BEHROOZ ATAEI

Industrial Automation Engineer

0098-913-115-1150
beh.ataei@gmail.com
Esfahan, Iran

SUMMARY

Accomplished Electronic Engineering graduate with over 20 years of extensive experience in process automation, specializing in process controls for various technologies. Proficient in managing and optimizing operations for steel hot rolling mills, steel making plants, direct reduced iron furnaces, copper extraction processes, flash furnace control, and power distribution systems. Skilled in SCADA systems, load shedding control, and maintaining high standards of efficiency and safety in industrial settings.

Certificats

No.	Title	Training Place	Training institute
1	SIEMENS, SIMATIC S7, WINCC and PCS7	Iran, Esfahan	IRISA training center
2	SIEMENS, SIMATIC TDC	Germany, Erlangen	SITRAIN
3	ABB, H651 - Industrial IT 800xA Applications for Minerals - Configuration and Operation	Slovakia, Kosice	DataKon Co.
4	ABB, RTU560	Turkey, Istanbul	Kontrolmatik
5	PSI, SCADA	Germany, Aschaffenburg	PSI Co.

SKILLS

- Proficient in programming, commissioning, and testing Siemens PLC systems (S7, TIA Portal, PCS7) and HMI programs, as well as Siemens TDC and FM458 with D7-SYS.
- Experienced in programming, commissioning, and testing ABB 800xA DCS systems using PC device library and BMI Library.
- Skilled in integrating and testing programs on-site, ensuring seamless operation.
- Proficient in Industrial Network Communications protocols including Profibus, Modbus, OPC, IEC60870-104, and DNP3.
- Capable of RTU configuration and communication with SCADA systems for efficient data exchange.
- Advanced proficiency in high-level programming (C# Dotnet).
- Experienced in developing concepts, cost estimation for proposals, and preparing functional descriptions of process controls and sequence of operations.
- Able to assist customers and co-workers with electrical/programming issues effectively.
- Skilled in designing software based on process narratives and P&ID diagrams.
- Quick problem-solving abilities with the capability to analyze issues and develop effective responses promptly.

- Good knowledge of operating systems including Linux and Windows, proficient in Microsoft Office suite.
- Familiarity with SQL database management, Virtualization, Docker, GRPC technologies for streamlined operations.
- Knowledgeable in EPALN and AutoCAD software for design and documentation purposes.

WORK EXPERIENCE

Automation Engineer
SCADA Application Development (2019-2024)

IRISA Company, Esfahan, Iran

Client: Mobarakeh Steel Company (M.S.C), Esfahan, Iran

- Analyzed Application Protocol Data Unit of IEC60870-104, DNP3, Modbus for effective communication.
- Collaborated with the SCADA development team to implement IEC 60870-104 protocol using C++ within IRISA SCADA software.
- Established communication protocols with Siemens RTU and ABB RTU560 systems for seamless data exchange.
- Developed and implemented Overcurrent detection and load shedding applications using C# and Dotnet Core programming languages.
- Facilitated the transmission of energy consumption data from each part of the plant to the Level 3 Automation system.
- Established OPC communication protocols for efficient load shedding operations.

Automation Engineer
Petro Sanat Lidoma Company (PSL), Tehran, Iran

2022-2023

- Programmed the ABB-800xA version 6.1 control system to manage power distribution and monitor the DRI plant at Baft Steel Company.
- Communicated with power matters and relay systems to ensure efficient plant operations.
- Provided assistance and supervision in programming the ABB-800xA control system in various plant areas.

Automation Engineer
IRISA Company, Esfahan, Iran

2022-2022

- Led the migration of physical servers and clients to virtual machines for the HOSCO DRI plant controlled by ABB-800xA DCS.
- Successfully migrated 6 HP physical servers and 9 physical clients to virtual machines in collaboration with the network group.
- Ensured seamless transition of control systems to virtual environments while maintaining plant operations.

