

ARUNKUMAR A

Principal Consultant (Safety & Risk)

Personal statistics

Name: ARUNKUMAR ARUNACHALAM

Date of birth: 1966-01-27

Nationality: Indian



Academic attainment

1. Bachelor of Technology (Chemical Engineering), Anna University, 1987
2. Master of Science (Engineering Management), BITS Pilani 1992

Professional attainment

1. TUV Certified Functional Safety Professional (ID # TP 13050738)
2. DNV certified HAZOP Leader
3. B.O.E - Certified Boiler Operation Engineer - Inspectorate of Boilers, India
4. Associate member Institution of Chemical Engineers - IChemE, U.K
5. Member American Society of Safety Engineers –ASSE
6. Presented technical paper on Functional Safety in "Global Refining & Petrochemical Congress"

CAREER SUMMARY

Overall work experience of over 35 years in the field of Technical Services, Commissioning & Operation and Process Safety Management – Workshops & Studies.

HAZID / ENVID / OHID Workshops:

1. Chairman for HAZID workshop for ADNOC's UZ 1.5 MMBD EXPANSION PROJECT – PRE-FEED AND FEED in Technip offices in UAE through Bilfinger Tebodin, U.A.E
2. Chairman for HAZID workshop for Petronet LNG terminal (3rd Berth Jetty) in Toyo offices in Mumbai
3. Chairman for HAZID workshop for SASREF+ECC Derivatives Pre-FEED/ FEED Project – LLDPE Unit in Samsung E&A Offices, Korea through ERM Hong Kong
4. Chairman for HAZID workshop for ADNOC, HABSHAN FACILITIES through Bureau Veritas, U.A.E
5. Chairman for HAZID workshop for LUKOIL's Gas Chemical Complex Stavrolen Feed Project for Ammonia and Urea plant through KBR, India.
6. Chairman for HAZID workshop for OTEKO's Ammonia and Urea plant through KBR, India.
7. Chairman for HAZID workshop for ADNOC's EPCM FOR PROJECT SWING executed through BV U.A.E
8. Chairman for HAZID workshop for North Oil Company (NOC) Long Term Evaluation (LTE) DC, FC, HA & IA through Alinoz Energy, Private Limited, India.

9. Chairman for HAZID workshop for CP6S and CP7S Compression Complexes that are part of QG-S RGE facilities in SAIPEM / Worley offices in Malaysia.
10. Chairman for HAZID for FPSO Maromba - Virtual workshop for Tuff Offshore, executed through DNV, India.
11. Chairman for HAZID for North Kuwait Excavation, Transportation & Remediation (NKETR) project of Kuwait Oil Company (KOC) - Virtual workshop for KLaamor, executed through DNV, Kuwait.
12. Chairman for HAZID for Al Shaheen field - AB OBS EPCIC Project for North Oil Company (Qatar), Virtual workshop for NOC through DNV GL, U.A.E
13. Chairman for HAZID for South Kuwait Excavation, Transportation & Remediation (SKETR) project of Kuwait Oil Company (KOC) - Virtual workshop for KLaamor, executed through DNV, Kuwait.
14. Chairman for HAZID for South Kuwait Excavation, Transportation & Remediation (SKETR – Zone 3) project of Kuwait Oil Company (KOC) - Virtual workshop for ENSHAAT, executed through BV, Kuwait.
15. Chairman for HAZID for South Kuwait Excavation, Transportation & Remediation (SKETR – Zone 2) project of Kuwait Oil Company (KOC) - Virtual workshop for HEISCO, executed through BV, Kuwait.
16. Chairman for HAZID for Chlor-Alkali (CA) and Ethylene Dichloride (EDC), Vinyl Chloride Monomer (VCM) and Poly Vinyl Chloride (PVC) facilities of ADNOC's TAZIZ derivatives Project - Virtual workshop for Wood, through DNV, U.A.E.
17. Chairman for HAZID for Replacement of old & obsolete Substations in MAA Refinery of KNPC - Virtual workshop executed through B.V Kuwait
18. Chairman for ENZID workshop for SASREF+ECC Derivatives Pre-FEED/ FEED Project – LLDPE Unit in Samsung E&A Offices, Korea through ERM Hong Kong
19. Chairman for ENVID workshop for CP6S and CP7S Compression Complexes that are part of QG-S RGE facilities in SAIPEM / Worley offices in Malaysia
20. Chairman for ENVID for Replacement of old & obsolete Substations in MAA Refinery of KNPC - Virtual workshop executed through B.V Kuwait
21. Chairman for HAZID for North Field Production Sustainability (NFPS) Project of Qatargas (QG), Virtual workshop for Saipem, executed through ERM Malaysia.
22. Chairman for Hazard Assessment workshop for Saudi Aramco Research & Development Center Department (R&DCD)'s facilities - PILODIST, ROFA & GECIL
23. Chairman for HAZID for HAIFA Ammonia Plant - Virtual workshop for Saipem India.
24. Chairman for HAZID for Additional Tanks at IOCL Paradip Refinery - Virtual workshop for Saipem India.
25. Chairman for HAZID workshop for POD I KALIBERAU DALAM development Project , Virtual workshop for Tripatra, Indonesia, executed through LR Consulting - Energy Private Ltd, India
26. Chairman for HAZID for Block 5 - Al Shaheen Field CD Platform Oil Export Pumps, Virtual workshop for Ramboll Qatar.

