

## PROFESSIONAL RESUME

**NAME:** FAYYAZ MOAZZAM

**POSITION:** Principal Consultant

**NATIONALITY:** Pakistani (UAE Resident since 2010)  
UK Resident (2008-2010)

**TOTAL EXPERIENCE:** 30 years in Petrochemicals, Oil & Gas Industry



### HIGHER EDUCATION AND QUALIFICATIONS:

BSc Chemical Engineering, 1980, University of Engineering & Technology, Lahore.

### CERTIFICATIONS:

- Certified Functional Safety Expert (CFSE) – CFSE Governance Board, USA
- BP Approved HAZOP & LOPA Facilitator
- TÜV Certified Functional Safety Professional (ID: TP10050264), Germany
- HAZOP Study Leadership & Management – Institution of Chemical Engineers, UK
- Accredited HAZOP Study Leader – ICI, UK
- HAZOP Study Leader Training – Exxon
- Layer of Protection Analysis (LOPA) – Institution of Chemical Engineers, UK
- Associate Value Engineering Specialist (Certification No. 201601068), USA
- DNV Fire & Explosion Modelling & Quantitative Risk Assessment Training

### CORE SKILLS:

- HAZID / ENVID / OHID / HAZOP / CHAZOP / SIMOPS / FMEA / E-HAZOP Chairman
- Safety Integrity Level (SIL) Assessment, SRS, SIL Verification & Validation
- Quantitative Risk Assessment (QRA)
- 3D Fire & Gas Mapping Studies using Detect3D
- Reliability, Availability & Maintainability (RAM) Studies
- Project HSE (PHSER) & Constructability Reviews
- HSECEs, Performance Standards & Written Scheme of Examination
- Value Engineering Studies
- Process Engineering Design, Verification & Training
- Project Risk Assessment & Management

### Recent Employment History:

Employer	Location	Title	From	To
PetroRisk	Abu Dhabi	Principal Consultant	2013	Current
Vectra	Abu Dhabi	Principal Consultant	2010	2013
Schlumberger	London	Senior Expert (Process Safety)	2009	2010
Simon Carves	Cheshire, UK	Principal Engineer (Process Safety)	2008	2009

*Please see below for complete employment history & professional experience.*

### Employers Brief Description & Professional Experience:

#### 2013 – Current

**Principal Consultant, PetroRisk**

#### HAZID, ENVID, OHID, HAZOP & SIL Studies

- Chairman Hazard Identification workshop for RWE Chile SpA Feasibility Study for Vientos Magallánicos Project which involves the production of Green Hydrogen and Green Ammonia leveraging the strong wind power potential in the Magallanes region in the southern Chile. Contractor was Fichtner GmbH, Germany.

## PROFESSIONAL RESUME

- Chairman HAZOP workshop for Aramco Gulf Operations Company (AGOC) FEED for Khafji Gas Plant (KGP). The HAZOP study covered Gas Receiving Facilities, Booster Gas & Sour Gas Compression, Acid Gas Removal Unit, SRU/TGT, Gas Dehydration, NGL Recovery, Propane Refrigeration, Condensate Stabilization / Dehydration, NGL Storage and Export. FEED Contractor – Technip Energies, Abu Dhabi. The 3-week long HAZOP Workshop was held at Technip Office in Abu Dhabi during Feb-Mar 2024 in which team members from Saudi Aramco Operations, Process, Control and Loss Prevention participated.
- Chairman HAZOP and SIL Assessment Workshop for Engro Polymer and Chemicals Limited FEED study of VCM 300 DBN Project. The 2-week long workshop was held in Karachi in April 2023.
- Chairman HAZID and HAZOP workshops for Qatargas Operating Company Limited Provision Of CSP Boiler and Deaerator Capacity Review Project. FEED Contractor – Worley. The workshops were held online using Microsoft Teams in Sept 2022.
- Chairman HAZID, ENVID, HAZOP & SIL workshops for QP FEED for Refinery Upgrade Project (Part A & B). FEED Contractor - Worley, Netherlands. The project will implement, Euro-V and Safety elements with crude processing capacity of 76,000 BPSD. The project scope of work covers major modifications in Crude unit, Naphtha stabilization unit, RFCC unit, New RFCC Light Gasoline HTU, SWS unit, Cooling Water System and upgrade in Refinery Waste Water Treatment Plant. The workshops were held online using Microsoft Teams between July 2021 and May 2022 with breaks.
- Chairman HAZOP, SIL, & ALARP workshops for QatarEnergy EPIC for New Gasoline and Jet Storage Facilities in MIC. EPIC Contractor – Rotary Engineering. The workshops were held at Rotary Engineering Office in Singapore during Feb-Mar 2022 and June 2022.
- Chairman HAZOP Workshop for ADNOC Onshore EPC BAB 485 MBD Sustainable Facilities Project covering new Pig Launcher & Receiver. EPC Contractor was Archirodon. The workshop was held online using Microsoft Teams on 14<sup>th</sup> Oct 2021.
- Chairman HAZID, ENVID & HAZOP workshops for QP FEED for Study of Wellhead Modular Skids. FEED Contractor was Worley. The workshops were held online using Microsoft Teams in April 2021.
- Chairman HAZID and ENVID workshops for QP FEED for Upgrade / Migrate of Obsolete PLCs and PMS in Dukhan Field. The workshops were held online using Microsoft Teams in June 2021.
- Chairman HAZID, ENVID, HAZOP, SIL & SIMOPS Workshops for Feed for Upgrade of Ethane Compressors at Station V (QP Project No. 4224). FEED Contractor was Black Cat Consulting & Engineering Services. The workshops were held online using Microsoft Teams during the period of Nov 2020 to Jan 2021.
- Chairman HAZID, HAZOP & SIL Workshops for QP EPIC for CO<sub>2</sub> WAG Injection Pilot Project (QP Project No. 4172). Main EPIC Contractor was Galfar and Engineering Consultant was TechnipFMC. The workshops were held online using Microsoft Teams in Aug 2020.
- Chairman HAZOP & SIL Assessment Workshops for ADNOC Onshore EPC BAB 485 MBD Sustainable Facilities Project. EPC Contractor was Archirodon. The workshops were held online using Microsoft Teams from 31<sup>st</sup> May to 3<sup>rd</sup> June and 5<sup>th</sup> to 6<sup>th</sup> July 2020.
- Chairman HAZOP Workshop for PPL ZAFIR Gas Processing Amine Unit from 18<sup>th</sup> to 20<sup>th</sup> May 2020. Engineering contractor was Schlumberger. The workshop was held online using Microsoft Teams.
- Chairman HAZID Workshop for Qatar Petroleum EPIC for Dukhan Production Facilities Upgrade (DPFU) Phase 1A - Package 1 Project. The workshop was held online using CISCO Webex videoconference tool on 11<sup>th</sup> March 2020.

