

Mohamed Tawfik

Инструктор

Биография

Work Experience:

OT & Cybersecurity | ICSS & Functional Safety | Instrumentation Engineer .

PETROBEL (Belayim Petroleum Company – ENI) – Zohr Gas Field

August 2017 – Present

OT & Cybersecurity Engineer.

- Directed the cybersecurity strategy for the Integrated Control and Safety System (ICSS) at Zohr gas field, ensuring robust protection of critical OT systems and maintaining operational resilience.
- Developed and managed multi-tier network architectures and firewall configurations, while designing tailored OT security solutions to address real-time risks and improve operational safety .
- Applied network segmentation strategies in alignment with IEC 62443 to enhance asset isolation and reduce lateral threat movement in industrial environments.
- Designed and implemented security zones and conduits architecture to control inter-zone communications and enforce cybersecurity policies as per IEC 62443 guidelines
- Conducted cybersecurity risk assessments for IACS systems to identify vulnerabilities, assign security levels, and develop appropriate mitigation plans.
- Developed and maintained an incident response plan tailored for industrial systems, ensuring rapid detection, containment, and recovery from cyber incidents.
- Expert in OT-IT convergence, delivering secure, end-to-end integration from field instrumentation to enterprise boundaries, and architecting defense-in-depth strategies that protect critical assets across the full industrial network stack.
- Protected critical industrial infrastructure by deploying unidirectional gateways, ensuring operational data could be exported for monitoring without exposing OT networks to IT-side threats .
- Managed Nozomi Networks for threat detection, network visibility, and anomaly monitoring.
- Administered domain controllers (DC), GPOs, WSUS, and EPO client policies to ensure cybersecurity compliance.
- Diagnose and resolve technical issues on operator and engineering workstations, enhancing system performance and maximizing uptime and reliability.
- Maintained system backups and recovery plans via NAS servers.
- Configured and managed NTP for network time synchronization, maintaining system consistency and supporting security operations.
- Optimized remote access through terminal servers and RDP management.
- skilled in securing OT environments in oil and gas, utilities, and manufacturing, utilizing robust cybersecurity protocols and incident response strategies to ensure operational safety and reliability.
- Developed and enforced OT cybersecurity policies with cross-functional teams, promoting a culture of security awareness and risk management across the organization.
- Good experience in risk management, vulnerability assessments, and security audits for OT systems, improving the security posture of critical assets.
- Managed and optimized SIEM and SOAR solutions to monitor security events, detect threats, and reduce false positives, collaborating with SOC and incident response teams for rapid threat mitigation.
- Utilized NPM tools to optimize network performance, troubleshoot issues, and deliver performance reports, ensuring reliable OT system operations.
- Addressed OT-specific cybersecurity challenges such as patch management, device authentication, and securing legacy systems, maintaining control system integrity.

ICSS & Functional Safety Engineer.

- Contributed to the engineering and installation of Zohr control and safety system upgrades, including Foxboro Evo DCS and Triconex ESD systems.
- Reviewed and implemented new versions of CS and CCS software related to control platform to ensure system enhancements and stability.
- Managed the SIL verification process and conducted Site Acceptance Tests (SAT), Factory Acceptance Tests (FAT), and Cause & Effect (C&E) tests for safety-critical systems
- Supervised the installation, commissioning, and acceptance of ICSS components, ensuring adherence to project specifications and standards.
- Practical Experience in application of IEC 61511 and of alarm management life cycle.
- Knowledge of control of work principles, risk assessment, and management of change.
- Ensure system redundancy and fail-safe mechanisms to enhance safety.
- Monitor system status and check faulty cards and modules (System survey).
- Support operation, maintenance, and upgrades systems in case of improvement.
- MOC implementation and provide red marked document when has been implemented.
- Review ICSS FDS document.
- Troubleshooting PLC systems (S7400/300), ensuring continuous system improvement and reliability.
- Practical experience HIMAX safety instrumented system for BMS .
- Practical experience with SAP program.

Instrumentation Engineer.

- Review of engineering drawings and vendor documents VDRL.
- Commissioned new project phases, including loop tests, control narrative tests, and cause-and-effect tests, to ensure operational readiness.
- Enhanced system performance through proactive tuning and optimization of PID control loops for critical processes.
- preparation of loop drawings/ hookup drawings/ cable routing for modifications and upgrades.
- Check and investigate with Engineering teams all new expansions in Zohr gas field.
- predictive maintenance and calibration of shutdown valves.
- predictive maintenance and calibration of control valves.
- predictive maintenance and calibration of instrument equipment: pressure, level, flow and temperature transmitters.
- Knowledge of offshore system architecture and Subsea control system.
- Experience in industrial communication standards: HART, Fieldbus, and Modbus.

Commissioning Telecommunication Engineer

PETROBEL (Belayim Petroleum Company – ENI) – Zohr Gas Field

August 2017 – 2019

- Installed and maintained CCTV, access control, TETRA, PAGA, and broadband communication systems.
- Supported ICS team with control, safety, and cybersecurity network installations.
- Installed microwave links between onshore and offshore sites.
- Conducted FAT, SAT, and OTP for telecom systems and expansions.
- Led telecom commissioning activities and handed over documentation to operations.
- Responsible for Cyber security system dedicated to ICSS system in Zohr gas field.
- laying fiber cables inside zohr buildings and between control rooms.
- Knowledge of multi-tier architectures and firewall management.
- Hand over commission check sheets and site acceptance reports to the Operation team.

Network Engineer

Etisalat ISP

March 2015 – August 2017

- Investigate and troubleshoot all ISP network components.
- Check all core network routers and switches configuration and upgrade the old devices.
- Responsible for installation and maintenance Huawei equipment for 2G&3G and ISP network components

Профессиональный опыт

Август 2017-По настоящее время - Experienced OT & Cybersecurity | ICSS & Functional Safety | Instrumentation Engineer - Belayiem petroleum company - Petrobel- ENI, Egypt

- Experienced OT Engineer with over 12 years of expertise in Industrial Control Systems (ICS), Integrated Control and Safety Systems (ICSS), and cybersecurity for OT environments. Specializing in securing and optimizing industrial automation processes, critical infrastructure, and operational technology systems, with a strong focus on cybersecurity protocols and network management. Hands-on experience in managing control systems for the oil & gas industry, implementing cybersecurity frameworks, and supporting system integrity through robust risk management, incident response, and system monitoring. Seeking a dynamic OT engineering role to contribute technical expertise in securing and enhancing mission-critical infrastructure
- Обучение персонала

Образование и квалификации

Вид	Имя
2008 - 2013, Бакалавр	B.Sc. in Electrical and Communication Engineering Higher Institute of Engineering and Technology, Kafr El Sheikh Graduation: 2013 Grade: Excellent (88.62%), Electrical and Communication Engineering
2021	TUV, FS Engineer, 70 часов
2015	Cisco, CCNA, 70 часов
2019	TUV, HIMAX, 70 часов

Язык: Английский, Арабский