27. Chairman for HAZID for LAM Offshore Facility Complex (LOFC), Virtual workshop for Dragon Oil, Turkmenistan executed through Saipem
28. Chairman for HAZID for Ruwais Fertilizer Industries (FERTIL), an ADNOC (Abu Dhabi National Oil Company) Group – Virtual workshop through DNV GL, U.A.E
29. Chairman for HAZID for Al Shaheen (ALS) field FSO (A) & FSO (B) project, Virtual workshop for NOC Qatar through DNV
30. Chairman for HAZID for Gato Do Mato FPSO project – Virtual workshop for Shell Brazil Engineered by Tuff Offshore / Saipem and execute through DNV GL India
31. Chairman for HAZID for Kuwait Oil Company (K.O.C) for GC-24 - Crude oil Gathering Centre and associated facilities in its North Kuwait (NK) area.
32. Chairman for HAZID for Schlumberger's ABH Stage 2 Project for Cairn India Ltd in Gurugram, India.
33. Chairman for HAZID for Lube Blending Plant for TOTAL OIL India Pvt. Ltd in Navi Mumbai, India
34. Conducted site visit and Process Hazard Review (PHR) of Panna offshore platforms (PPA / PA-PK & PQ) for British Gas (BG) in Feb 2016
35. Chairman for HAZID for Petronet LNG Storage and Regassification trains (3trains) at Dahej, Gujarat, India
36. Chairman for HAZID for ONGC's Daman Development Project for SWIBER Offshore – 7 well platforms (B12-field & C-24 field), 1 riser platform, pipelines and associated modifications in process (TCPP/TPP) platform.
37. Chairman for HAZID for KOC's EF / 1921-Construction of new 3 no.s 132 kv substations in SEK, Kuwait
38. Chairman for HAZID for Petro China Halfaya Company - HALFAYA OILFIELD DEVELOPMENT PROJECT, Republic of Iraq.
39. Chairman for HIRAC Workshop 42" SBHT Pipeline Project for L&T Hydrocarbon Engineering Ltd, Mumbai
40. Chairman for OHID for Abu Dhabi Oil Co. Ltd (ADOC)- FIELD DEVELOPMENT PROJECT – Hail & Mubbaraz Island, Abu Dhabi.
41. Chairman for HAZID for British Gas (BG) MB Platform & pipeline Project for L&T – Electrical Systems engineered by Larsen & Toubro, Chennai, India.
42. Chairman for ENVID for British Gas (BG) MB Platform & pipeline Project for L&T engineered by Larsen & Toubro, Chennai, India.
43. Chairman for HAZID for Abu Dhabi Oil Co. Ltd (ADOC)- FIELD DEVELOPMENT PROJECT – Hail & Mubbaraz Island Abu Dhabi.
44. Chairman for HAZID for FLUOR - HAZID Study for FEED for NGL to Burn Pit for GASCO in Abu Dhabi.
45. Chairman for HAZID for HPCL Bottling plant in Yediyur, Bangalore, India.
46. Chairman for HAZID for Indian Oil Corporation (IOCL) Paradip Refinery Project – Sour Water stripper unit, (SWS) engineered by Foster Wheeler UK.
47. Chairman for HAZID for Indian Oil Corporation (IOCL) Paradip Refinery Project –

Amine Regeneration Units (ARU) engineered by Foster Wheeler UK.

48. Chairman for HAZID for Indian Oil Corporation (IOCL) Paradip Refinery Project – Hydrogen Compression & Distribution system (HCD) engineered by Foster Wheeler India Pvt Ltd.
49. Chairman for HAZID for Indian Oil Corporation (IOCL) Paradip Refinery Project – Offsite & Utility Units Foster Wheeler India Pvt Ltd.
50. Chairman for HAZID for ONGC ARP Lakhmani ETP & WIP units in India.
51. Chairman for HAZID for KOC's Boundary fencing for Dhahi, Umm Niqa, NWRA areas project for MECC
52. Lead Process Engineer in HAZID workshops for YANSAB Polyolefin, SABIC - LLDPE, Polypropylene & Product handling units in Zoetermeer, Holland.

