

Muhammad Nouman

Electrical & Instrumentation Engineer

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PROFILE

Passionate Instrument & Control Engineer with 7 years' experience, including 4 years of Process & Maintenance of Hydrogen Generation Units. And 3 years of Project Management & Installation of Hydrogen Generation and Heat Treatment Plants.

Excellent teamwork and collaboration skills as demonstrated by working with Hydrogen generation Units, Heat Treatment Plant, Electrolytic Cleaning Cold Rolling Lines and Reverse Osmosis Systems. Expertise includes Plant Automation, PLC Programming, process Designing, selection of Instruments, Cost effective & saving techniques, Safety Protocols Atex, Class I and Class II & Project management.

7 Years of Experience

CONTACT DETAILS

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LANGUAGES

- English
- Urdu

AREAS OF EXPERTISE

Siemens

• VFD

Micromaster 430,420,440, Sinamics G120)

• PLC

S7-300, S7-400, S7-1200, S7-200 HMI, KP400-OP77, Smart HMI)

FUJI

• VFD

Frenic VG5000, VG1

• PLC

CPU NP1, HMI Monitouch V9

Mitsubishi

• PLC

FX, Q series, HMI GOT-1000

EDUCATION

M.E (Mechatronics) NED University, Pakistan 3.03/4 CGPA 2020

B.E., Electrical, and Electronic Engineering, Bahria University, Pakistan. 3.35/4 CGPA 2015

Aisha Steel Mills Ltd

(2016-To date)

Senior Executive Engineer -Electrical Instrumentation

Cummins Hydrogenics Type 6 and Type 4 Generation Units (EU Technology)

- Plant Lead at Cummins Hydrogen Generation Units 150 cubic meter (Type 6 and Type 4).
- Producing Hydrogen Gas with Grey energy for application of heat treatment process.
- Designing & making logics of process routine as per need using PLC's software's (Step-7, Wincc Flexible, I/O builder, IX developer & TIA Portal).
- Comprehensive knowledge of Analytical instrumentation and Good Understanding of Process Trends, PID's and Feedback control system.
- Knowledge & Hands on Experience on safety & Purity analyzers (hydrogen transmitted in atmosphere (HTA), Hydrogen Transmitted in Oxygen (HTO), Oxygen Transmitted in Hydrogen (OTH), Conductivity & Dew Point). Importance & Handling of analyzers.
- Performed Calibration of (HTA, HTO, OTH, LT, Thyristor Firing Boards, Positioner, Differential Pressure Transmitters & I/P valves).
- Good Exposure on Troubleshooting of different instruments (LT, LS, PT, RTD, Conductivity, TS, Magnetic Valves, motorized valves, I/P Valves, Rectifier units & Thyristor firing boards)
- Good Exposure of Troubleshooting with help of PLC- Fail safe S7-300 series (language included FBD, SCL, STL & Ladder), Saia Burgess (PCD2. M487) & HMI Beijer.
- Complete adherence to HSE protocols while working on plant.
- Find out Root cause analysis of process issues.
- Develop SOP's related to plant maintenance & equipment handling.
- Selection of instruments to improve process safety & quality.
- Generate Purchase Requisitions & Evaluation of vendor quotation.
- Maintaining & Spare Planning on yearly basis (Capex & Revex).

EBNER-(Austria) Batch Annealing Furnace

- E&I Plant lead at Batch Annealing Treatment Ebner Plant.
- Knowledge & Hands on experience on heat treatment of metals using hydrogen as a medium in Batch Annealing Process..
- Knowledge & Hands on Experience of safety, Purity analyzers, VFD Siemens Micromaster &

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Other Expertise

- SAP HANA S4/ MM
- Automation (PLC & HMI)
- Instrumentation
- Budgeting (Capex & Revex)
- Inventory Management
- Project Management
- Process SOP's & Safety Protocols
- Revamping of Plants
- Engineering Standards
- Cost Saving Plans & Continuous Improvement Techniques

Sinamics, PLC S7-300 & Communication Protocol (Profibus).