Automation Engineer

Petro Sanat Lidoma Company (PSL), Tehran, Iran

2019

- Implemented ABB 800xA Automation system (v6.0.3) with PC Device Library for the Copper Smelter project at National Iranian Copper Industries Co., Kerman, Iran.
- Configured three Profibus Rings for communication between the control system and plant devices, including motor drives and other packages.
- Collaborated with PLT GmbH Company for the installation, configuration, and commissioning of ABB 800xA virtual machines.
- Conducted remote maintenance of the control system using VMware horizontal setup.

Projects:

- Copper Smelter Project, National Iranian Copper Industries Co., Kerman, Iran
- Implemented ABB 800xA Automation system with Profibus communication
- Collaborated with PLT GmbH Company for virtual machine installation and configuration
- Conducted remote maintenance using VMware

Automation Engineer

IRISA Company, Esfahan, Iran

2018

- Configured, entered data, and commissioned PSI SCADA system for Mobarakeh Steel Company.
- Configured and commissioned ABB RTU560 for energy consumption monitoring in Level3 Automation.

Automation Engineer

IRISA Company, Esfahan, Iran

2016

- Installed and configured ABB 800xA System Version 6.0 for Direct Reduction Iron (DRI) Plant at CSTM, Shanxi, China.
- Programmed ABB DCS with 800xA based on control philosophy and P&ID using BMI Library.
- Conducted factory acceptance test with simulator to ensure system functionality.

Automation Engineer

Arshid Sanat Company, Esfahan, Iran

2015

- Programmed Siemens PLC S7-414H and designed HMI with WINCC for Water Treatment Automation System at Kerman Steel Company.
- Implemented Profibus communication for motor control.
- Programmed sand filter backwash control using SFC programming language.
- Conducted FAT, SAT, and commissioning of the system.

Technical Manager
IRISA Company, Esfahan, Iran
2014 - 2016

Revamping Automation System of DRI Plant for Khuzestan Steel Company (KSC), Ahwaz, Iran

- Designed and installed a new automation infrastructure using ABB 800xA version 5.1 with BMI Library.
- Conducted hardware FAT at the workshop of Tias company, Italy.
- Installed ABB software in collaboration with Datakon Company at the workshop of Tias Company, Italy.
- Programmed DCS based on functional design specifications and P&ID.
- Developed control modules for various process control loops including pressure, flow, and temperature control, cascade control loops, and complex logic for gas compressors.
- Led FAT, SAT, and commissioning activities to ensure system functionality.
- Provided operators training on the new automation system.

Automation Engineer
Automation System of Material Handling
IRISA Company, Esfahan, Iran
2013 - 2014

- Developed a new library for S7-PLC programming, encompassing functions for various types of motors and valves along with their corresponding faceplates.
- Programmed Siemens PLC S7-414H and orchestrated the design and implementation of HMI using WINCC, aligning with control philosophy and P&ID.
- Established communication protocols with other S7-PLCs to ensure seamless integration.
- Executed Factory Acceptance Testing (FAT), Site Acceptance Testing (SAT), and led the commissioning process.

Automation Engineer
Flying Crop Shear Control
IRISA Company, Esfahan, Iran
2012 - 2013

- Specialized in Siemens TDC Automation System Programming and played a key role in designing HMI screens using WinCC, ensuring an intuitive and efficient user interface for system control and monitoring.
- Led the calculation of speed references for the Flying Crop Shear drive, optimizing cutting and positioning operations to enhance overall system performance.

- Successfully conducted Factory Acceptance Testing (FAT), Site Acceptance Testing (SAT), and actively participated in the commissioning process to validate system functionality and performance.

Automation Engineer
Hot Strip Mill Preheating Furnace Automation

IRISA Company, Esfahan, Iran

2011 - 2012

- Demonstrated proficiency in programming Siemens S7-417H PLC using PCS7 CFC language, contributing to the seamless automation and control of the preheating furnace.
- Played a pivotal role in the design of HMI screens using WinCC, ensuring intuitive and efficient visualization of system parameters for effective monitoring and control.
- Led the implementation of air and gas ratio control strategies, optimizing furnace combustion to meet stringent process requirements and enhance efficiency.
- Spearheaded the development and implementation of pressure and temperature control algorithms, leveraging cascade control loops to achieve precise and stable furnace operation.
- Successfully facilitated the Factory Acceptance Testing (FAT), Site Acceptance Testing (SAT), and commissioning processes, ensuring the seamless integration and functionality of the automation system.
- Established communication protocols with the Level 2 automation system, enabling seamless data exchange for precise temperature control and process optimization.