ISD workshop / Design Risk Assessment / Layout Safety Review:

1. Chairman for ISD workshop for ADNOC's UZ 1.5 MMBD EXPANSION PROJECT – PRE-FEED AND FEED in Technip offices in UAE through Bilfinger Tebodin, U.A.E
2. Chairman for Layout Safety Review for ADNOC's UZ 1.5 MMBD EXPANSION PROJECT – Al Ghallan Island (AGI) (CI), Umm Al Anbar Island (UAAI), Ettouk Island (ETI), & Asseifiya Island (ASI) through Bilfinger U.A.E
3. Chairman for Inherently Safer Design (ISD) workshop for ADNOC's Rehabilitation and Integrity Reinstatement of Flow lines & Trunk Lines in Bab & Asab through Bilfinger, U.A.E
4. Chairman for Inherently Safer Design (ISD) workshop for ADNOC's HABSHAN FACILITIES through Bureau Veritas, U.A.E
5. Chairman for Design Stage Inherently Safer Design (ISD) Workshop for Ruwais Diyab PROJECT for ADNOC through Dome Oilfield & Services, U.A.E
6. Chairman for Design Stage Inherently Safer Design (ISD) Workshop – ADNOC, PROJECT SWING for ADNOC through CPECC / Bureau Veritas, U.A.E
7. Chairman for Select Stage Inherently Safer Design (ISD) Workshop – ADNOC, FOR NASR 115MBD PROJECT PHASE 2 through Technip / Dome, U.A.E
8. Facilitated the Multidisciplinary Design Review (MDR) workshop for CP6S and CP7S Compression Complexes that are part of QG-S RGE facilities.
9. Facilitated the Design Risk Assessment (DRA) workshop for CP6S and CP7S Compression Complexes that are part of QG-S RGE facilities.
10. Chairman for Inherently Safer Design (ISD) Workshop – ADNOC, TAZIZ Project Diamond / Integration for Amec International Limited through DNV Abu Dhabi

HAZOP workshop:

1. Chairman for HAZOP workshop for ADNOC's RAK Depot Gas Oil storage and distribution in ADNOC offices U.A.E
2. Chairman for HAZOP workshop for ADNOC's CNG Stations (Mother, Online, Booster and Daughter) in ADNOC offices U.A.E
3. Chairman for HAZOP workshop for ADNOC's NGL Train 5 Project (45 working

days) in JGC offices in Japan through BV, U.A.E

4. Chairman for HAZOP workshop for ADNOC's BAB GAS CAP (BGC) PROJECT in Worley offices in U.A.E
5. Chairman for HAZOP workshop for Exxon Mobil's Holly Resin Blend Plant Project in KBR offices Chennai, India
6. Chairman for HAZOP workshop for CO2 Off gas Injection unit of AR RATAWI, Gas Midstream Project through Total Energies / KBR, India.
7. Chairman for online HAZOP workshop for EJECTOR BASED ATMOSPHERIC FLARE GAS RECOVERY Project for HAMMAR DGS IPF – Initial Production Facility, Iraq through Ruastec, Chennai, India.
8. Chairman for HAZOP workshop for Exxon Mobil's Air pre-heaters and Fuel switch project in KBR offices Chennai, India.
9. Chairman for HAZOP workshop for ADNOC's Salt-Off-Plot scope in ADNOC's offices in UAE through Bilfinger UAE.
10. Chairman for HAZOP workshop for P5 - HABSHAN-1 & HABSHAN- 5 DELTA HAZOP through Bureau Veritas , U.A.E
11. Chairman for HAZOP workshop for Petronet LNG terminal (3rd Berth Jetty) in Toyo offices in Mumbai
12. Chairman for HAZOP workshop for HABSHAN-4 & Utilities system through Bureau Veritas , U.A.E
13. Chairman for HAZOP workshop for Dredge facilities for QMM Bibibe PFS Engineering Services Project.
14. Chairman for HAZOP workshop for HABSHAN-0 & WASIT facilities through Bureau Veritas , U.A.E
15. Chairman for HAZOP workshop for HABSHAN-1 & HABSHAN-2 facilities through Bureau Veritas , U.A.E
16. Chairman for HAZOP workshop for PH&L facilities of QAFCO through DNV Abu Dhabi, U.A.E
17. Chairman for HAZOP workshop for Soybean facilities of SFPL through ERM, India
18. Chairman for HAZOP workshop for LUKOIL's Gas Chemical Complex Stavrolen Feed Project for TOYO's Urea plant in KBR, India.
19. Chairman for HAZOP workshop for LUKOIL's Gas Chemical Complex Stavrolen Feed Project for KBR's Ammonia plant in KBR, India.
20. Chairman for HAZOP of ISROSENE facility for ISRO through TUV Rhineland, India
21. Chairman for HAZOP Ruwais Diyab PROJECT for ADNOC through Dome Oilfield & Services, U.A.E
22. Chairman for HAZOP for ISRO Propellant storage and service facilities through TUV, India
23. Chairman for HAZOP for Condensate Stabilization Unit and LPG Sweetening and De-hydration facilities of AR RATAWI, Gas Midstream Project through Total Energies / KBR, India.

