

Mohammed M. Alnughaimesh, PE

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PROFESSIONAL EXPERIENCE

Operations Engineer, Saudi Aramco (March 2018—Present, February—December 2017, July—October 2016)
Riyadh Refinery, Riyadh

Core Responsibilities:

- Attended daily OME meetings to follow-up on critical equipment performance trends, corrosion problems, and maintenance items that impacts unit performance.
- Investigated, solved, and coordinated short-term plant upsets.
- Developed & applied daily process data sheets, computer models, and engineering drawings for updates/familiarization with plant operations and related operating parameters.
- Led long-term studies to improve unit performance from process, safety and environmental standpoints.

Notable Accomplishments:

- Authored Riyadh Refinery Operations Engineering Handbook—a 400-page book that received highest praise from Saudi Aramco Global Operations Vice President and Chief Engineer.
- Facilitated a major performance test run on the crude complex unit boosting its capacity by 4000 barrels per day generating an estimated annual revenue of \$12 million and co-authored the performance test report.
- Joined and supported project team responsible for developing Integrated Manufacturing Operations Management Software Solution—a project aimed to digitalize all aspects of refinery operation in line with IR 4.0.
- Spearheaded pre-commissioning and commissioning activities as the primary process engineer of a newly constructed process wastewater treatment plant.
- Contributed to two major Turnaround & Inspection (T&I) events in the refinery: the 1st pertained to the execution of Clean Fuels Transportation Project in 2017 and the 2nd was a whole refinery T&I in 2020.
- Developed and overhauled several official operating procedures including normal shutdown and startup of amine treating unit, crude stabilization facility, and sphere tanks and their emergency procedures.
- Led an investigation team consisting of eight members from operations, maintenance, and engineering regarding a serious mechanical failure of multiple safety relief devices. Implemented Root Cause Analysis methodology to develop and publish the final investigation report with remedial recommendations.
- Responded to refinery-wide, multi-day emergency event caused by an external attack incident on a major sphere tank containing light hydro carbons.

Planning Engineer, Saudi Aramco (January—February 2018)
Riyadh Refinery, Riyadh

Core Responsibilities:

- Handled planning in involvement with process engineer and performed special analysis and prepared reports for other planning-economics related problems.
- Reported the production loss from operational upsets planned or unplanned to stakeholders.
- Issued the monthly lost opportunity report based on actual refinery performance.

Notable Accomplishments:

- Developed and issued a comprehensive refinery economic performance report showcasing the refinery fiscal results and product mobility to the department management.

Operations Shift Supervisor, Saudi Aramco (November 2016—January 2017)
Riyadh Refinery, Riyadh

- Enlisted in regular shifts, participated in operation and maintenance activities, and applied operating procedures and safety best practices as a plant operations shift supervisor.

Notable Accomplishments:

- Executed a complete shutdown and startup procedures on Crude Stabilization Facility with fellow operators safely and successfully.
- Passed all of the practical industrial safety training and examination, such as firefighting, hydrogen sulfide safety, and confined space.

EDUCATION

Columbia University—M.Sc. Earth & Environmental Engineering, Class of 2021–2022

Concentration: Sustainable Energy

Arizona State University—B.S. Chemical Engineering, Class of 2016

GPA: 3.90/4.00 (*Summa Cum Laude*), Dean's List (6 semesters)

Minor: Business

LISCENSURE & CERTIFICATIONS

Professional Licences

Professional Engineer License (PE), granted by Saudi Council of Engineers

Saudi Aramco Certifications

Accelerated Development Program for Young Engineers in Refining

Saudi Aramco Talent Essentials Program

Introduction to Process Control

Introduction to Process Heaters

Rotating Equipment

Safety Relief Disposal & Flare Systems

Process Separation & Vessel Design

Introduction & Advanced HYSYS Modelling

Emotional Intelligence for Professionals

Information Security Essentials

Root Cause Analysis for Equipment & Process Failures

Heart American Association

Heartsaver® First Aid CPR AED

Harvard ManageMentor Certifications

Budgeting

Business Case Development

Finance Essentials

Leading People

Project Management

Strategic Thinking

Strategy Planning & Execution

Society of Petroleum Engineers-KSA & Fullbridge

Critical Thinking

Creative Thinking

Emotional Intelligence

PUBLICATIONS

Riyadh Refinery Operations Engineering Handbook (2nd Edition), September 2020

Riyadh Refinery Operations Engineering Handbook, September 2019

PROFESSIONAL MEMBERSHIPS

Saudi Council of Engineers (SCE)

American Institute of Chemical Engineers (AIChE)

International Institute for Strategic Studies (IISS), London, United Kingdom

Society of Petroleum Engineers—Kingdom of Saudi Arabia Section (SPE-KSA)