

S. Arul Amudhan

Instrumentation Engineer Professional

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PROFILE SUMMARY

- A result-oriented professional with **12.5 years** of rich experience in handling Engineer Instrumentation operations with key focus on top line profitability as well as optimal utilization of resources across Refinery, Petrochemical, Oil, Gas & Metal Industries
- Comprehensive exposure in:
 - Instrument installation & commissioning activities
 - Maintenance of SCADA Instrumentation and Control systems
 - Siemens PLC S7 1500 control system
- Inspection of Various types of cables (Pair cables, Core cables, Patch Cables, OFC and so on)
- Inspection of Instruments and control valves
- Played a key role in clearance of Mechanical Completion Check Records (MCCR) as per ITP Check list (ICAPS/CCMS)
- Pre-commissioning & Commissioning of control systems like PLC, SCADA, DCS, ESD, FGS, HIPPS
- Strong knowledge of control valves of different types from all major manufactures.
- Demonstrated abilities in handling the operations pertaining to planning and arranging of project related activities in Instrumentation and Controls environment
- Exposure of working with clients like: Farabi Saudi Arabia, Petroleum Development of Oman (PDO), Saudi Aramco & Sumitomo, MEW Kuwait, Hadeed, and Chennai Water Desalination (CWDL)

EDUCATION

B.E. in Electronics & Instrumentation from Annamalai University, City in 2007

Diploma in Computer Application from CSC, Chidambaram in 2006

CORE COMPETENCIES

Installation & commissioning
Quality Assurance & Control
Project Management
Client Relationship Management
Process Engineering
Inspection
Control systems
Instrument calibration
Instrument maintenance

CAREER TIMELINE



WORK EXPERIENCE

Since Nov'17 with Larsen & Toubro Hydrocarbon Engineering Ltd., Saudi Arabia as Instrumentation Engineer

Project : Farabi Normal Paraffin and Derivatives Complex , Yanbu, KSA and Kauther Gas Project
Client: Farabi Saudi Arabia and Petroleum Development of Oman (PDO)

Key Result Areas:

- Responsible for Paraffin derivatives process complex and tank farming complex Instrumentation control system like PLC, SCADA, DCS, TGS Various types of sensors, transmitters and control valves installation and commissioning activities
- Inspected the sub contractor /contractor's works to ensure that acceptable work standards are achieved.
- Monitoring the installation of materials and equipment to ensure conformance with drawings and specifications.
- Monitoring the activities of contractors to ensure compliance with plans specifications ,international standards such as SHELL DEP,ISA,IEEE,NEC,IEC,SAES,SABIC,NEMA VE1,NEMA VE2,NEMA ICS 6,NFPA 70 and so on
- Ensure that the Subcontractor correctly interprets drawings, specifications and schedules.
- Check equipment before release to the contractor advising the Materials Controller of any defects or where damage has occurred.
- Complete Construction Punch lists as required by the Project and ensures that these Punch Lists are cleared without delay as per CCMS/ICAPS
- Recording of all "as built" information in accordance with the requirements of the Contract.
- Responsible for FAT Inspection of Instrumentation control panels like PLC ,SCADA, DCS, Junction box, Various types of sensors, transmitters and control valves as per approved ITP, Project specification and its standards.
- Experienced in handling various calibrator (pressure, Temperature, Loop Calibrator & HART communicator).
- Tests, calibrates, checks instrumentation with relevant standards
- Calibration of Field Instrumentation and maintains records on testing
- Responsible for instrument Calibration & installation of skid mounted , Loose supplied instruments
- Responsible for quality documentation, checking & requisition for ITP& FAT procedures
- Monitoring simulation and loop checking of various instruments as per company standards / specifications
- Inspecting process equipment instrumentation such as Recycle Gas Compressors ,Vibration monitoring systems, Instrument air compressors, Fuel gas & Mist eliminator skid mounted and loose supplied instruments.
- Managing process measurement, control instrumentation & services to optimize plant operations
- Assuring that all instrumentation activities conforms to the Instrument standards wherein taking considerations of the installations and guidelines of the international standards.
- Monitoring and surveying all instrumentation works and activities at the site and making sure that all are in proper procedure and conforms to the standards
- Managing metering skid inspection & project construction activities inspection of Instruments (PT,TT,LT , Various type of FT like Ultrasonic, Electromagnetic, Mass flow meter), control valve ,ESD, ON/OFF Valve installation, Conduits and fittings (above and below ground), Cable trays/ladder racks and Cables, Junction Boxes, Control Panels, Consoles, wiring termination, impulse tubing, Instrument air manifold & Air tubing as per the project specification
- Providing necessary support of Trouble shooting of DCS & PLC during start-up.
- Experienced in engineering work and tests (FAT, I-FAT, etc) and site activities (SAT, Pre-commissioning, Commissioning & Start-up) as well as in maintenance and troubleshooting jobs
- Witnessing of Cause and effect test of Gas compressor control systems
- Worked on
 - Instruments installation of FGS systems, Various telecom & Security systems like PAGA, PIDS, ALPR, MIDS, ACS, VOIP, CCTV
 - CAT 6 cable laying , Cable Glanding & termination, Continuity check
 - Fiber optic cable laying and OTDR test
 - Various functional Checks of Flow Meters, Level Gauges, Switches and so on