24. Chairman for HAZOP for OTEKO's Urea plant through KBR, India.
25. Chairman for re-validation HAZOP for UFC B facilities of QAFCO, Qatar. Virtual workshop for QAFCO through DNV GL, U.A.E
26. Chairman for HAZOP for South Kuwait Excavation, Transportation & Remediation (SKETR) project Leachate system of Kuwait Oil Company (KOC) for KLaamor, executed through DNV, Kuwait.
27. Chairman for HAZOP for OTEKO's Ammonia plant (3000 TPD) through KBR, India.
28. Chairman for re-validation HAZOP for Ammonia 5 & 6 facilities and associated utilities of QAFCO, Qatar. Virtual workshop for QAFCO through DNV GL, U.A.E
29. Chairman for re-validation HAZOP for Urea-5 facilities and associated utilities of QAFCO, Qatar. Virtual workshop for QAFCO through DNV GL, U.A.E.
30. Chairman for HAZOP workshop for CP6S and CP7S Compression Complexes that are part of QG-S RGE facilities in SAIPEM / Worley offices in Malaysia
31. Chairman for HAZOP for KOC's Water Treatment Plant at SEK Tie-In HAZOP Study. Virtual workshop for Saipem, executed through BV, Kuwait.
32. Chairman for HAZOP for water steam cycle of IWMF Singapore through Fichtner, India.
33. Chairman for HAZOP study for "North Kuwait Excavation Transportation and Remediation (NKETR)" through Bureau Veritas, Kuwait
34. Chairman for HAZOP for Vendor Charter (TEG REGENERATION PACKAGE) - North Field Production Sustainability Offshore & Pipelines Project for Saipem, Qatar. Virtual workshop for Saipem, executed through ERM Malaysia.
35. Chairman for HAZOP for HAZOP of SLB Compressor packages for KOC held in Kuwait through Glexcon U.A.E
36. Chairman for HAZOP for South Kuwait Excavation, Transportation & Remediation (SKETR) project of Kuwait Oil Company (KOC) through BV, Kuwait.
37. Chairman for HAZOP for Valve seal flushing package - North Field Production Sustainability Offshore & Pipelines Project for Saipem, Qatar. Virtual workshop for Saipem, executed through ERM Malaysia.
38. Chairman for HAZOP for WEPCO Expansion Project, Egypt. Workshop meeting held in Egypt by TUV Nord Egypt.
39. Chairman for HAZOP for Flare, Nitrogen & Propane system for North Field Production Sustainability Offshore & Pipelines Project for Saipem, Qatar. Virtual workshop for Saipem, executed through ERM Malaysia
40. Chairman for HAZOP for NOVEC, HVAC, DIFF & DELUGE System North Field Production Sustainability Offshore & Pipelines Project for Saipem, Qatar. Virtual workshop for Saipem, executed through ERM Malaysia.
41. Chairman for HAZOP for South Kuwait Excavation, Transportation & Remediation (SKETR) project of Kuwait Oil Company (KOC) - Virtual workshop for KLaamor, executed through DNV, Kuwait.
42. Chairman for HAZOP for Sand treatment package Qatar. Virtual workshop for

DBN PWM - ENG – SAF through DNV GL, U.A.E

43. Chairman for re-validation HAZOP for Urea-4 facilities and associated utilities of QAFCO, Qatar. Virtual workshop for QAFCO through DNV GL, U.A.E.
44. Chairman for HAZOP for Waste Water Treatment (WWT) package for POSCO, Qatar. Virtual workshop for QAFCO through DNV GL, U.A.E.
45. Chairman for re-validation HAZOP for Urea Formaldehyde facilities (UFC A) and associated utilities of QAFCO, Qatar. Virtual workshop for QAFCO through DNV GL, U.A.E
46. Chairman for HAZOP for North Kuwait Excavation, Transportation & Remediation (NKETR) project of Kuwait Oil Company (KOC) - Virtual workshop for KLaamor, executed through DNV, Kuwait.
47. Chairman for HAZOP for South Kuwait Excavation, Transportation & Remediation (SKETR) project of Kuwait Oil Company (KOC) - Virtual workshop for KLaamor, executed through DNV, Kuwait.
48. Chairman for re-validation HAZOP for Urea 3 facilities and associated utilities of QAFCO, Qatar. Virtual workshop for QAFCO through DNV GL, U.A.E
49. Chairman for re-validation HAZOP for Ammonia 4 facilities and associated utilities of QAFCO, Qatar. Virtual workshop for QAFCO through DNV GL, U.A.E
50. Chairman for HAZOP for Al Shaheen field - AB OBS EPCIC Project for North Oil Company (Qatar), Virtual workshop for NOC through DNV GL, U.A.E
51. Chairman for re-validation HAZOP for Ammonia 3 facilities and associated Utilities of QAFCO, Qatar, Virtual workshop for QAFCO through DNV GL, U.A.E
52. Chairman for HAZOP for North Field Production Sustainability (NFPS) Project of Qatargas (QG), Virtual workshop for Saipem, executed through ERM Malaysia.
53. Chairman for HAZOP for Catalytic Cracking Unit (CCU), Wastewater Incinerator (WWI) and Propylene refrigeration units of IOCL Dumad - Virtual workshop for Technimont through Vysus group.
54. Chairman for HAZOP for Train 3 of Wara Pressure Maintenance Project (WPMP), Kuwait Oil Company (KOC), Virtual workshop for CPECC through DNV GL, U.A.E
55. Chairman for HAZOP for SWS II unit of IOC Barauni BR 9 expansion project, Virtual workshop through Air Liquide
56. Chairman for HAZOP for UFC facilities of QAFCO, Qatar, Virtual workshop for QAFCO through DNV GL, U.A.E
57. Chairman for HAZOP for ARU III unit of IOC Barauni BR 9 expansion project, Virtual workshop through Air Liquide
58. Chairman for HAZOP for Melamine facilities of QAFCO, Qatar, Virtual workshop for QAFCO through DNV GL, U.A.E
59. Chairman for re-validation HAZOP (including re-HAZOP of Utilities) for Urea 1 facilities of QAFCO, Qatar, Virtual workshop for QAFCO through DNV GL, U.A.E
60. Chairman for HAZOP workshop for Saudi Aramco Research & Development Center Departmentp (R&DCD)'s facilities - PILODIST, ROFA & GECIL facilities