## PROFESSIONAL RESUME

- Chairman HAZID, HAZOP and SIL Assessment Workshop for Qatar Petroleum FEED for Mitigation of Piping Vibration at RG Plant Dukhan Project. The SIL Assessment workshop was carried out online using CISCO Webex videoconferencing tool. EPIC Contractor was Roots.
- SIL Verification for ADNOC Onshore EPC Al Dabb'iya Thammama Zone B Transition Zone Developments - Phase 1 (15 Wells) & Restore Al Dabb'iya Other Zone (OZ) Production (17 Wells) Project. EPC Contractor – Archirodon. Timeframe – Jan 2020.
- Chairman HAZOP/LOPA for QCHEM EPCM 6th Furnace Project. HAZOP/LOPA SOW included modifications in Quench Water, Dilution Steam, Propane Refrigeration & Fuel Gas/BFW System. EPCM Contractor – TechnipFMC. Timeframe Feb 2020.
- Chairman HAZOP & SIL studies for Qatar Petroleum FEED for New LPG Bottling Plant Project at Ras Laffan (QP Project No. 4126). FEED Contractor – Kentz Engineering / SNC Lavalin. Timeframe Dec 2019.
- Chairman HAZID, HAZOP & SIL studies for Qatar Petroleum FEED for Provision of Facilities for Securing Gasoline Supply for FIFA2022 (QP Project No. 4130). FEED Contractor – Kentz Engineering / SNC Lavalin. Timeframe Dec 2019.
- Chairman HAZID, HAZOP & SIL Studies for Qatar Petroleum FEED for New Tank Farm, Multiproduct Pipeline & Berth Modifications in Mesaieed (QP Project No. 4134). FEED Contractor – Kentz Engineering / SNC Lavalin. Timeframe Nov 2019.
- Chairman HAZID, ENVID, HAZOP & SIL Studies for Qatar Petroleum FEED for Two New Fuel Depots & Multiproduct Pipelines Project (QP Project No. 4100). FEED Contractor – WorleyParsons. Timeframe April-Aug 2019.
- Chairman HAZID, HAZOP & SIL Assessment for Qatar Petroleum EPIC for Domestic Supply of Butane from NGL Complex to QP Refinery, Phase-1 (QP Project No. 4012). Contractor – Fernas Construction / Black Cat Construction. Timeframe 2018.
- Chairman HAZID, HAZOP & SIL Assessment for Qatar Petroleum EPIC for MTBE Tanks and Pipeline between QAFAC and QP Refinery (QP Project No. 4006). Contractor – Fernas Construction / Tebodin. Timeframe 2018.
- Chairman SIL Assessment workshop for Saudi Aramco Gas Processing Plant at Haradh, Saudi Arabia. A total of more than 200 safety instrumented function were evaluated using LOPA methodology. The workshop was held at plant site Haradh, Saudi Arabia from 6th to 24th Oct 2019.
- Chairman HAZOP & SIL Assessment workshop for ADNOC Refining Sulphur Recovery Unit Replacement Project. The representatives from ADNOC Refining, Licensor - UOP Ortloff, Texas, USA and EPCC contractor Wison Engineering from Shanghai, China participated in the workshop. The workshop was held at Sheikh Khalifa Energy Complex, Abu Dhabi, UAE from 23th June to 4th July 2019.
- Chairman HAZOP workshop for Al-Shbaka Al-Thahabiya Golden Oil Refinery being setup in Najaf, Iraq. EPC Contractor – SPEC, Dubai, UAE. The workshop was held from 8th to 15th July 2019 in Dubai, UAE
- Chairman HAZOP & SIL workshops for DUQM Refinery Project, Oman. EPC Contractor – TR Engineering. The workshop covered Hydrogen Production, Hydrocracker and Sulphur Recovery Units. The technology licensors from Chevron Lummus Global and Fluor USA participated in the workshop. The workshop was held from 5<sup>th</sup> Nov to 26<sup>th</sup> Jan 2019 with a break in Dec 2018 at Técnicas Reunidas Engineering Office in Madrid, Spain.
- Chairman HAZOP & SIL workshops for ADNOC Refining Crude Flexibility Project. Contractor – Samsung Engineering. The workshop was held from 1<sup>st</sup> Oct to 31<sup>st</sup> Oct 2018 at Samsung Engineering Office in Seoul, Korea.
- Chairman HAZOP & SIL workshops for KOC EF2017 Fuel Supply System to Nuwaiseeb Power Station. EPC Contractor – Wood. The workshop was held at Wood Office in London, UK from 24th to 28th Sept 2018.

## PROFESSIONAL RESUME

- Chairman HAZOP workshop for FEED Services for ADNOC Gas Processing Ruwais Capacity Enhancement of NGL Trains 1, 2, 3 & 4. Contractor – WorleyParsons. HSEIA Consultant – DOME. The workshop was held from 16<sup>th</sup> to 18<sup>th</sup> July 2018 in Abu Dhabi.
- Chairman HAZOP & SIL workshops for Kuwait Oil Company's GC-32 New Gathering Centre for SEK Project. The technical representatives from MAN Turbomachinery, Germany and BS&B, Houston, USA participated in the workshop. The workshops were facilitated as an associate of Cholamandalam MS Risk Services. The workshop was held at Petrofac office in Sharjah, UAE from 8<sup>th</sup> to 11<sup>th</sup> April 2018.
- Chairman HAZOP & SIL studies for Gas-to-Liquid (GTL) Project. The workshop was held at Hyundai office in Seoul, Korea from 29<sup>th</sup> Nov to 22<sup>nd</sup> Dec 2017.
- Chairman HAZID and HAZOP workshops for ZADCO FEED for Crude Oil Export from ZIRKU to Onshore. Team members were from ZADCO, ADMA & TAKREER. FEED Contractor – Technip. The workshop was held in Abu Dhabi between 30<sup>th</sup> July to 3<sup>rd</sup> Aug 2017.
- Chairman HAZOP workshop for Pak-Arab Pipeline Company Limited (PAPCO) White Oil Pipeline Mogas Project. Contractor – Descon. The workshop was held from 11<sup>th</sup> to 16<sup>th</sup> Sept 2017 at Descon Office, Lahore.
- Chairman HAZOP workshop for Pak-Arab Refinery (PARCO) Revamp Project. The modifications in Crude Distillation, Distillate/Unionfining/DHDS, LPG Merox Gas Concentration, Naphtha Hydrotreating, platforming and new Isomerase and Crude Oil Tanks were HAZOPed. Honeywell/UOP's Process Specialists from USA and UK participated in the workshop along with PARCO engineers. EPC Contractor – Honeywell / UOP. The workshop was held from 12<sup>th</sup> to 21<sup>st</sup> July 2017 at PARCO plant site.
- Chairman HAZID, ENVID, Inherently Safer Design (ISD) workshop for KOC Fuel Supply System (Crude oil, LSFO, Fuel Gas & Gas Oil) from Zour to Nuwaiseeb Thermal Power Station. The scope included Pumping & Metering Station. The workshop was held at AMEC Foster Wheeler office in London in the first week of July 2017.
- Chairman SIL Assessment workshop of Kuwait Oil Company (KOC) GC-24 Upgrade to handle 70% Water Cut in Crude and Capacity Increase to 215 MBOPD Project. FEED Contractor – Amec Foster Wheeler. The workshop was held in London in Aug 2016.
- Chairman HAZOP & SIL Assessment for Kuwait National Petroleum Company (KNPC) Al-Zour Oil Refinery Project. The workshop was held at Fluor office in Amsterdam in May 2016. EPC Contractor – Fluor, Daewoo and Hyundai Heavy Industries (FDH Joint Venture).
- Chairman HAZOP & SIL Assessment for SCOP Karbala Refinery Project, Iraq. EPC Contractors – SK Engineering, GS Construction & Hyundai. The workshops were facilitated as an associate of DNV GL, Seoul, South Korea. The workshop was held in Seoul during May-June 2015.
- Chairman HAZOP workshop for BGC Rehabilitation of Iraq South Gas Facilities – West Qurna Gas Interface Facilities Project. HAZOP team members were from Shell, ExxonMobil and State Company for Oil Projects (SCOP), Iraq. Contractor – WorleyParsons.
- Chairman HAZOP workshop for Oil Storage Terminal Project – KAFZA II, Khor Al Zubair (KAFZA), Iraq. Team members were from British Petroleum, UK and Chemietech. EPC Contractor – SKA Energy.
- Chairman HAZOP study for PARCO Refinery – Honeywell/ UOPs PENEX Isomerisation and PSA Units were HAZOPed. Honeywell/ UOPs specialists participated in the workshop. Contractor – ENAR Petrotech.
- Chairman HAZOP workshop for Jet A-1 Fuel Farm & Fuel Hydrant System for the new King Abdulaziz International Airport, Jeddah, Saudi Arabia.
- Chairman HAZID & HAZOP workshops for ADMA-OPCO Zakum Oil Lines Replacement Project (Phase I). Contractor – NPCC.



