Siemens, Allen-Bradley, Yokogawa, etc.) is an advantage.
- Experience with SCADA/DCS systems used in mineral processing.
- Ability to work independently and within a team.
- Strong safety mindset.

Qualifications & Experience

- Certificate or Diploma in Instrumentation, Electrical Engineering, or related field.
- Trade Test / Red Seal or equivalent certification preferred.
- 3–5 years' experience in mineral processing, heavy industry, or similar environment.
- Experience in gold processing (CIP/CIL, elution, crushing, milling) highly desirable.
- Competency in using calibration tools and field communication devices.