61. Chairman for the re-validation HAZOP for Urea 2 facilities of QAFCO, Qatar, Virtual workshop for QAFCO through DNV GL, U.A.E
62. Chairman for HAZOP for Modification Projects and Technical adjustments in Ammonia 1 & 2 facilities of QAFCO, Qatar, Virtual workshop for QAFCO through DNV GL, U.A.E
63. Chairman for HAZOP for ExxonMobil' s FEP enclosed ground flare project, Mossmorran, Scotland, Virtual workshop through TUV Nord, India.
64. Chairman for re-validation HAZOP (including re-HAZOP of Utilities) for Ammonia 1 facilities of QAFCO, Qatar, Virtual workshop for QAFCO through DNV GL, U.A.E
65. Chairman for re-validation HAZOP for Ammonia 2 facilities of QAFCO, Qatar, Virtual workshop for QAFCO through DNV GL, U.A.E
66. Chairman for HAZOP workshop for Additional coolers in POD I KALIBERAU DALAM development Project, Virtual workshop for Tripatra, Indonesia, executed through LR Consulting - Energy Private Ltd, India
67. Chairman for HAZOP for Modification Projects (9nos) and Technical adjustments (56 nos) in Ammonia 5 & 6 facilities and Urea 5 & 6 facilities of QAFCO, Qatar, Virtual workshop for QAFCO through DNV GL, U.A.E
68. Chairman for HAZOP workshop for POD I KALIBERAU DALAM development Project, Virtual workshop for Tripatra, Indonesia, executed through LR Consulting - Energy Private Ltd, India
69. Chairman for HAZOP for Block 5 - Al Shaheen Field CD Platform Oil Export Pumps, Virtual workshop for Ramboll Qatar.
70. Chairman for HAZOP for Common Tank Farm & Operational Meghnaghat-1 (M1) Power Plant in Bangladesh, Virtual workshop for Summit Meghnaghat Power Company Limited (SMPCL) through ERM, India
71. Chairman for HAZOP for H2S Management Project on Serpentina FPSO facility, Virtual workshop for L&T / Exxon Mobil through TUV Nord India
72. Chairman for HAZOP for LAM Offshore Facility Complex (LOFC), Virtual workshop for Dragon Oil, Turkmenistan executed through Saipem
73. Chairman for HAZOP for Ruwais Fertilizer Industries (FERTIL), an ADNOC (Abu Dhabi National Oil Company) Group, Virtual workshop through DNV GL, U.A.E
74. Chairman for Baseline HAZOP for Qatargas QG-2, QG 3&4 SRU and Hot gas Units in Al-Khor, Qatar
75. Chairman for e Re-HAZOP for ADNOC LNG OAG & IGD facilities in Das Island, Abu Dhabi
76. Chairman for Re-HAZOP for ADNOC LNG Train-3 & Storex facilities in Das Island, Abu Dhabi
77. Chairman for HAZOP for FPSO for NOC's Al Shaheen Field development for Tuff Offshore in Chennai, India
78. Chairman for HAZOP for ADNO LNG Nitrogen Generation Unit (Plant-10) in Das Island, Abu Dhabi
79. Chairman for Re-HAZOP for ADNOC LNG Train-1 & Train -2 in Das Island, Abu

