

# Abdalla Osama Hassan

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## Professional Summary

**Mechanical Power Engineer** with extensive experience in piping systems and materials engineering. Proven ability in executing, supervising, and ensuring quality in piping projects, including pressure testing and validation of piping loops. Skilled in analyzing isometric drawings, P&ID diagrams, and 3D models for system completeness. Strong background in material selection, quality control, and compliance with industry standards. Committed to delivering efficient engineering solutions and contributing to project success through meticulous planning and execution.

## Education

### B.Sc. in Mechanical Power Engineering

Suez Canal University, Egypt | 2022

## Professional Experience

### Mechanical Site Engineer

Al Basmalah for Trading and Contracting | June 2024 – Present

- **Piping Execution & Supervision:** Led the installation, execution, and supervision of piping systems, ensuring alignment with project specifications and timelines.
- **Loop Preparation & Testing:** Organized and prepared piping loops for pressure testing, evaluating line readiness and ensuring proper isolation of incomplete lines.
- **Drawing and Model Review:** Analyzed Isometric drawings, P&ID diagrams, and 3D models to confirm loop completeness and readiness for testing.
- **System Isolation:** Ensured proper isolation of non-test lines to avoid any issues during pressure testing.
- **Pressure Test Readiness:** Assessed loop configuration and connections, ensuring all criteria for pressure testing were met.
- **Documentation & Reporting:** Collaborated with the project team to generate comprehensive reports on loop preparation, test results, and required adjustments.
- **Quality Assurance:** Conducted detailed quality checks to verify compliance with project specifications and safety standards before testing.
- **Material Selection & Compliance:** Worked with engineering teams to choose appropriate materials, ensuring adherence to project and industry standards.

### Heavy Equipment Maintenance and Inspection Engineer, Military Service

2023 – 2024

- Performed routine and preventive maintenance on a variety of heavy equipment including excavators, loaders, and bulldozers.
- Implemented safety protocols to ensure the safe operation of equipment and adherence to regulatory standards

## **Materials Engineer**

Petrojet Eastern Department | February 2022 – March 2023

- **Material Inspection & Testing:** Conducted material inspections and ensured compliance with project specifications and industry standards, overseeing quality assurance throughout various phases of the project.
- **Coordination with Suppliers:** Worked closely with suppliers to ensure materials met the required specifications, coordinating material delivery schedules to align with project timelines.
- **Technical Documentation:** Prepared and reviewed technical documents, including material test reports, inspection reports, and compliance certificates for internal use and client submission.
- **Quality Control:** Performed quality checks on materials and components, ensuring they met the required mechanical properties, chemical composition, and dimensional accuracy.
- **Site Support:** Provided on-site technical support during the installation and testing of materials, ensuring proper handling and usage according to specifications.
- **Inventory Management:** Managed inventory levels of critical materials, ensuring continuous availability without project delays.

## **Maintenance Engineer Intern, Al Nasr Petroleum Company**

2021

- Assisted in the maintenance and repair of petroleum processing machinery and equipment.
- Monitored equipment performance and conducted regular inspections to ensure optimal functionality.

## **Courses & Certifications:**

### **Non-Destructive Testing (NDT) – ASNT Level II**

Certified in Non-Destructive Testing as per American Society for Non-Destructive Testing (ASNT – SNT – TC – A1), Level II in the following methods:

1. Visual Inspection (VT)
2. Dye Penetrant Testing (PT)
3. Magnetic Particle Testing (MT)
4. Radiographic Testing (RT)
5. Ultrasonic Testing (UT)

## **Technical Skills**

- Equipment Maintenance and Repair
- Preventive Maintenance
- Safety Compliance
- HVAC
- Hydraulic Systems
- CAD Software (AutoCAD)
- SolidWorks
- Microsoft Office Suit

## **Soft Skills**

- Problem-Solving
- Team Collaboration
- Attention to Detail
- Time Management
- Communication
- Adaptability

## **Graduation Project: Enhancement of Combustion Efficiency in Internal Combustion Engine**

**Objective:** Improve combustion efficiency using an ozone generator to enhance performance and reduce emissions.

**Research:** Investigated variable valve timing, direct fuel injection, turbocharging, and an ozone generator.

**Experimentation:** Developed a prototype engine, testing fuel consumption, emissions, and power output under various conditions.

**Results:** Achieved a 12% increase in fuel efficiency and a 15% reduction in emissions.

**Conclusion:** Demonstrated the potential of advanced technologies to significantly improve engine performance, highlighting the importance of innovative engineering solutions in the automotive industry.

## **Languages**

Arabic: Native

English: very good