## PROFESSIONAL RESUME

- Chairman HAZOP & SIL Assessment workshop for QP Domestic Supply of Butane from NGL Complex to QP Refinery. Contractor – Mott MacDonald.
- Chairman HAZOP & SIL Assessment workshops for QP FEED for Hamad International Airport Jet A1 Supply & FEED for Strategic Petroleum Products Storage Facility Phase 1 at Ras Laffan Industrial City. Contractor – WorleyParsons.
- Chairman SIL Assessment for QP FEED for New Crude Oil Storage Tank and Associated Facilities at Halul.
- Chairman SIL Assessment of Al Hosh, Shah Gas Development Program GG12 Tie-in of 12 Wells to the Gas Gathering System Project. Contractor – Chiyoda CCC Engg. Ltd.
- Chairman HAZOP for ADMA-OPCO EPC for 4 New Gas Injectors Project. Contractor – McDermott.
- Chairman HAZOP for ZADCO Seventh Crude Oil Storage Tank at Zirku Island.
- Chairman HAZOP of BAPCO Sulphur Recovery Unit #3 Condensate System Modification. Contractor – Technip.
- Chairman HAZID & SIL Assessment workshops for QP Expansion of Fuel Gas & ethane Headers at Ras Laffan Industrial City. Contractor – TR Engineering.
- Chairman SIL Assessment for RasGas LNG Trains during 3-weeks long workshop held in Al-Khor, Qatar in Nov 2013. Safety Instrumented Functions count was 650. Contractor - Qatar Kentz/CGC.
- Chairman HAZOP workshop for Maersk Oil HP/LP Interface Revalidation Project.
- Chairman HAZOP workshop for Maersk Oil By-pass of ASABI-V-3401 Inlet during PVI Project.
- Chairman HAZID workshop for Maersk Oil Accommodation Rig at Offshore B-Location.
- Chairman HAZOP & SIL Assessment workshops for State Company for Oil Projects (SCOP) Iraq Crude Oil Export Pipeline Infrastructure Project Rumailah to Haditha. Contractor – SNC Lavalin.
- SIL Verification for Iraq Crude Oil Export Expansion Project (ICOEEP). Contractors – Foster Wheeler & Leighton Offshore.
- Chairman HAZID, HAZOP & SIL Assessment workshops for Qatar Petroleum Front Mounted Base (FMB) Offshore Project. Contractor – Technip.
- Chairman HAZOP workshop for Oryx GTL U50 Tempered Water Cooling System Installation for pumps seal system. Contractor – Technip.
- Chairman HAZOP workshop for Dubai Natural Gas Company (DUGAS) for their new 32000MT Butane Storage facility. Contractor – Belleli, Italy.
- Chairman for various HAZID/HAZOP workshops for Maersk Oil Qatar:
  - HAZOP for GD Seawater Coarse Filtration Upgrade
  - HAZOP for BE Platform Sea Water System modifications
  - HAZID & HAZOP of EDHTR01-4 Fuel Gas Skid Relocation & Modifications
  - HAZID for Replacement of Accommodation Containers at FA platform
  - HAZID for Removal & Installation of ABB After-coolers on AB platform
  - Pre-SIL Surge Protection HAZOP for offshore platforms D & F Locations
  - Pre-SIL HAZOP for offshore platforms B & C Locations
  - SIL Assessment for D2EVA Surge Protection
  - HAZOP for New Production Wells GD-22 / GD-37 and Water Injection Well GA-02
- Chairman SIL Assessment for ZADCO EPC for Power Upgrade Project at Zirku Island. Contractor – ABB, Italy.
- Chairman HAZID workshop for ADMA-OPCO Zirku Island Accommodation Complex and Administration Building –SARB Package 2.
- Chairman Pre-Startup HAZOP for Initial Production (IP) at North Island/NSP and South Island/SSP Facilities for ZADCO Upper Zakum 750K Sub-Sea Pipelines, Cables, Offshore Structures & Brownfield (EPC-1) Project.
- Chairman SIL Assessment of Ethane Dryer Facilities at Yanbu NGL Plant Project of Saudi Aramco, Saudi Arabia/ Engineer – SINOPEC E&C Middle East Co. Ltd

## PROFESSIONAL RESUME

- Chairman SIL Assessment for QP FEED for Installation of 20" Wet Gas Pipeline between KM & KS.
- Chairman HAZID workshop for QP FEED for Installation of Flammable and Toxic Gas Detectors at Ras Laffan Industrial City Buildings. Contractor – Tebodin ME.
- Chairman HAZID & HAZOP workshops for QP FEED for Installation of Firewater Pumps at Khatiyah Main and Ummbab. Contractor – Tebodin ME.
- Chairman HAZOP workshop for BGC West Qurna CGS-6 Gas Compression, Dehydration Station & Utilities. Vendor representatives from General Electric (GE) Italy, BGC and State Company for Oil Projects (SCOP), Iraq participated in the workshop. Contractor – WorleyParsons.
- Chairman SIL Assessment for OMV Condensate Stabilization Unit for Mehar GPF project. Contractor – Presson Descon (PDIL).
- Chairman HAZOP workshop for BGC Zubair Integrated Facilities (WO-13). Contractor – WorleyParsons.
- Chairman HAZOP workshop for Majnoon Slug Catcher and North Rumailah Gas Dehydration Bypass Project (WO-20). Contractor – WorleyParsons.
- Chairman HAZOP workshop for Rehabilitation of Iraq Gas Facilities Qurainat Temporary Compressors Off-Plot Piping Tie-Ins Project (WO-22). Contractor – WorleyParsons.
- Chairman SIL Assessment for ZADCO 7<sup>th</sup> Crude Oil Storage Tank Project at Zirku Island. Contractor – Belleli.
- Chairman SIL Assessment for ZADCO UZ-750 West Island & West Satellite Platform. Contractor – Technip.
- Chairman HAZOP workshop for Upgrade of Effluent Treatment Plants and existing network at Al Quoa, Wadi Al Flaie and Al Hayer areas in Al Ain, UAE. Contractor – Purewater Technology.
- Chairman HAZOP workshop for Premier Products FZC Oil & Petrochemical Storage Terminal at Hamriyah Free Zone, Sharjah, UAE.
- Chairman HAZOP Workshop for Main Gas Turbine Pumps FAO Depot which is part of the Iraq Crude Oil Export Expansion Project (ICOEEP). The team members were from SCOP/SOC (Iraq), Ruhrpumpen (Germany), Siirtec Nigi (Italy), Siemens (Sweden), PEG and Penspen (Abu Dhabi). The workshop was held in Istanbul, Turkey.
- Chairman HAZOP & SIL Assessment for Pakistan Petroleum Limited Gambat South Gas Processing Facility Train-1 (GPF-II) Project. The team members were from Exterran (UAE) and PPL. Contractor – PDIL.
- Chairman SIL Assessment for Kuwait Oil Company's New Gathering Centre, GC-29 in North Kuwait. The total number of safety instrument functions were more than 200. Contractor – Petrofac.
- Chairman HAZOP Workshop for ADCO EPC for Sahil Field Development Project (Phase 2). EPC Contractor – Descon.
- Chairman HAZID workshop for GASCO New Workshops and Civil Maintenance Facilities at Buhasa.
- Chairman HAZID workshop for GASCO New Stores for GS and SCM Divisions at Mussafah – Abu Dhabi.
- Chairman SIL Assessment workshop for ADMA-OPCO Satah Al Razboot (SARB) Field Development Project – Package 3 EPC Works.
- Chairman HAZID, HAZOP & SIL Assessment for Kuwait Aviation Fuelling Company (KAFCO) Extension of Aviation Fuel Hydrant System at Kuwait International Airport.
- Chairman SIL Assessment workshop for Abu Dhabi Polymers Company Ltd., Petrochemical Complex at Ruwais Industrial Area, U.A.E for introduction of single site catalyst in the PE-2 unit of BOROUGE-1 plant.
- Chairman HAZOP workshop for Brooge Petroleum & Gas Investment Company FZC (BPGIC) Fujairah Oil Terminal, Phase I. Technical team members from Audex, Singapore

## PROFESSIONAL RESUME

attended the workshop. Employer's representatives were from MUC Oil & Gas Engineering Consultancy LLC.

- Chairman SIL Assessment for Vacuum Distillation of Sohar Refinery Improvement Project, Oman Refineries and Petrochemicals Company LLC, Sultanate of Oman.
- Chairman Pre-Startup HAZOP for TAKREER EPC Works for Construction of Jetty at Hamriyah Free Zone, UAE. Engineering - Tebodin Middle East Ltd & ATKINS. Contractor – Archirodon.
- Chairman HAZOP workshop for ADSSC Phase 4 Network and WWTP Capacity Enhancement in Madinat Zayed. Team members from Dorsch Gruppe DC, ILF, ADSSC & Purewater attended the workshop.
- Chairman SIL Assessment / Safety Requirement Specifications / SIL Verification for ADCO EPC ASAB FFD Project Flare Modifications Project. EPC Contractor – Petrofac.
- Chairman HAZOP workshop for Pakistan Petroleum Limited Gambat-III Gas Processing Plant. EPC Contractor – Spec Pro, Dubai, UAE.
- Chairman SIL Assessment workshop for QP FEED for Fiscal Metering Facilities for PS-2 /3 Crude Oil at Halul and QP FEED for Produced Water Disposal System at Halul. FEED Contractor – Mott MacDonald, Abu Dhabi.
- Chairman HAZID, ENVID & HAZOP workshops for Gazprom Neft Badra BV EPC for Water Supply System in Badra, Iraq. EPC Contractor – Al Bilal, Dubai.
- Chairman for HAZID/ ENVID/ OHID for ADCO EPC Bab Habshan 1 Development Project (Phase I) - VO No.4 (Phase II) Project.
- Chairman HAZOP workshop for ADCO EPC for Replacement of Air Compressors in Gas Facilities at RMS 1 to 5 and Replacement of Instrument at 51 OGD Wells. EPC Contractor – Fortune Engineering & Energy Services, Abu Dhabi, UAE.
- Chairman HAZOP workshop for Jaheziya Development Program. Lead Design Consultant – Dar Al Handasah, Abu Dhabi, UAE.
- Chairman SIL Assessment for ADCO EPC for Replacement of Air Compressors in Gas Facilities at RMS 1 TO 5 & Replacement of Instrumentation on 51 OGD –II Wells Project. Contractor – Fortune.
- Chairman HAZOP workshop for Dubai Municipality Jebel Ali Sewage Treatment Plant, Phase 2. Contractor – Six Construction and L&T Joint Venture. The workshop was held from 22<sup>nd</sup> to 26<sup>th</sup> April 2018 at Project Site Office, Jebel Ali, UAE.