Dhabi

80. Chairman for HAZOP workshop for DOLPHIN upstream offshore operations PHA revalidation project in Doha, Qatar
81. Chairman for HAZOP for Chlorination Package for KOC's LFHO project in Petrofac offices in Sharjah U.A.E
82. Chairman for HAZOP workshop for KOC's GC-25 in Kuwait.
83. Chairman for Re-HAZOP for Qatar Gas Train-6 & Train -7 in RasLaffan, Qatar.
84. Chairman for GC 32 vendor package HAZOP (Lot 6) for KOC, Kuwait.
85. Chairman for Re-HAZOP for Consolidated Utilities and offsites for Qatar gas in Ras Laffan, Qatar.
86. Chairman for HAZOP for Vendor packages (Desalter, GDU and Fire water pump, package) for KOC's EF/1931- New Gathering Centre (GC-32) in Petrofac offices in Sharjah
87. Chairman for HAZOP for Schlumberger's ABH Stage 2 Project for Cairn India Ltd in Gurugram, India.
88. Chairman for EPC HAZOP for Wara Pressure Maintenance Project (WPMP) engineered by China Petroleum (CPECC) for Kuwait Oil Company (KOC) in CPECC offices in Dubai UAE.
89. Chairman for HAZOP for Air Compressor package & Ozone package for KOC LFHO Phase-1 project in Petrofac offices in Sharjah
90. Chairman for HAZOP for Project: G/F Gas Cross Over Line to WDDM & MEG system of Burullus Gas Company (JV Shell), BP and Enppi (EPC contractor) at their Offices in Alexandria, Egypt.
91. Chairman for HAZOP for 7 berth facilities (Berth no 20/21/22/23/24/25/30) of Qatar Gas at their Offices in DOHA & Ras Laffan, QATAR
92. Chairman for HAZOP for 4 nos tank farm facilities LRTF/CCSL/CLSC/QSGTL& SPM facilities of Qatar Gas at their HQ in DOHA, QATAR
93. Chairman for HAZOP for Ragas Integrated offshore facilities at their HQ in DOHA, QATAR
94. Chairman for HAZOP for Ras Gas Train – 5 LNG Facilities at Ras Laffan, QATAR
95. Chairman for HAZOP for Lube Blending Plant for TOTAL OIL India Pvt. Ltd in Navi Mumbai, India
96. Chairman for HAZOP workshop for Kuwait Oil Company (KOC) for GC 31 vendor packages in DODSAL office in Dubai UAE.
97. Chairman for HAZOP for KOC Lower Fars Heavy Oil development program Phase-1 in Petrofac offices in Sharjah, U.A.E
98. Chairman for HAZOP workshop for SABIYA Gas Turbine power project for Kuwait Oil Company (KOC) in Al- Ghanim office in Kuwait.
99. Chairman for vendor HAZOP workshop for GC-31 project for Kuwait Oil Company (KOC) in DODSAL office in Dubai UAE.
100. Chairman for vendor HAZOP workshops (HP/LP Flare, Compressed Air, GDU &

Hot Oil Systems) for NAG LTFD project for Tatweer Petroleum Bahrain in Petrofac offices in Chennai.

101. Chairman for process HAZOP workshop for NAG LTFD project for Tatweer Petroleum Bahrain in Petrofac offices in Chennai.
102. Chairman for HAZOP for Petronet LNG Storage and Regassification trains (3trains) at Dahej, Gujarat, India
103. Chairman for HAZOP for EF 1762: Jurassic Gas Facility 1CPF system for Kuwait Oil Company (KOC) in Flour office in Farnborough UK.
104. Chairman for HAZOP for Dahej Nagothane Ethane Pipeline project for Reliance Industries Limited, engineered by Larsen & Toubro-Gulf, in Mumbai.
105. Chairman for HAZOP for EF 1762: Jurassic Gas Facility 1 PLG system for Kuwait Oil Company (KOC) in Flour office in Farnborough UK.
106. Chairman for HAZOP for ONGC's Daman Development Project for SWIBER Offshore – 7 well platforms (B12-field & C-24 field), 1 riser platform, pipelines and associated modifications in process (TCPP/TPP) platform.
107. Chairman for FEED HAZOP for EF 1945 Train 3 of Wara pressure maintenance project (WPMP) engineered by Worley Parsons, Manchester (WPMP) for Kuwait Oil Company (KOC) in WPM offices in Manchester UK.
108. Chairman for HAZOP for Utilities sections of YAMAMA FORMATION DEVELOPMENT FEED PROJECT, IRAQ– engineered by Worley Parsons Abu Dhabi
109. Chairman for HAZOP for FCCU & PRU for HMEL refinery Batinda India.
110. Chairman for HAZOP for British Gas (BG) MB Platform & pipeline Project for L&T – WHCP & Chemical Injection System engineered by Larsen & Toubro
111. Chairman for HAZOP for Heavy Naphtha Project for BECHTEL for Reliance Industries Ltd.
112. Chairman for HAZOP for HPCL Bottling plant in Yediyur, Bangalore.
113. Chairman for HAZOP workshop QATALUM Re-lining facility for McConnell Dowell ME LLC. Qatar
114. Chairman for HAZOP for FLUOR - HAZOP Study for FEED for NGL to Burn Pit for GASCO's
115. Chairman for HAZOP for Indian Oil Corporation (IOCL) Paradip Refinery Project – Sour Water Stripper unit, (SWS) engineered by Foster Wheeler UK.
116. Chairman for HAZOP for Indian Oil Corporation (IOCL) Paradip Refinery Project – Amine Regeneration Units (ARU) engineered by Foster Wheeler UK.
117. Chairman for HAZOP for Indian Oil Corporation (IOCL) Paradip Refinery Project EPC HAZOPS, Hydrogen Compression & Distribution system (HCD) engineered by Foster Wheeler India Pvt Ltd.
118. Chairman for HAZOP for Indian Oil Corporation (IOCL) Paradip Refinery Project EPC HAZOPS, Offsite & Utility Units Foster Wheeler India Pvt Ltd.
119. Chairman for HAZOP for IOCL Paradip Refinery Project EPC HAZOPS, Package Units including Fired heaters, Nitrogen Generation Package, Boilers.

