

Lead Mechanical Engineer

AREAS OF EXPERTISE

- *Engineering (Concept, FEED, Detailed)*
- *Static (Stationary) Equipment*
- *Packaged Equipment*
- *Solid Material Handling*
- *Technical Authority*
- *Leadership, supervision*
- *Technical Decision/Solutions*
- *Multi-Disciplinary experience*
- *Onshore/offshore Facilities*
- *International Standards/Codes*
- *Procurement*
- *Vendor Management (Selection of Vendors)*
- *Material Selection and corrosion management*

PROFESSION

- *Master of science (MSc) on Mechanical Engineering*
- *Engineering & Designing*
- *Project Management*

CERTIFICATES

- *H2S Basic Training - OPITO*
- *BOSEIT (with EBS)*

COMPUTER SKILLS

- *PV-ELITE*
- *Aspen Heat Exchanger Design*
- *Tank, ETank*
- *Nozzle Pro*
- *ANSYS*
- *Microsoft Office*

PERSONAL DETAILS

Armin Aghamolaei
Turkey Citizen

M: +7 775 803 5430
M: +974 66 202 694
E: armin.aghamolaei@gmail.com

DOB: September 1978

PERSONAL SUMMARY

A professional Engineer with over twenty (20) years of experience with major upstream and downstream oil companies, refineries, gas plants, petrochemical facilities, upgrade, revamp, EPC firms and PMC consultant.

Worked on greenfield, brownfield, expansion, construction and revamp project worth billions of dollars. Performed and managed engineering, designing, project management, procurement, fabrication, installation, construction, inspection, testing, pre-commissioning, commissioning, start-up, turnaround activities on static and packaged equipment.

Key Technical Skills

- Lead Mechanical Engineer with 20+ years of work experience in the oil, gas & petrochemical industry.
- Extensive knowledge of quality construction methods and techniques with sound knowledge of mechanical equipment design.
- Experience in servicing technical queries at site and supporting construction team
- The professional areas of work include Conceptual Studies, Front End Engineering and Design, Basic Engineering, Detail Engineering, Thermal rating, stress analysis, supervision during fabrication, solving technical difficulties in fabrication, maintenance, integrity, construction and installation.
- Knowledge of welding processes, NDT methods and hydrostatic / pneumatic test of equipment and piping system.
- Precise, competent and reliable engineer with ability to take responsibility for design coordination and management of projects in a team-orientated and multi discipline environment in order to achieve projects targets.
- Proven ability to work within a multicultural environment and to liaise with other department engineers, senior management and a range of internal/external stakeholders
- Occupied in reputable companies along with high valued Onshore and Offshore oil, gas & petrochemical projects.
- In depth understanding of Codes & Standards of equipment and related applications such as ASME Sec.VIII, Div.1 & Div.2, ASME Sec.IX, ASME Sec.II, API, TEMA, NACE, BS, DIN, CEMA.
- Proficient with the use of individual softwares for design of Pressure Vessels, Towers, Heat exchangers and storage tanks and Finite Element Analysis
- Capable for planning, scheduling, establishing project man-hour budgets, coordinating activities on projects and experience in management of change process.
- Demonstrated experience and competence in activities related to procurement services of projects such as Material Requisition preparation, Vendor's Proposal Review,
- Technical Clarification with vendors, Technical Bid Evaluations (TBE), Vendor Data Review (VDR) and approval.

ACADEMIC QUALIFICATIONS

Master's in Mechanical Engineering (M.Eng)
Isfahan University of Technology, Isfahan, Iran

Bachelor's in Mechanical Engineering (B.Eng)
University of Tehran, Tehran, Iran

WORK EXPERIENCE

September 2020 -
Present

Qatargas Operation Company Limited
Doha, Qatar
Lead Mechanical & Solid Material Handling



North Field Expansion Project, Onshore facilities FEED, Bid Sulphur (Onshore Sulphur Facility) export 9000 TPD Sulphur granular. Main components of the project include:

- *Sulphur Granulators*
- *Solid handling Equipment, such as conveyors, Stacker, Reclaimer. Ship loader, etc.*
- *Sulphur storage system (liquid and granular)*
- *Storage tanks, pressure vessels, Air cooled and shell & tube heat exchangers, boilers and packages.*

Duties:

- Responsible for overseeing the design and installation for all mechanical and solid sulfur handling scope for the NFXP Sulfur Facility Project
- Provide oversight to the FEED and Bid Evaluation to select EPC Contractors of all aspects of mechanical and solid sulfur handling to ensure technical objectives are met within the approved scope, budget and schedule
- Ensure technical requirements such as project specifications, data sheets, procedures, etc. developed during FEED comply with project requirements
- Provide clear guidance to the contractor and facilitate resolution of technical issues to complete mechanical and solid sulfur handling engineering activities and meet project objectives and milestones
- Provide engineering surveillance of mechanical and solid handling deliverables.
- Monitor discipline schedule, progress, productivity and quality
- Provide discipline support and input to EPC Tendering activities
- Provide discipline support to procurement and vendor surveillance activities
- Monitor and support construction and discipline field engineering activities
- Coordinate and support mechanical equipment vendor representatives during installation and commissioning activities

October 2016 -
December 2019

North Caspian Operating Company (NCOC N.V.)
Atyrau, Kazakhstan
Lead Mechanical Engineer (Static Equipment), Project Execution (Reporting to Engineering Manager (Projects))



KASHAGAN DEVELOPMENT EXPERIMENTAL PROGRAM. ESKENE West Loading Facility (Onshore Sulphur Facility) export 4500 TPD Sulphur pastilles. main components of the project include:

- *Sulphur Pastille Forming System*
- *Sulphur Pastille Loading system including conveyors, loading arm, Indexer, loading Leveling devices, etc.*
- *Sulphur storage system (liquid and pastilles)*
- *Stacker/Reclaimer, conveyors, Bulk Sulphur loading Facilities of Pastilles into rail wagons.*
- *Pressure vessels, Air cooled Heat exchangers, Shell & Tube Heat exchangers, Storage tanks, Diesel Generators package, Overhead cranes and hoists, water treatment packages, centrifugal and metering pumps*

Duties:

I have joined project execution team due to urgent requirement to assist with the backing of mechanical design scope.

- Supervising and directing Engineering Detail Contractors during the execution of design, procurement and construction activities, ensuring the quality of the works, according to the contract requirements.
- Providing technical input, in line with project requirements, to various EP/EPC Engineering Contractors as a part of the Design Integrity process for the Onshore Sulphur facility (OSF).
- Ensuring a smooth and effective transfer of data and information between Contractors /Vendors and from the Contractor to NCOC N.V.
- Perform engineering and project management activities on static/package and Solid Handling equipment, which includes Pressure vessels, Heat changers, Boilers, Air cooled Heat Exchangers, Diesel Generators, Storage Tanks, Sulphur Pastillation, conveyors, Stacker/Reclaimer, Sulphur Bulk Load out.
- Continuing to lead the identification, creation and adoption of appropriate mechanical and packages engineering standards, with appropriate consideration of the Republic of Kazakhstan's national standards and norms. Ensure that the intentions identified through the Conceptual and FEED phases are maintained. Generates procurement package contents from engineering design contractor deliverables.
- Assessing capabilities and limitations of contractor's detailed design and incorporating in development planning and risk mitigation processes. Coordinates Vendor Data review & expedites comments.
- Undertake technical integrity and HSE reviews/audits, and participate in process safety management.

December 2014 -
October 2016



North Caspian Operating Company (NCOC N.V.)

Atyrau, Kazakhstan

Lead Mechanical Engineer (Static Equipment), Technical Authority, Level TA-1

KASHAGAN DEVELOPMENT EXPERIMENTAL PROGRAM. (NCOC previously agip kco)

Provide technical support to the EP Project Engineering teams to ensure Design and Operability Integrity are achieved in accordance with applicable codes and standards, specifically focusing on safety criticality and performance criteria.

Duties:

- Ensure definition, dissemination and update of "discipline" procedures and standards for design, construction of production plants;
- Being Part of Due Diligence team investigating the reason of leak in Kashagan pipeline from artificial D Island to the onshore plant leak due to sour service and the effected pipes in onshore plant.
- Promote, where applicable, the standardization, coding and dissemination of the best methods and definition of best practices and performance indicators on the specific "discipline"
- Utilize the experience and the company know-how in the fields of study, design, construction and maintenance of systems and facilities where required.
- Support Project discipline engineers during the revision process/approval of key level 1 documents, e.g. Design Basis, Design Criteria, Instrumentation and Control Philosophies, P&ID, and be involved in HAZID, HAZOP, 3D Model Review.
- Monitor services and specialized studies for the development of the projects, as required by the projects to ensure compliance with company standards for the specific "discipline"
- Providing field engineering assistance to construction supervision team