### Alarm Rationalization Studies

- Chairman Alarm Rationalization study for Uzbekistan Gas-to-Liquid (GTL) Project. The workshop was held at Hyundai office in Seoul, Korea from 29<sup>th</sup> Nov to 22<sup>nd</sup> Dec 2017.
- Co-Chairman Alarm Rationalization Study for Petronas Carigali Provision of EPCC of Water Management System (WMS) Phase 2 for Garraf Development for Petronas Carigali Iraq Holding B.V. EPC Contractor was TCC China. The workshop was held from 17<sup>th</sup> to 19<sup>th</sup> Nov 2022

### Bow-Tie & HSE Critical Equipment & Systems

- Chairman Bow-Tie workshop for QatarEnergy EPIC for New Gasoline and Jet Storage Facilities in MIC. EPIC Contractor – Rotary Engineering. The workshops were held at Rotary Engineering Office in Singapore during Feb-Mar 2022 and June 2022.
- Chairman Bow-Tie workshop for QatarEnergy EPIC for Facilities Modification at RG Plant. EPC Contractor was ROOTS Energy & Engineering Services. The workshop was held on 14<sup>th</sup> Sept 2021.

## PROFESSIONAL RESUME

### Control HAZOP (CHAZOP)

- Chairman CHAZOP workshop for Public Works Authority Al-Shamal Sewerage Treatment Project, Doha, Qatar. EPC Contractor – Larsen & Toubro.
- Chairman CHAZOP workshop for Public Works Authority Industrial Area Sewage Treatment Facilities Second Phase (2B) Expansion Project. EPC Contractor – Six Construct.
- Chairman CHAZOP workshop for Saudi Aramco/ BAPCO Saudi Bahrain Pipeline Project, Saudi Arabia. Contractor – Saudi FAL Co. Ltd.
- Chairman CHAZOP workshop for Public Works Authority Design, Build Operate and Maintain (DBOM) Contract for Integrated Industrial Wastewater Treatment Works (IIWWTW) Phase I – CP 798 for AOP & TMS. EPC Contractor – Larsen & Toubro. The workshop was held from 23rd & 24th August 2023 in Doha.

### Electrical System Hazard & Operability (e-HAZOP) Studies

- Chairman e-HAZOP for ADGAS LG-7 Power Generation Unit at Das Island. Contractor – CEGELEC.
- Chairman e-HAZOP for BP Iraq NV Early Power Plant Project, Rumaila Oil Field, Iraq. Contractor – China Petroleum Engineering & Construction Corporation.

### Project HSE Reviews (PHSER)

- Chairman Project HSE Review (PHSER) Stage 4 for ZADCO Satah Field Facilities Development, Project No. 7218. Contractor – Galfar.
- Chairman Project HSE Review (PHSER) Stage 3 SATAH Full Field Development (STFFD) Project. Contractor – Technip.
- Chairman Project HSE Review (PHSER) Stage 4 SATAH Full Field Development (STFFD) Project. Contractor – Technip.
- Chairman Project HSE Review (PHSER) FEED Stage for SCOP's Iraq Crude Oil Export Pipelines Infrastructure Project Contractor – SNC Lavalin.
- Chairman Project HSE Review (PHSER) Stage 4 for ZADCO Replacement of Main Diesel Generators at Arzanah Power House. EPC Contractor – SICON.
- Chairman Project HSE Review (PHSER) Stage 4 for ZADCO 7<sup>th</sup> Crude Oil Storage Tank Project at Zirku Island. Contractor – Belleli.
- Chairman Project HSE Review (PHSER) Stage 2 for ADOC (Japan) FEED for Expansion Project. FEED Contractor – Mott MacDonald.
- Chairman Project HSE Review (PHSER) – Commissioning for GASCO's LNG Terminal at Ruwais.
- Chairman Project HSE Review (PHSER) - EPC for Water Supply System from Fresh Water Wells to CPF Badra in Iraq (Pre-Construction PHSER). Contractor – Al Bilal/ PL Engineering.
- Chairman Project HSE Review (PHSER) Stage 2 for Kuwait Oil Company's Jurassic Gas Facility 1 Project. The PHSER workshop was held at Fluor Office in Farnborough, UK.
- Chairman Project HSE Review (PHSER) Stage 3 & 4 for ADOC (Japan) EPC Causeway Pipelines Project. EPC Contractor – Target Engineering.
- Chairman Project HSE Review (PHSER) Stage 2 for KOC Nuwaiseeb Pipeline Project. The PHSER workshop was held at AMEC Foster Wheeler Office in London, UK.

### HSECES Identification, Performance Standards & Written Scheme of Examination

- EPC Works for ZK Field WHT'S Electrification ZWSC/ZCSC Topside Electrical Works Package-A. Contractor – TUV Nord.



## PROFESSIONAL RESUME

### Reliability, Availability and Maintainability (RAM) Studies

- Qatar Petroleum - Jet A1 Fuel Intermediate Storage Tanks, Jet A1 Booster & Mainline Pumps at Hamad International Airport, Doha.

### Value Engineering Studies

- Chairman for Iraq Crude Oil Export Pipeline Infrastructure Project Rumailah to Haditha Project Value Engineering workshop. Contractor – SNC Lavalin.

### Design Review

- Chairman Design Review workshop for Qatar Petroleum Front Mounted Base (FMB) Offshore Project.
- Chairman QP FEED for New Crude Oil Storage Tank and Associated Facilities at Halul

### SIMOPS

- ADNOC FEED for Hail and Ghasha Development Project. The workshop was held on 10th & 11th June 2019 at ADNOC Headquarters, Abu Dhabi involving representatives from ADNOC, ENI, Bechtel, OMV and Wintershall DEA.
- ADCO EPC Tie-in Works at South East (Package B) - Contractor – Descon
- Abu Dhabi Oil Company Limited (ADOC) – Japan FEED for Expansion Project
- Gazprom EPC Gas Export Pipeline Badra Zubaidah Republic of Iraq Project
- QP FEED for New Crude Oil Storage Tank and Associated Facilities at Halul
- ZADCO Island P6279: Satrah Off Gas Compressor at Zirku Project

### Constructability Review

- ADNOC Onshore EPC for Al Dabb'iyah Thammama Zone B Transition Zone Developments - Phase 1 (15 Wells) & Restore Al Dabb'iyah Other Zone (Oz) Production (17 Wells). Contractor – Archirodon.
- ADCO EPC Tie-in Works at South East (Package B) - Contractor – Descon
- GASCO Yas-Mina Zayed Gas Pipeline Existing Facilities Upgrade Project
- Chairman QP FEED for New Crude Oil Storage Tank and Associated Facilities at Halul
- Iraq Export Pipelines Infrastructure Project aimed to deliver 2.25 MMBOPD and 280 MMSCFD of fuel gas from the southern oil fields to the crude oil tank farm and pumping station at Haditha, North of Iraq

### Quantitative Risk Assessment

- QRA and FRA studies for SCOP Iraq Export Pipelines Infrastructure Project which will be constructed to deliver 2.25 MMBOPD and 280 MMSCFD of fuel gas from the southern oil fields to the crude oil tank farm and pumping station at Haditha, North of Iraq.
- Pakistan Petroleum Limited ADHI LPG/NGL Recovery Plant-III Project.
- QRA Study for TAKREER Improvement of Mafrag to Ghwaifat Section No. 4B:Al Mafrag to Himeem Interchange Project – Contractor – Ghantoot Transport.
- QRA & FERA Studies for Kuwait Oil Company's Fuel Supply System to Nuwaiseeb Thermal Power Station.
- Fire Hazard Analysis & Flare Radiation, Noise & Dispersion Study for Rehman Production Facility for Polish Oil & Gas Company. Engineering Contractor – Jacobs.
- QRA & EERA studies for Ethiopian Petroleum Supply Enterprise (EPSE) Dukem Petroleum Depot Project. Engineering Contractor – SMEC.
- Dispersion Study for Tatweer Petroleum Associated Gas Compression Phase 5 Project, Bahrain. Engineering Contractor – TDE, Abu Dhabi.
- Dispersion Study for Dubai Petroleum New MEG Regeneration Unit at Margham. Engineering Contractor – TDE, Abu Dhabi.