120. Chairman for HAZOP for Abu Dhabi Company for Onshore Oil Operations (ADCO) - Qusahwira Full Field Development Project – Utilities Packages (Nitrogen, Compressed Air, Flare, Fuel Gas system, Pig Launcher system, MSM, MPFM) for the Remote Degassing station (RDS) and Central Degassing Station (CDS)
121. Process Lead (Team Member) in HAZOP for Saudi Arabian Basic Industries Corporation Ltd (SABIC), Ibn Zahr Polypropylene Plants
122. Chaired HAZOP for Saudi Arabian Basic Industries Corporation Ltd (SABIC) – Saudi European Petrochemical Company (Ibn Zahr) Common Facilities Upgrade Project - PSA Units upgrade, Compressed air system, sea water cooling system, Fire water system and potable water systems
123. Participated as Lead Process Engineer in HAZOP reviews of YANSAB Polyolefin, SABIC (LLDPE, Polypropylene & Product handling units) of Cracker complex.

SWIFT workshop

1. Chairman for SWIFT workshop for Ammonia Storage Tank Shut down, Inspection and Start-up for QAFCO, Qatar. - Virtual workshop for QAFCO through DNV GL, U.A.E
2. Chairman for SWIFT workshop for Fire water automation system for GC-31 project for Kuwait Oil Company (KOC) in DODSAL office in Dubai UAE.
3. Chairman for SWIFT workshop for Dahej Nagothane Ethane Pipeline project for Reliance Industries Limited, engineered by Larsen & Toubro-Gulf, in Mumbai.
4. Chairman for workshop for movement of Cathodes and Superstructures from Pot room to various stages / Operation in QATALUM Re-lining facility for McConnell Dowell ME LLC in Qatar.

SIL Assessment / Verification

1. Chairman for SIL Assessment study for ADNOC's Salt-Off-Plot scope in ADNOC's offices in UAE through Bilfinger UAE.
2. Chairman for SIL Assessment study for Petronet LNG terminal (3rd Berth Jetty) in Toyo offices in Mumbai
3. Chairman for SIL Assessment study for LUKOIL's Gas Chemical Complex Stavrolen Feed Project for TOYO's Urea plant in KBR, India.
4. Chairman for SIL Assessment study for LUKOIL's Gas Chemical Complex Stavrolen Feed Project for KBR's Ammonia plant in KBR, India.
5. Chairman for SIL Assessment study for Ruwais Diyab PROJECT for ADNOC through Dome Oilfield & Services, U.A.E
6. Chairman for SIL Assessment study for Project EPCM FOR PROJECT SWING packages 1, 2 & 9 for ADNOC through B.V, U.A.E
7. Chairman for SIL Assessment study for OTEKO's Urea plant through KBR, India
8. Chairman for SIL Assessment study for UFC-V facilities of QAFCO, Qatar. Virtual workshop for QAFCO through DNV GL, U.A.E.
9. Chairman for SIL Assessment study for EPIC for mitigation of Hydrocarbon

emissions for Qatar Energy Refinery Storage Tanks through Alinoz Energy, Private Limited, India.