- Troubleshooting on different instruments (FT, Thermocouple, PT, Turbine Flow meter, TS, Solenoid Valves, motorized valves, lambda probes, Thermal Mass Flow meters, DPT, Gas Leak Detectors & Siemens Positioners).
- Troubleshooting with help of PLC S7-300 series , SCADA & HP Server Systems.
- Good Understanding of Process Trends, PID's and Feedback control system.
- Performed Calibration on Motorized valves, Oxygen Analysers & Positioner as per schedules.
- Coordination with top management informing them about plant operational issues & future upgradation.
- Responsible for Yearly spare parts budgeting (Capex & Revex).
- Using SAP HANA S4 Maintenance Module for Plant Maintenance.

Accomplishments

Cost Saving projects Included

- Lambda Probes Up-gradation for smooth burning & safety operation.
- Gas Leak Detectors Up-gradation Job.
- Water Flow Meters Upgraded from Differential Flow measurement to Ultrasonic flow measurements.

AREAS OF INTEREST TECHNICAL

- Hydrogen Generation using Green energy for industrial & Power grid Applications.
- PLC & HMI Design Automation.

HOBBIES AND INTEREST

- Running
- Cricket
- Volunteer Work.

Tanisaka Iron Works & HOTANI Chemical Treatment (Japanese Technology)

- Knowledge & Hands on experience on Electrolytic Cleaning Line.
- Good Expertise in Centre Positioning Control & Edge Positioning Controls.
- Troubleshooting on different instruments (Welder Unit, FT, Thermocouple, PT, TS, and Solenoid Valves, Servo Guide, Proximities, Level Switches, Heaters, & DPT).
- Make Backup of PLC, HMI & Drive systems, included downloading PLC & HMI program. Download Parameters of VFD's.
- Worked on Electro-Static Oilers.
- Worked on PLC Omron, Mitsubishi FX, Q Series, Siemens S7-200 & Weintek HMI.
- Troubleshooting with help of PLC Fuji NP1 series, Monitouch HMI & Mitsubishi GOT-1000.
- Worked on Fuji PWM & Frenic Inverters (VG Series).

ACT Automation

(2015-2016)

Instrument & Control Engineer, Automation Department

- Designed process using PLC's, machines included (Automatic Pipe Bender & Crank shaft Machine)
- Extensive experience in instrumentation and control engineering.
- Installation and Calibrations of different Field Instrument on schedule's date.

Accomplishments

- Perform Automation of pipe bending machine using Delta PLC & Servo Drives.
- PLC Revamping of Formaldehyde Plant converted Siemens S5 PLC to S7300.

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PROFESSIONAL PROJECTS

Hydrogen Generation Unit

- Execution of revamping on Hydrogen generation unit (conversion of Saia Burges PCD M48.1 to Siemens S7-400).
- Supervise Wiring, Installation, commissioning & budgeting of 150 m3 hydrogen generation system.

Automatic Pipe Bender Machine

- Programming & HMI designing of pipe bender machine using Delta PLC & Weintek HMI.

Batch Annealing facility

- Supervise & Execute plant installation having PLC S7-300 & KP400 Comfort HMI.
- Installation & Programing of Purity analyser to check the ratio of Oxygen in Exhaust Gas.

RO Plant

- Supervise & Execute Reverse Osmosis Plant installation having PLC S7-1200 & Siemens Smart HMI.

Electrostatic Oiler Units

- Supervise & Execute Electrostatic oiler Units having PLC S7-200 , S7-300 & Siemens Smart HMI.

Formaldehyde Chemical Plant

- Revamping of formaldehyde (converted PLC Siemens S5 to S7-300).

Recoiling & Electrolytic recoiling HMI Migration

- Migration of project files Mitsubishi GOT-1000 & Monitouch HMI from V8 to V9.
- Commissioning of Centre Positioning controls system.

Plant Software Backups

- Make Backups of PLC & HMI Software of different plants.
- PLC's includes Siemens S7-200, S7-300, Saia Burges M48.1, Fuji NP1, Delta S02, EX2, Mitsubishi Q00, Q02, and FX Series.
- HMI includes Weintek, KP400, Wincc Smart 700IE, Beijer X2 pro 10 HMI, GOT-1000 Mitsubishi, Monitouch Fuji Hakko HMI V9 and V8.