## PROFESSIONAL RESUME

- 3D Fire & Gas Mapping Study for Dubai Petroleum New MEG Regeneration Unit at Margham.
- QRA & FERA Studies for Qatar Petroleum Upgrade of Ethane Gas Compressor at Station V Project. Engineering Contractor – Black Cat Construction, Qatar.

**2010 – 2013**

**Principal Consultant**

**Vectra Middle East Ltd – Abu Dhabi**

**HAZID, HAZOP & SIL Studies**

- Chairman HAZOP & SIL Assessment of Group-III Base Oil Production Project of Abu Dhabi Oil and Refining Company (TAKREER) held during Sep-Oct 2011 at Hyundai office in Seoul, Korea. Vendor representatives from Borsig (Germany), Mann-Turbo (Germany), General Electric / Nuovo Pignone (Italy), I.T.T. (Italy) and UOP (France), Neste Jacobs (Finland) and ExxonMobil (USA) participated in HAZOP & SIL workshops / EPC – Hyundai Engineering, Korea
- Chairman SIL Assessment & Verification of Crude Gathering Facilities - Safaniya Phase I Project of Saudi Aramco, Saudi Arabia / EPC – J Ray McDermott.
- Chairman HAZOP and SIL Assessment of Petrobras FLNG Feed Project. The study was conducted in Chiyoda Corporation's office in Yokohama, Japan during July & Aug 2010. Team members were from Petrobras (Brazil), Repsol (Spain), and SBM (Netherlands) / Contractor – Chiyoda Corporation (Japan).
- Chairman HAZOP & SIL Assessment of ADNOC Distribution/TAKREER's New Oil Terminal at Hamriyah Free Zone, Sharjah. The terminal will be utilized for the storage and distribution of petroleum products Gas Oil, Unleaded Gasoline and Jet A-1 in the Northern Emirates. The workshop was held at SINOPEC office in Beijing, China in Nov 2012.
- Chairman HAZOP & SIL Assessment & SIL Verification of Iraq Crude Oil Expansion Project, Iraq Southern Oil Company / Contractors Leighton, Foster Wheeler & Mott MacDonald. The Workshop was held in Kuala Lumpur in May 2011
- Chairman HAZOP & SIL Assessment of INPEX Masela FLNG Project. The workshop was held in Jakarta, Indonesia during Sept-Oct 2013. Feed Contractor was JGC.
- Chairman HAZOP of Rumaila Oilfield Development Project, British Petroleum / China National Petroleum Corporation & Iraq State Oil Company, Iraq / Contractor - Nama Mott MacDonald
- Chairman HAZOP of FCP Offsite Well Cluster-1 Garraf Operations, Iraq. Client – Petronas Carigali Iraq Holding BV / Contractor – SPEC Pro, UAE
- Chairman HAZID workshop of Iraq Ministry of Oil/Joint Management Committee Export Infrastructure Crude / Fuel Gas Pipelines / Facilities Project which will export crude oil to Syria & Turkey. Contractor was SNC-Lavalin.
- Chairman SIL Assessment workshop for Iraqi Oil Export Pipeline Badra-Gharraf (Phase I) Project. Contractor - China Petroleum Pipeline Bureau.
- Chairman HAZID workshop for State Company for Oil Projects (SCOP) Iraq Export Pipelines Infrastructure Project which will transport dry gas from Basra to Baiji. The main components of the project include compressor stations, block valve stations and associated facilities for dry gas take-off to specific consumers. Contractor – SNC Lavalin.
- Chairman HAZID, HAZOP & SIL workshops for ZADCO/ADMA-OPCO Upper Zakum Field Development (UZFD) project which is aimed at achieving target oil production plateau rate of 750 MBD from the UZ field. EPC-1 contractor – Technip, UAE.
- Chairman HAZID & HAZOP workshops for ADMA-OPCO Zakum Water Injection Topside Piping and Subsea Pipeline Replacement Project. Contractor - Technip.
- Chairman SIL Assessment & Verification of LPG, Diesel & Gasoline Unloading, Storage & Transfer Facility, Ras Laffan, Qatar Petroleum, Qatar / EPC – Tebodin ME.
- Chairman SIL Assessment of NGV Filling Stations, GASCO, UAE / Contractor – QEnergy, UAE.

## PROFESSIONAL RESUME

- Chairman SIL Assessment of LPG Vaporizers, Qatar Petroleum / EPC – Tebodin ME
- Chairman SIL Assessment of Third Party Gas Receiving Project, Dolphin Energy, Doha, Qatar / Contractor – Worley Parsons, Qatar
- Chairman SIL Assessment of Bahrain Field Development Associated Gas Expansion Project- Phase I, Tatweer Petroleum, Bahrain / EPC – Worley Parsons, UAE.
- Chairman SIL Assessment of Fire Training Project, GASCO, UAE / EPC - Penspen
- Chairman SIL Assessment of new Sour Gas Booster Compressors & TEG unit, ADOC, Japan.
- Chairman SIL Assessment of Jetty LNG Boil-off Project, Qatar Gas, Qatar / EPC – Technip, Qatar.
- Chairman SIL Assessment of QP Khuff Gas Injection Project, Qatar Petroleum, Qatar / EPC – TR Engineering, Oman.
- Chairman SIL Assessment of Pressure Regulating Station, Qatar Gas Group, Qatar
- Chairman SIL Assessment of Habshan Direct Depressuring (HDD-1) Project, GASCO, UAE / Contractor – Nama Mott MacDonald, UAE.
- Chairman SIL Assessment of Upgrade of the Drainage Network at QP Refinery, Mesaieed project / Contractor – Fernas Construction Company
- Chairman HAZOP and SIL Assessment of General Electric Gas Turbine package, Ministry of Energy & Industry, Turkmenistan / Contractor – Petrofac Emirates. Vendor representatives from General Electric, France participated in the SIL workshop.
- Chairman SIL Assessment using LOPA for Qatar Petroleum Automation Upgrade Project for KMDS, KNDS & KSDS Gas Plants. Contractor was Yokogawa.
- Chairman SIL Verification of Abu Dhabi Crude Oil Pipeline (ADCOP) project. The project will facilitate the transfer of crude oil from Habshan production facilities to the Fujairah main oil terminal (MOT) on the East coast of the UAE. Contractor was Penspen.
- Chairman LOPA & Cost Benefit Analysis of proposed ESDV loop to protect against GTL Naphtha leakage & fire case for GTL Oryx, Qatar. Contractor - WorleyParsons.
- Chairman HAZOP of Modifications to Pearl Platform, Qatar SHELL GTL / Contractor – Technip.
- Chairman HAZOP of Diversion of Acid Gas Project, GASCO, UAE
- Chairman HAZOP of Habshan Direct Depressurizing Project (HDD-1), GASCO, UAE / Contractor - NAMA Mott MacDonald
- Chairman HAZOP of EPIC of Sweet Fuel Gas Supply to Dukhan Consumers (SFGSDC), Qatar Petroleum, Qatar / EPC – Black Cat Construction, Qatar
- Chairman HAZOP of Replacement of NGL Pipeline Network, Bu-Hasa, GASCO, UAE
- Chairman HAZOP of LPG Vaporizers, Qatar Petroleum, Qatar / EPC – Tebodin ME
- Chairman HAZOP of QP Mesaieed Refinery WWTP Up-gradation & Expansion Project, Qatar Petroleum, Qatar / EPC – Worley Parsons, Qatar.
- Chairman HAZOP of QP Halul Island Drain System Project, Qatar Petroleum, Qatar
- Chairman HAZOP of Re-routing of inter-Refineries Pipelines Project, TAKREER, UAE / Contractor – Alsa Engineering, UAE
- Chairman HAZOP of Shams Synthetic Natural Gas Plant, Sorough, UAE
- Chairman HAZOP of Offshore North Field Alpha Platform Modifications, Qatar Petroleum, Qatar / Contractor – Worley Parsons, Qatar
- Chairman HAZOP of Oily Water Effluent project, Dukhan field, Qatar Petroleum
- Chairman HAZOP of QP Mesaieed Refinery Waste Water Treatment Plant HAZOP / Contractor – Worley Parsons, Qatar
- Chairman HAZOP of Gas Dehydration Unit for Bahrain Field Development Project, Tatweer Petroleum, Bahrain. The vendor was BS&B from USA / Contractor – Worley Parsons, UAE
- Chairman HAZOP of Low & High Pressure Compressors for Bahrain Field Development Project, Tatweer Petroleum, Bahrain. The vendor representatives were from Enerflex, Canada / Contractor – WorleyParsons, UAE