July 2013 -
December 2014



Agip Kazakhstan North Caspian Operating Company (agip kco)

Atyrau, Kazakhstan

Senior Mechanical Engineer (Static Equipment), Technical Authority (Reporting to Technical Authority Manager)

Involved in KASHAGAN DEVELOPMENT EXPERIMENTAL PROGRAM which is estimated that the Kashagan Field has recoverable reserves about 13 billion barrels (2.1×10^9 m³) of crude oil. Harsh conditions as sea ice during the winter, temperature variation from -35 to 40 °C (-31 to 104 °F), extremely shallow water and high level of hydrogen sulphide, together with mismanagement and disputes, make it one of the most challenging oil megaprojects. Project costs US\$116 billion, which makes it the most expensive energy project in the world.

Duties:

- Providing guidance to the relevant engineers within the Projects & Operations Groups and support the Technical activities in the fields of study, construction, commissioning, start up and maintenance of systems and facilities for the production and operation of the plants.
- Ensuring definition, dissemination and update of Mechanical and Piping Discipline Philosophies, and standards for construction, commissioning and optimization of the production facilities; promoting, for each pertinent field, the standardization, coding and dissemination of the best operative methods and the definition of best practices on mechanical and piping discipline.
- Investigate and resolve with Project and Operations Engineers in case of any deviations from Agip KCO Technical Standards in mechanical and piping discipline. Provide Technical Authority Role for Experimental Programme and provide technical guidance to the resolution and close out of Non-conformity reports;
- Supporting the coordination of the activities of the structuring and dissemination of feedback on mechanical and piping discipline in terms of guidance on the resolution of issues raised and close out.
- Reviewing static equipment in Inlet Gas Separation (Slug Catcher), Sulphur recovery units (SRU including knock-out drum, Claus combustion chambers, Reactor, Gas condenser, Claus reactors, Sulphur pit and tank), Gas Sweetening Unit and Tail Gas Treatment Unit and Sour Water Collection Unit.

October 2011 -
July 2013



Petroleum Industries Research & Engineering Company (PIRECO)

Tehran, Iran

Static Equipment & Packages Lead Engineer (Reporting to Engineering Manager)

Involved in design of developing Phases of 22 -24 of the South Pars Field, located offshore, Platform design is 600 MMSCFD

Duties:

- Including offshore platform units installed on offshore Jacket, Chemical Injection System, Test Separation Unit, Free water Knock Out, Oily Water Treatment, Closed and Open Drain System, Diesel Oil System, HP/LP Flare System, Pig Launching Trap, Glycol and KHI Injection System.

- Reviewed the scope of the project and finalized the engineering activities pertaining to the department.
- Reviewed the technical specifications and standards to meet the project requirement.
- Reviewed the MRQ's and MRP's for different static equipment and packages.
- Estimate the man-hour's required at different stages for completing the project in time
- Reviewed vendor's offers and Technical Queries.
- Attended Vendor meetings to finalize the order.
- Prepared technical bid evaluation.
- Attended KOM's and meetings as project requires, to resolve engineering problems
- Guided and controlled job Engineers and designers to get the work done.
- Attended weekly Project control meetings to interact with other departments and finalize department dependent engineering issues.
- Planed and distributed job to meet the project schedule with controlled man hours
- Liaise with client and contractor
- Mentoring junior staffs
- Used my experience in project coordination and offshore project

**March 2008 -
October 2011**

Oil Design & Construction Company (ODCC)

Tehran, Iran

Static Equipment Lead Engineer (Reporting to Project Engineering Manager)



Involved in project to Increase Shahzand Arak Refinery capacity up to 80/000 BPD from 169,100 to 249,100 BPD of light and heavy crude. Increase gasoline production from 29,000 to more than 100,000 BPD. (From 4.6 million liters to about 16 million liters per day). Meet product specifications of EURO 2005. Follow environmental mandates.

also Involved in Tehran Refinery Product Upgrading Project: Installation of new units and modification of existing units to provide for refining capability for Maroon, Ahwaz Asmari and north Dezful Crude Oil.