PREVIOUS EXPERIENCE

Jul'16-Oct'17 with National Contracting Company, Saudi Arabia as Instrumentation Engineer

Project: Refining and Petrochemical Project (RP2)

Client: Saudi Aramco & Sumitomo

Key Result Areas:

- Responsible to Lead the E&I Commissioning team to produce technically acceptable standard of work and deliverables.
- Responsible to lead and provide engineering and site coordination for the supply, installation, and commissioning support to the project scope
- Responsible for installation & Commissioning activities of Naptha and aromatics process unit instruments and its control systems (ESD, ICSS, FGS, DCS, HIPPS)
- Worked in calibration of Electronics Instruments & sensors
- Worked with process equipment (GAS compressors ,Boilers, Instrument air compressor)trouble shooting of programmable logic controllers (PLC), which control process machinery on various units
- Experienced in implementation, construction and commissioning of LV electrical equipment and Control Systems.
- Extensive Experienced of PLC (Allen Bradley), SCADA (AB), tank inventory and network systems.
- Experienced with RSLogix/Studio 5000 Logix and SCADA Systems
- Assists the superintendent and manager in the development of contract specifications for commissioning of plant equipment by outside vendors.
- Providing daily, on-site/in-field leadership, execution coordination of a multi-discipline team of discipline supervisors
- Lead executing systems tasks and activities, and development and reporting.
- Lead the execution of commissioning procedures for assigned discipline systems.
- Interact with Engineering and Operations team for input and draw from past experience and knowledge when executing procedures.
- Advanced knowledge in Systems Completion and Commissioning, Completions Management Systems
- Acceptance of Mechanical Completion of Sub system packages from Construction.
- Punch List management and responsibility of offered Sub systems / Systems (QMIS)
- Working with project HSE leadership to develop appropriate Job Safety Analysis (JSA's) for the Site commissioning team and Site commissioning activities.
- Read, interpret and work from vendor documentation, project drawings, schematic diagrams and equipment manuals.
- Witnessing of FAT/SAT
- Maintain records and prepare regular and special reports on electrical and electronic systems
- Undertake all responsibilities in a safe manner and ensure safety in design is implemented in all site installations.
- Ensure all aspects of the engineering commissioning efforts (i.e. technical review of the works, drawings, specifications, instrument calibration, SATs, etc.) are delivered on time, cost effectively, and fit for purpose for the project and client requirements.
- Complying with health and safety regulations & Following all safety standards

Nov'13-Dec'14 with Kharafi National, Kuwait as Instrumentation Engineer

Project: Power & Water Distillation

Client: Ministry of Electricity & Water

Key Result Areas:

- Leading instrument maintenance team and implementing the best maintenance strategy for Co generation plant process equipment like Boiler, steam turbine and so on
- Performing Troubleshooting of plant instruments problems & determining their root causes & recommending options.
- Experienced in Calibration of Pressure transmitter, Pressure gauge, Temperature transmitter, Temperature scanner, level gauge, control valves & different types of pneumatic valves.
- Performing Breakdown Maintenance of instrumentation control systems such as Turbine controls, vibration monitoring, boiler controls, interlock systems, emergency shutdown systems, fire and gas detection systems.
- Experienced of Blower(Atlas Copco) control systems (PLC Siemens) and its trouble shooting
- Experienced in Boiler control system and its trouble shooting

- Planning of preventive maintenance and predictive maintenance to minimize down time
- Worked with proper maintenance of permit closing and ensuring the safety of Employees.