Technical Manager
Copper Extraction, Heap Leach Plant Automation

IRISA Company, Esfahan, Iran

2011

- Successfully programmed Siemens S7-414 PLC using STEP7 software for efficient plant automation.
- Designed HMI screens using WinCC software to enhance user interface and monitoring capabilities.
- Implemented flow control, pressure control, and level control systems to optimize plant operations and ensure production efficiency.
- Established communication protocols with other S7-PLCs to facilitate seamless integration and data exchange between different systems.
- Conducted Factory Acceptance Tests (FAT), Site Acceptance Tests (SAT), and Commissioning activities to ensure proper functionality and performance of automation systems.
- Provided operator training sessions to equip staff with the necessary skills and knowledge to operate and maintain the automated systems effectively.

Automation Engineer
Ladle Furnace Revamping Automation

IRISA Company, Esfahan, Iran

Client: Khuzestan Steel Company (K.S.C), Ahwaz, Iran

2010

- Programmed Siemens S7-417 and S7-300 PLCs using STEP7 software to enhance automation and control functionalities in the Ladle Furnace system.
- Designed HMI screens using WinCC software to provide operators with a user-friendly interface for monitoring and controlling the furnace operation.
- Implemented belt feeder control systems and established communication with belt scales using SIWAREX Function module for accurate material feeding and process optimization.
- Conducted Factory Acceptance Tests (FAT), Site Acceptance Tests (SAT), and Commissioning activities to ensure the successful implementation and functionality of the automated systems in the Ladle Furnace revamping project.

Automation Engineer
Load Shedding Automation of Power Electrical Network

IRISA Company, Esfahan, Iran

Client: Mobarakeh Steel Company (M.S.C), Esfahan, Iran

2009

- Designed and implemented the automation system for load shedding using Siemens S7-417 PLC with hardware interrupt programming to ensure efficient and reliable operation of the power electrical network.
- Developed HMI screens using WinCC software to provide operators with a graphical interface for monitoring and controlling the load shedding process.
- Conducted Factory Acceptance Tests (FAT), Site Acceptance Tests (SAT), and Commissioning activities to validate the functionality and performance of the automation system.
- Established communication with SCADA systems to enable real-time monitoring and data exchange between the load shedding system and the central control room.

Automation Engineer
Hot Strip Mill Automation Revamping
IRISA Company, Esfahan, Iran
Client: Mobarakeh Steel Company (M.S.C), Esfahan, Iran

2007 – 2008

- Collaborated with Siemens Company in Erlangen, Germany for joint programming of the automation system for the hot strip mill.
- Utilized TDC programming and PLC programming with STEP7 to enhance the functionality and efficiency of the automation system.
- Conducted Factory Acceptance Tests (FAT) at the workshop of Siemens in Erlangen, Germany to ensure the system's compliance with specifications and requirements.
- Executed Site Acceptance Tests (SAT) and led the commissioning activities to validate the performance and functionality of the revamped automation system at the client's site.

Automation Engineer

Maintenance of Hot Strip Mill Automation Systems

IRISA Company, Esfahan, Iran
Client: Mobarakeh Steel Company (M.S.C), Esfahan, Iran

2000-2007

- Maintained and programmed various automation systems including Siemens R30, PLC S5, and S7-PLC, Probus, VME, LabVIEW, etc. to ensure smooth operation and efficiency of the systems.
- Conducted troubleshooting activities to identify and resolve issues in the automation systems, ensuring minimal downtime and optimal performance.
- Implemented data collection and analysis processes to monitor system performance, identify trends, and make data-driven decisions to improve overall efficiency and effectiveness.

EDUCATION

B.S.C Degree in Electrical Engineering 1992-1997
Shiraz University, Iran

LANGUAGES

- Persian
- English