Duties:

- Responsible for Technical design (Hydrogen Induced Cracking (HIC) resistant pressure vessels & heat exchangers TEMA type, Reactors) considering NACE requirements
- Provided mechanical datasheets, specifications, review of technical proposal and preparing the technical clarifications, technical bid evaluation (TBE)
- Upgrade Shahzand Arak Refinery including Kerosene Hydrotreatment Unit (KHU), Gas Oil Hydrotreatment Unit (GHU), Hydrogen Production Unit (HPU), including High Pressure Reactors, Drums, Towers, Trays and internals, Heat exchangers, Heaters, Storage tanks (Fixed roof, Floating roof), spherical tanks, Column (C3 splitter,
- Upgrade in Tehran Sulphur recovery unit including KHU, HPU and GHU and revamping of Sour Water Stripper Unit (SWS), H₂S remover Amine Treating Unit (AMN) and Sulphur Recovery Unit (SRU) consisting of equipment such as Claus Reactors, drums and air coolers, including provide data sheets and material requisitions and vendors documents review
- Hormuz Refinery including utility units (Nitrogen Production, Air Dryer), and water treatment units (including desalination and potable water) and Storage unit
- Reviewed vendor print document including strength calculation, shop drawings and engineering procedure.
- Experienced in Nitrogen production unit, Air unit and Waste water treatment unit.
- Preparation/checking of technical documents, all technical Specifications
- Trained other engineers in the area of static equipment
- Progress monitoring and reporting to Project Manager
- Developed my skills in design and vendor document check

**March 2006 -
March 2008**

Namavarzan Delvar Engineering & Construction Company (NDEC)

(Working with Technip France, Mitsui Engineering Japan)

Tehran, Iran

Senior Mechanical Engineer (Reporting to Mechanical Lead Engineer)



5th Olefin Plant-Assaluyeh which was consists of Ethylene, MEG and utility of Asaluyeh. Ethylene Assaluyeh: The Project concerns the implementation of a Cracker Plant with a capacity of 500,000 MTPA polymer grade ethylene from Ethane Feedstock. This Plant is located in Assaluyeh Island.

Duties:

- Checked technical specification and material requisition and data sheets, Prepared technical specification and material requisition, Technical Bid Evaluation (TBE), Reviewing Vendor documents and drawings for Pressure Vessels, Reactors, Heat exchangers (shell & tube including kettle type, hairpin - Double pipe - type, kettle, plate and Frame, Air cooled Heat Exchanger), Deaerators, Reactors, Towers & Internal for drums and Towers, Storage Tanks (Atmospheric API 650, Low pressure API 620, Cryogenic - Refrigerated - double wall tank), fired heaters, Loading Arms, Flare Stacks, Gas Cracking Furnace.
- Project olefin complex consists Ethylene plants including units such as: Cracking Furnace Section, Hot Section, Compression Section, Ethylene Recovery and Ethylene Purification Section, Refrigeration Systems, Steam, Blowdown, Cooling water, fuel

- gas and other utilities, Storage Area and Ethane Cracking Plant Storage.
- Reviewing Vendor documents and drawings, TBE (Technical Bid Evaluation)
- Inter disciplinary co-ordination
- Maintain the documents with Quality as per ISO standards.
- Providing manpower estimation, budgetary quotations and list of deliverables for the purpose of new proposals
- Became familiar with petrochemical plant and its equipment

March 2001 - *Bahr Azar Mfg. & Ind. Company*
March 2006 Tehran, Iran
Mechanical Engineer (Reporting to Engineering Manager)

Involved in detail design and construction of Oil, Gas and Petrochemical industries Equipment.

Duties

- Experienced in detail of oil and gas equipment such as:
- ✓ Pressure Vessels acc. to ASME Sec VIII Div.1 & Div.2 and PD 5500 and using PV-Elite Software
- ✓ Heat Exchangers acc. to TEMA and using Aspen B-jac Software
- ✓ Pig Launcher/Receiver design using ASME B31.8 & ASME Sec.VIII
- ✓ Split Tee
- ✓ Storage Tanks acc. to API 650, 620 and using Tank and ETANK software
- ✓ Steam and Hot Water Boiler
- Prepared & checked QC documents such as ITP, PQR, WPS and WQT.
- Prepared Manufacturer record book (MRB) and vendor final dossier
- Supervision of Gas Pressure Reducing Package manufacturing for South Gas Pars 6 & 7 & 8 phase.
- Developed my skills in oil and gas industries
- Being familiar with Oil and gas industries equipment