## PROFESSIONAL RESUME

- Led Wellhead Over-pressure Reliability Study for ADCO Full Field Development Project / Contractor – Petrofac, UAE.
- Chairman HAZOP of Flare System, Tatweer Petroleum, Bahrain
- Chairman HAZOP of Produced Water Phase 2, Qatar Petroleum, Qatar / EPC Contractor – Black Cat Construction, Qatar
- Chairman HAZOP of Offshore De-mothballing & Debottlenecking Project of Abu Dhabi Marine Operating Company (ADMA-OPCO) at Zakum Central Super Complex (ZCSC) and Zakum West Super Complex (ZWSC).
- Chairman HAZOP of Fire Training Project, GASCO, UAE / Contractor - Penspen
- Chairman HAZOP of QP Khuff Gas Injection Project, Qatar Petroleum, Qatar / EPC – TR Engineering, Oman
- Chairman HAZOP of Re-Engineering of QP Fire Water System PS-2 & 3 / Contractor – Worley Parsons, Qatar
- Chairman HAZOP of Pressure Regulating Station, Qatar Gas Group, Qatar / Contractor – Qatar Gas Group
- Chairman HAZOP of Habshan Direct Depressuring (HDD-1 R) Project, GASCO, UAE / Contractor – NAMA Mott MacDonald.
- Chairman HAZOP of Upgrade of the Drainage Network at QP Refinery, Mesaieed project / Contractor – Fernas Construction Company
- Chairman HAZOP of QP Recycle Compressor Upgrade Project at ARAB-D Plant Dukhan / Contractor – Black Cat Engineering & Construction
- Chairman HAZOP of Gas Turbines & Diesel Treatment Package. Client - TOTAL / Contractor - Technip. Vendor representatives from Rolls Royce, USA and GEA, Germany participated
- Chairman HAZOP & CHAZOP (Instrumentation & Control HAZOP) of Doha South Waste Water Treatment Plant, Phase II. Client – Public Works Authority, Qatar and Contractors were, ITT(UK), KEO International Consultants and Consortium Larsen & Toubro-Galfar
- Chairman HAZOP of Pakistan Mehar Gas Development Project. Client Petronas/OMV & EPC Contractor – SPEC Pro, UAE.
- Chairman HAZOP of Yemen LNG Project. Client - Safer Exploration and Production Operations Company (SEPOC), TOTAL & EPC Contractor – Technip
- Chairman HAZOP of new Asphalt Blowing Unit for PARCO Refinery, Multan, Pakistan.
- Chairman HAZOP of Gas Intake and Pressure Letdown System of CNG Stations for ADNOC Distribution. Contractor was Bauer Kompressoren GmbH, Germany.
- Chairman HAZOP & SIL Assessment of Produced Water Treatment Plant, ZADCO Satah Full Field Development Project. Contractor was Galfar Engg. & Construction. Vendor representatives from FLSmidth, UK participated in the workshops.
- Chairman HAZID of Synthetic Natural Gas Project, GASCO, UAE / Contractor – Sergas, UAE.
- Chairman HAZID & HAZOP of ZADCO 42" NMOL Project / EPC Contractor – NPCC
- Chairman HAZID of LNG Terminal Project of Pakistan Gasport / EPC Contractor – Halcrow, UK
- Chairman HAZID & HAZOP workshops for new air compressors at QP offshore production stations at Maydan, Mahzam & Bul Hanine. EPC contractor was WorleyParsons.
- Chairman HAZID & HAZOP workshops for QP NGL Topside & Riser Modification Project / Contractors were DOPET & Technip, Qatar.
- Chairman HAZOP & SIL Assessment of ADCO's Bab Habshan Development Phase 1 Feed Project / Contractor was CH2M HILL / Veco Engineering, UAE.
- Chairman HAZID workshop for ADCO Bab Habshan Development Phase-I. Contractor – Petrofac.
- Chairman HAZID & HAZOP workshops for Al-Kafji Joint Operation (KJO), a joint venture between Saudi Aramco and Kuwait Gulf Oil Company (KGOC), Pipeline Project at Al-

## PROFESSIONAL RESUME

Hout Oilfields in the divided area between Saudi Arabia and Kuwait. Feed Contractor was Technip.

- Chairman HAZOP workshop for GEO Energy Gas Preparation Units at Balgymbaeva & Makat, Kazakhstan. Contractor – SPEC.
- Chairman HAZOP workshop for QP Water Supply Facilities to Dukhan Concession Area. Contractor – KEO, Qatar.
- Chairman HAZOP workshop for Five Sustainability Projects of Oryx GTL, Qatar. Contractor – WorleyParsons.
- Chairman HAZID workshop for GASCO Habshan Acid Gas Flare Recovery (HAGFR) Project. EPC Contractor – DESCON.
- Chairman HAZID, HAZOP & SIL workshops for Qatar Petroleum Additional After-cooler for Recycle Compressor in ERU, Dukhan project. Contractor – Technip.
- Chairman HAZID, HAZOP & SIL workshops for Kuwait Aviation Fuelling Company (KAFCO) Jet Fuel Storage & Distribution Project for new passenger terminals at Kuwait International Airport. Contractor – Penspen.
- Chairman HAZOP workshop for Ammonia Recovery & Ammonia Flare System of Qatar Fertiliser Company. Contractor – Black Cat Construction.
- SIL Verification of Safety Instrumented System of ADMA-OPCO Zakum Water Injection Project Capacity Upgrade Project. Contractor - J Ray McDermott.
- Chairman HAZID workshop for QP Dissipation Array System for PS/2 and PS/3 Offshore platforms. Contractor – Technip.
- Chairman SIL Assessment Workshop for ADMA-OPCO Additional 100MBD ZWSC Modification Project. Contractors - NPCC & WorleyParsons.
- Chairman HAZOP & SIL Assessment for Oryx GTL Unit 40 Third Coalescer & Unit 30 Gas Primary Filter Backflush Projects.
- Chairman HAZOP for Tanker Reception Facility at Doha West STW old plant. Client was Public Works Authority, Doha, Qatar and Contractor was Metito. Consultant representatives from NIPPON KOEI Company also participated in the workshop.
- Chairman HAZOP for KGOC Export Gas and Condensate Facilities for Al-Khafji facility and for Kuwait facility. Representatives from Al-Khafji Joint Operations (KJO) and Kuwait Oil Company (KOC) participated in the workshops. Contractor – Technip.
- Chairman HAZOP & SIL Assessment workshops for ZADCO Gas Dehydration Unit (GDU) of Satrah Full Field Development Project. Vendor representatives from Frames Process Systems participated in the workshop. Contractor – Technip.
- Chairman HAZID, HAZOP & SIL Assessment for Dolphin Energy's Third-Party Interconnecting Facilities Project. Contractor – Technip.
- Chairman HAZOP & SIL Assessment for ZADCO's PMP Shutdown Optimization Project. Contractor – Technip.
- Chairman SIL Assessment of Nabucco Natural Gas Pipeline Project which is a joint venture of Bulgarian Energy Holding (Bulgaria); BOTAS (Turkey); MOL Group (Hungary); OMV Gas & Power (Austria); RWE Supply & Trading (Germany) and Transgaz S.A. (Romania). The project constitutes a dedicated gas transit and transportation pipeline from Turkey to Austria via Bulgaria, Romania and Hungary. Contractor – WorleyParsons.
- Chairman HAZOP workshop for ADNOC Distribution's CNG Stations Phase II Project. The CNG stations will be installed all across UAE. Compressor vendor representatives from Bauer, Germany also participated in the workshop.
- Chairman HAZID & HAZOP workshops for ADNEC SNG Plant for Capital Centre. Contractor – Q-Energy (Lootah BC Gas LLC).
- Chairman HAZOP workshop for ZADCO's Electrical Submersible Pumps at UAD Wellhead platforms WHPS-01, 02 & 11 Project. Contractor – Tebodin.
- Chairman HAZOP of GASCO's ASAB Compression Units 191 & 291 operational modes.
- Chairman HAZID & HAZOP workshops for QP's Dewatering & Fiscal metering facilities Project at Halul Island. Contractor - WorleyParsons.