Jan'12-Sep'13 with Saudi Arabian Kentz Corporation Ltd., Saudi Arabia as QA/QC Inspector Instrumentation

Project: Saudi Iron and steel

Client: Heeded

Key Result Areas:

- Supervised calibration status and condition of Inspection/Test and Measuring instruments
- Prepared daily reports of RFI and ITR closure status to discipline leader at the end of the each working day
- Worked on Instrumentation and Control systems like: DCS, ESD, PLCs and Cabinet integration instruments and transmitters like pressure, Diff pressure, level, flow, RTD & thermocouples with thermowells, gauges, analyzers and instrument tubing and so on
- Ensured that the latest revision of project quality documentation is available and that records of product and process conformance are maintained in accordance with the document and record control requirements
- Performed inspection of:
 - Cable Tray, Cable Trench, Duct Bank and Conduit installation prior to cable Installation
 - Earthing Resistance Test and Continuity check
 - Impulse Installation & Pressure Testing of Impulse Line
 - Pneumatic Line Installation and Leak Test
 - JBs, LCPs & Various types of panels
 - Continuity test and Insulation Resistance Test of Various Cables
 - Fire & gas, PAGA & telecom systems devices and equipment

Jun'07-Nov'11 with Control Logix Automation Private Limited, Chennai as Instrumentation Engineer

Project : Minjur Desalination Plant Chennai, India

Client: Chennai Water Desalination (CWDL)

Key Result Areas:

- Supporting the Field Instrumentation maintenance workshop including Maintenance, installation, troubleshooting, calibration and repair works on site or in repair shop and minimize the downtime for all installed Field Instrumentation by the timely implementation of planned maintenance procedures.
- Calibration of Field Instrumentation and maintains records on testing, calibration and installation.
- Technical assessment for Field Instrumentation performance
- Integration of new projects into existing infra structure
- Evaluation of process changes and managing the change consequences in terms of Field Instrumentation specifications and reactions
- Experienced in Foundation Fieldbus devices, HART, Profibus and MODBUS (Serial and Ethernet) Communication
- Complying with health and safety regulations & Following all safety standards.
- Worked in Breakdown Maintenance of Process Equipment's / Instruments during startup sequences.
- Provide guidance to technicians and trades helpers in the repair, maintenance and installation of Instrumentation and control systems including daily process control problem solving and measurement activities that enable continuous plant operations.
- Worked in Analog, Digital & Pneumatic Control System.
- Troubleshoot and repairing of pneumatic, electronic and "smart" instruments.
- Troubleshoot and repair PLC's, and SCADA systems (Siemens).
- Follow plant preventive maintenance procedures.
- Supporting to Store team to maintain arranging the resource: Spare Tools & Instrument Equipment.
- Trouble Shooting & Programming of Siemens PLC Control System & Mod bus, TCP/IP Network Systems.
- Maintaining the Instruments calibration reports
- Work as a team with operations, engineering, and maintenance
- Installation, Calibration and Preventive maintenance of Field Instrument like Pressure, Flow, Level, Temperature Transmitter, control valve, motorised valve, Positioner, I/P converter, Indicator & controller and All type of mechanical gauges and SOV, all type of switches.

- Installation, Calibration and Preventive maintenance of analytical instrument like pH sensor, Conductivity sensor, Oxygen analyzers, ORP analyzers, Sox &Nox analyser, SPM analyzers. Vibration sensor.
- Supervising the functions of troubleshooting & Predictive/Preventive Maintenance for identifying areas of obstructions and reducing the machinery downtime to minimum.
- Performed troubleshoot on process and equipments in case of any emergency and provided necessary technical support.
- Experienced in preparation of Monthly Job Reports, Shutdown Job Reports, Breakdown and Maintenance Job Reports.
- Responsible for providing timely communications on significant issues or developments to the O&M manager

PERSONAL DETAILS

Date of Birth: 28th May 1986

Languages Known: Tamil,English,Hindi,Malayalam

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Passport Details:Passport. No: S2852281; Place of Issue: Chennai; Date of Issue: 06.08.2018; Date of Expiry: 05.08.2028