## PROFESSIONAL RESUME

- Chairman HAZID & HAZOP workshops for TOTAL's New Sampling Drums Project for Offshore platforms at Al Khalij Field.
- Chairman HAZID workshop for QP Continuous Emission Monitoring System (CEMS) Project in Dukhan Plant. Contractor – Black Cat
- Chairman HAZOP workshop for Oryx GTL's Deluge System Automation Project. Contractor – Black Cat
- Chairman HAZOP & SIL Assessment workshops for QP Replacement of Hot Oil-Crude Heat Exchanger & Installation of Liquid-Liquid Coalescer Project at Dukhan.
- Chairman HAZID & HAZOP workshops for QP New Jet A1 Fuel Supply Pipeline from Mesaieed Refinery to New Doha International Airport. Contractor – Petrojet.
- Chairman HAZOP & SIL Assessment workshops for QP NGL-3 Acid Gas Removal Units 1 & 2 Amine Regenerators & associated equipment revamp project at Mesaieed. Contractor – Mott MacDonald.
- Chairman HAZOP workshop for ADGAS Train-1 & 2 Ethane Extraction Project. Contractor – Chiyoda Almana, Qatar.
- Chairman HAZOP workshop for GASCO's Refrigeration Package Vendor Modifications, Buhasa. Contractor – Toledo.
- Chairman HAZOP workshop for ADMA-OPCO's Flare Modification Project at Das Island. Contractor – Technip.

### Project HSE Reviews (PHSER)

- Chairman Project HSE Review (PHSER) for GASCO's Replacement of 20" Lean Gas Pipeline from Buhasa to Bab & Bab to Thamama C in Habshan Project. Contractor – ILF Consulting Engineers.
- Chairman Project HSE Review (PHSER) for GASCO's new Butane, Propane and Paraffinic Naphtha Storage Tanks at Ruwais.
- Chairman Project HSE Review (PHSER) for GASCO's Habshan Ruwais Shuweihat Gas Pipeline Project

### HSECES Identification, Performance Standards & Written Scheme of Examination

- ADMA-OPCO ZCSC De-mothballing Project
- GASCO Habshan Integrated Gas Development Project
- ADMA-OPCO 100 MBD DAS Facilities Upgrade Project

### Reliability, Availability and Maintainability (RAM) Studies

- Qatar Petroleum Spare Heat Exchangers Project at RG Plant, Dukhan
- Qatar Petroleum Telemetry from Production Stations (PS) to Ras Abu Abu (RAA)
- Qatar Petroleum Feasibility and Concept Optimization for ETP for NGL 1, 2, 3 & 4

**2009 – 2010**

**Senior Expert**

**Schlumberger Business Consulting – United Kingdom**

During his time with Schlumberger Business Consulting, Fayyaz worked for Kuwait Oil Company on the following projects:

- Failure Mode & Effects Analysis of Gathering Stations, Kuwait Oil Company
- Design verification of New Condensate Recovery Units, Kuwait Oil Company
- Site Safety Audit of Gas Gathering Centres, Kuwait Oil Company

**2008 – 2009**

**Principal Engineer (Process Safety)**

**Simon Carves – Cheshire, United Kingdom**

Lead role in coordinating process safety activities within the company and with external clients.

## PROFESSIONAL RESUME

### HAZOP & SIL Studies

- Coordinated HAZOP closeout for various LDPE projects
- Verification of SIL Assessment calculations for various LDPE projects.

### Process Safety Design

- Verification of Pressure Relief Design of PTTPE LDPE Project, Thailand
- Fire Water Network Design, Saudi Kayan Project, Saudi Arabia
- Development of Active & Passive Fire Protection Philosophy, PTTPE LDPE Project

**1995 – 2008**

### Senior Engineer

### Akzo Nobel (formerly ICI)

Fayyaz was involved with the following projects during his time with ICI:

### Project Safety Reviews

- Management Safety Audit & Risk Assessment of PPL's Oil & Gas Gathering, Purification & Compression Stations at Sui, Kandhkot, Mazarani & Adhi.

### Value Engineering / Process Re-engineering / Energy Audits

- Led Value Engineering Studies for a number of manufacturing sites all around the world with the objective to reduce energy consumption and increase productivity;
  - ICI Paints plant in Lahore. Personnel from ICI Paints China & Thailand participated in the study
  - ICI Soda Ash Plant at Khewra
  - ICI Specialty Chemicals Plant at Karachi
  - Nimir Chemicals – manufacturer of Phthalic Anhydride, DOP & Fatty Acids
  - Style Textile, Lahore
  - 400,000 tons per annum Pure Terephthalic Acid Plant at Port Qasim.
  - ICI Polyester Fiber Plant at Sheikhpura
  - Packages Pulp & Paper Mill, Lahore
  - National Starch Plant – Goole, Yorkshire, United Kingdom
  - National Starch Plant – Hamburg, Germany
  - Pre-Decorative Plant, Ammerzoden, the Netherlands
  - Specialty Chemicals Plant at Palmira, Argentina
  - Paints Plant at Rheinberg, Germany

### Process Engineering & Operations Experience

- 44KTPA Polyester Expansion Project - Prepared process specifications and P&IDs for Ingersoll-Rand Centrifugal Air Compressors, Reverse Osmosis Water Treatment Plant, Cooling Towers and Effluent Treatment Plant for 44KTPA Polyester Expansion Project.
- Process Design for 50ktpa Soda Ash Expansion Project - Process engineering design of the plant piping for the 50ktpa Soda Ash Expansion Project:
- Redesign of Overhead Stripping Column Distributor - Redesigned top distributor of OSC column and successfully improved the column performance.
- Debottlenecking of Packed Column - De-bottlenecked Process Distiller that enabled recovery of 500 m<sup>3</sup>/day of wastewater.
- Debottlenecked Mono-carbonating Tower intended for carbon dioxide absorption in ammoniated brine solution. Plant throughput increased by about 3%.
- De-bottlenecked Pure Terephthalic Acid Conveying System at Polyester plant with the technical assistance from Chicago Blowers, USA. The conveying rate was successfully increased by additional 10%.
- Process Design of Acrylic Emulsion Plant - Developed P&IDs and basic process design for the new Acrylic Emulsion and Alkyd Resin Plant for ICI Paints Plant.

## PROFESSIONAL RESUME

- Gas Turbine & Waste Heat Boiler Projects - Led development of the technical & commercial feasibility and basic process design for Co-generation plant (Gas Turbine/Waste Heat Boiler).
- 10tons Polyvinyl Acetate Reactor Design - Led basic design of 10 Tons PVA Reactor and its associated equipment e.g. primary & secondary overhead condensers, catalyst and monomer feed tanks etc.
- Visited Brunner Mond's Soda Ash Plants at Northwich, Cheshire, UK for training at their plant and for exposure to their management practices.

### Presentation on Modern Tools & Techniques for Energy Conservation in Germany

- Attended the Energy Workshop in Rheinberg, Germany and made a presentation on modern tools & techniques for energy reduction in manufacturing sites.

**1992 – 1995**

**Staff Engineer, Engro Chemical**

### Process Engineering & Operations Experience

- Lead Process Engineer for 750KTPA Urea Plant Expansion Project. Basic Engineering was carried out at Toyo Engineering Corp's office in Chiba, Japan. Developed de-bottlenecking scope & process specifications of the following:
  - Uprate of two CO<sub>2</sub> Five Stage Reciprocating Compressors
  - Addition of a vertical thermosyphon reboiler in parallel for HP Decomposition
  - Replacement of Low Pressure Decomposer
  - Addition of Ammonia Booster Pumps, HP Carbamate Circulating Pump, HP Ammonia Pumps and Ammonia Condensers
  - Bubble Cap Trays modification in HP Absorber
  - Addition of third Finishing Train consisting of Falling Film Evaporator, Air Heater, Air Blower, Scrubber & Molten Urea Tank
- Lead Commissioning & Process Engineer (Urea Plant) for PAKVEN-600 Project in which second-hand Ammonia & Urea plants were purchased & relocated from USA & United Kingdom to Daharki, Pakistan. The ammonia plant was bought from Chevron and urea plant from ICI. Coordinated with commissioning teams from Exxon, Canada and from Toyo Engineering Corporation, Japan for the start-up of the plant. Inspected the plant units after the mechanical completion and signed mechanical completion certificates as owner's representative.
- Led pollution abatement study at the urea plant. Measured losses from the various vents at the plant. Optimized the operation of units and successfully reduced the ammonia losses from the plant.

**1981 – 1992**

**Staff Engineer, Fauji Fertilizer Co. Ltd.**

- Lead Process Engineer for Urea Plant Debottlenecking Project. Basic Engineering work was carried out at Snamprogetti's office in Milan, Italy. The scope of work included;
  - Preparation of material & energy balance of the plant at 2160 TPD capacity.
  - Process evaluation of Urea Reactor, HP & LP Decomposers, Heat Exchangers, Process Vessels, Control Valves, Pumps & Piping for new loads.
  - Visited Nuovo Pignone workshop in Florence, Italy for the technical meeting on uprating of High Pressure Centrifugal Compressor for CO<sub>2</sub>.
- Received training as user of Ammonia Plant designing software at Haldor Topsoe's office in Copenhagen, Denmark during the 6-months long assignment in 1985-86. The training covered process design of Primary/Secondary Reformer, CO Shift Converters, Ammonia Reactor, Ammonia Synthesis Loop and Cross-flow & Shell-and-Tube Heat Exchangers
- Pre-commissioning, Commissioning & Startup Engineer for Ammonia/Urea/Utilities Complex, FFC, Goth Machhi. Worked closely with American and Italian vendors during the commissioning of Gas Turbines, Steam Boilers, Water Treatment Plant, Chromate

## PROFESSIONAL RESUME

Removal Plant, Nitrogen generation plant, Air Compressors and Waste Water Treatment. Planned and Led performance tests on Utilities units for acceptance from the contractor and signed acceptance certificates as owner's representative.

- Developed Urea Plant simulation package using Fortran-77

### Experience as a Trainer

Developed & conducted courses on the following topics:

- Hazard Study Leader's Course (Duration: 5 days)
- Manufacturing Excellence Awareness (Duration: 2 days)
- Orientation Course on Engineering Applications (Duration: 1 day)
- Managing Innovation Workshop (Duration: 2 days)
- Creative Problem Solving (Duration: 1 day)

### International Consultancy Experience

Travelled and completed consultancy projects in the following countries in the last 10 years:

Argentina, Bahrain, China, Germany, Indonesia, Japan, Kuwait, Malaysia, Netherlands, Oman, Pakistan, Qatar, Saudi Arabia, Singapore, Spain, South Korea, Turkey, United Arab Emirates and United Kingdom.



# Certificate / Certificat Zertifikat / 認証

CFSE 130626 003

exida Certification hereby confirms that:

## FAYYAZ UL MOAZZAM

Has met the program requirements as defined by the CFSE  
Advisory Board in the field of functional safety applied to:

**Process Industry Application**

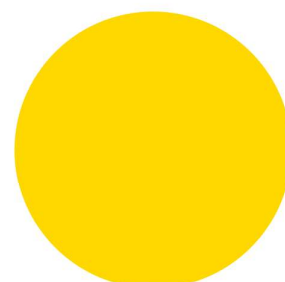
And is authorized to use the title:

## Certified Functional Safety Expert

And passed the exam for the standard:  
**IEC 61508 & IEC 61511**

A CFSE has clear obligations and duties to exercise his or  
her skills toward the creation, promotion and maintenance  
of functional safety.

Director



Candidate ID 13-UAE-00001

**Validity:**

This certificate is valid effective  
May 02, 2022 and expires  
May 02, 2025.

exida Certification  
Sellersville, PA, USA



Form	Version	Date
CFSE001	2.00	October 2009



**RISKNOWLOGY®**



Choose certainty.  
Add value.

# CERTIFICATE

**Fayyaz Moazzam**

Has successfully completed the Functional Safety  
Certification Program requirements for

***Functional Safety Professional***

In accordance with  
IEC 61508:1998  
IEC 61511:2003

Date issued: 2010-10-06  
ID number: TP10050264  
Field: Process Industry  
Subject: Safety Instrumented Systems

A handwritten signature in blue ink, appearing to read 'G. Greil'.

G. Greil  
Certifier

A handwritten signature in blue ink, appearing to read 'Dr. M. Houtermans'.

Dr. M. Houtermans  
Trainer




# Institution of Chemical Engineers

## HAZOP Study, Leadership and Management

This is to Certify that

**Fayyaz Moazzam**

Attended the course on HAZOP Study, Leadership and Management  
at IChemE, London, UK  
on 2–4 September 2014



Signed Course Director



# Institution of Chemical Engineers

## Layer of Protection Analysis

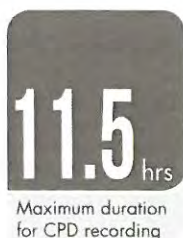
This is to certify that

**Fayyaz Moazzam**

Attended the course on *Layer of Protection Analysis*  
on 26–27 October 2015

Signed Course Director

*R-T Gowland*



# CERTIFICATE OF TRAINING

---

Name: **Fayyaz Moazzam**

Company: **PetroRisk Middle East**

has attended the following user courses

## **SA-01 Phast and SA-02 Safeti Training**

Online Training Course – January 17<sup>th</sup> to 21<sup>st</sup> and 25<sup>th</sup> to 27<sup>th</sup>, 2021

### **Contents:**

This course introduces the concepts and models within Phast. All areas of consequence modelling are covered, including:

- Discharge
- Dispersion
- Pool Formation & Evaporation
- Flammable Effects (Radiation & Overpressure)
- Toxic Effects
- Materials & Mixtures
- Advanced Features
- Introduction to Safeti
- Risk Models
- Risk Data Input & Study Structure
- Risk Theory &
- Risk Result

with extensive hands-on practice with the software to allow your new knowledge to be applied to typical problem scenarios.

Place and date:

Online, 27.01.2021



---

**Emmanuel Shogelola**

Course Tutor

# CERTIFICATE OF TRAINING

Certificate Number  
D-PS-SA-01F-202009-09

This is to certify that

**FAYYAZ MOAZZAM**  
**PetroRisk Middle East**

has successfully completed the following DNV GL - Digital Solutions training course

## **PHAST FOR FIRE AND EXPLOSION MODELLING TRAINING**

Place and date of course: **Online course, 2 September 2020**

Trainer: **Todd Yu and Richard Lee**

### **Course description/Focus areas:**

*The course introduces the concepts and models for fire and explosion modelling within Phast software, including:*

- Fire Modelling
- Explosion Modelling
- Advanced explosion modelling with Phast 3D Explosions extension

Place and date:  
**Online course,  
2 September 2020**

Signed on behalf of  
**DNV GL - Digital Solutions**



**Todd Yu**  
Trainer



**Richard Lee**  
Trainer



# CERTIFICATE OF TRAINING

Certificate Number  
D-PS-SA-07-202011-01

This is to certify that

**FAYYAZ MOAZZAM**  
**PetroRisk Middle East**

has successfully completed the following DNV GL - Digital Solutions training course

## **SA-07 SAFETI FOR QUANTITATIVE RISK ASSESSMENT**

Place and date of course: **Online course, 26-30 October and 2-3 November 2020**

Trainer: **Richard Lee**

### **Course description/Focus areas:**

*The course provides extensive guidance on how to use Safeti within the context of a Quantitative Risk Assessment (QRA). All the key aspects of the QRA process using Safeti are covered. Some of the topics included are:*

- QRA introduction
- Material handling
- Frequency estimation and parts count
- Release and dispersion modelling
- Ignition, fire and explosion modelling
- Toxic modelling
- Facility siting
- Impact and risk modelling

Place and date:  
**Singapore,**  
**3 November 2020**

Signed on behalf of  
**DNV GL - Digital Solutions**



**Richard Lee**  
Trainer



## CERTIFICATE OF TRAINING

---

**Fayyaz Moazzam**

has attended the DNV training course

## SA-03/06 Safeti advanced modelling Training Course

Date: 4, 5, 6, 7, 8, 11 & 12 December 2023 (7 days/ 4 hours per day)

Place and date:  
London, 15 December 2023

for DNV

*Mark Hunter*

---

**Mark Hunter**  
Principal Technical Support Engineer





INSIGHT NUMERICS

# CERTIFICATE OF COMPLETION

This document certifies that

# FAYYAZ MOAZZAM

has successfully completed introductory training held by Insight Numerics, LLC for Fire and Gas Mapping using Detect3D.

Issued date : 23 November 2020

Awarded this certificate based on the knowledge and skills gained.

**Detect3D**  
Detect3D Certified

Oliver Heynes, CEO and Director

E. Allen Miller, Director



[www.insightnumerics.com](http://www.insightnumerics.com)