10. Chairman for re-validation SIL Assessment study for Ammonia 5 & 6 facilities and associated utilities of QAFCO, Qatar. Virtual workshop for QAFCO through DNV GL, U.A.E
11. Chairman for re-validation SIL Assessment study for Urea-5 facilities and associated utilities of QAFCO, Qatar. Virtual workshop for QAFCO through DNV GL, U.A.E.
12. Chairman for SIL Assessment study for North Oil Company (NOC) for JA & KA facilities, Qatar. Virtual workshop for QAFCO through DNV GL, U.A.E
13. Chairman for SIL Assessment study for Urea-4 facilities and associated utilities of QAFCO, Qatar. Virtual workshop for QAFCO through DNV GL, U.A.E.
14. Chairman for SIL Assessment study for WEPCO Expansion Project, Egypt. Workshop meeting held in Egypt by TUV Nord Egypt.
15. Chairman for SIL Assessment study for NOVEC, HVAC, DIFF & DELUGE System North Field Production Sustainability Offshore & Pipelines Project for Saipem, Qatar. Virtual workshop for Saipem, executed through ERM Malaysia.
16. Chairman for SIL Assessment study for Urea 3 facilities and associated utilities of QAFCO, Qatar. Virtual workshop for QAFCO through DNV GL, U.A.E
17. Chairman for SIL Assessment study for Ammonia 4 facilities and associated utilities of QAFCO, Qatar. Virtual workshop for QAFCO through DNV GL, U.A.E
18. Chairman for SIL Assessment study for Al Shaheen field - AB OBS EPCIC Project for North Oil Company (Qatar) - Virtual workshop for NOC through DNV GL, U.A.E
19. Chairman for SIL Assessment study for Ammonia 3 facilities and associated utilities of QAFCO, Qatar. Virtual workshop for QAFCO through DNV GL, U.A.E
20. Chairman for SIL Assessment study for North Field Production Sustainability (NFPS) Project of Qatargas (QG) – Virtual workshop for Saipem, executed through ERM Malaysia.
21. Chairman for SIL Assessment study for Catalytic Cracking Unit (CCU), Waste Water Incinerator (WWI) and Propylene refrigeration units of IOCL Dumad - Virtual workshop for Technimont through Vysus group.
22. Chairman for SIL Assessment study Train 3 of Wara Pressure Maintenance Project (WPMP), Kuwait Oil Company (KOC) - Virtual workshop for CPECC through DNV GL, U.A.E
23. Chairman for SIL Assessment by Risk Graph workshop method for SWS II unit of IOC Barauni BR 9 expansion project - Virtual workshop through Air Liquide
24. Chairman for SIL Assessment by Risk Graph method for ARU III unit of IOC Barauni BR 9 expansion project - Virtual workshop through Air Liquide
25. Chairman for SIL Assessment study for Urea -1 plant of QAFCO, Qatar. - Virtual workshop for QAFCO through DNV GL, U.A.E
26. Chairman for LOPA / SIL Assessment for Borouge 4 - FEED competition for Ethane Cracker - Virtual workshop for ADNOC through Safe Controls Eng., U.A.E

27. Chairman for SIL Assessment (LOPA) for ExxonMobil's FEP enclosed ground flare project, Mossmorran, Scotland - Virtual workshop through TUV Nord, India.
28. Chairman for SIL Assessment study for Suez Oil Processing Company (SOPC) Delayed Coker Complex upgrade project - Virtual workshop for Enppi Egypt, executed through TUV Nord, India.
29. Chairman for SIL allocation study for POD I KALIBERAU DALAM development Project - Virtual workshop for Tripatra, Indonesia, executed through LR Consulting - Energy Private Ltd, India
30. Chairman for SIL assessment workshops for Modification Projects and Technical adjustments in Ammonia 5 & 6 and Urea 5 & 6 facilities of QAFCO, Qatar. - Virtual workshop for QAFCO through DNV GL, U.A.E
31. Chairman for SIL Assessment workshop for Block 5 - Al Shaheen Field CD Platform Oil Export Pumps - Virtual workshop for Ramboll Qatar.
32. Chairman for SIL Classification LOPA workshop for LAM Offshore Facility Complex (LOFC) - Virtual workshop for Dragon Oil, Turkmenistan, through Saipem
33. Chairman for LOPA workshop Petrofac Umm Shaif Gas CAP condensate development project Phase- 1 in Petrofac offices in Sharjah
34. Chairman for SIL Assessment workshop for DOLPHIN upstream offshore operations PHA revalidation project in Doha, Qatar
35. Chairman for SIL classification workshop for KOC's GC-25 in Kuwait.
36. Chairman for GC 32 vendor package HAZOP (Lot 6) for KOC, Kuwait.
37. Chairman for SIL classification workshop for Vendor packages (Desalter, GDU and Fire water pump, package) for KOC's EF/1931- New Gathering Centre (GC-32) in Petrofac offices in Sharjah
38. Chairman for SIL classification workshop for Schlumberger's ABH Stage 2 Project for Cairn India Ltd in Gurugram, India.
39. Chairman for SIL classification for Wara Pressure Maintenance Project (WPMP) engineered by China Petroleum (CPECC) for Kuwait Oil Company (KOC) in CPECC offices in Dubai UAE.
40. Chairman for SIL assessment (LOPA approach) workshop for Air Compressor package & Ozone package for KOC LFHO Phase-1 project in Petrofac offices in Sharjah
41. Chairman for SIL assessment workshop for Project: Installation of Standalone Medium Pressure (MP) Steam Generation Boiler, New Demin Water Plant and Associated Facilities in QP Refinery, at in DOHA, QATAR.
42. Chairman for SIL assessment workshop for Project: G/F Gas Cross Over Line to WDDM & MEG system of Burullus Gas Company (JV Shell), BP and Enppi (EPC contractor) at their Offices in Alexandria, Egypt.
43. Chairman for SIL assessment (Risk Matrix & LOPA approach) workshop for 7 berths (Berth no 20/21/22/23/24/25/30) and VOC facilities of QatarGas at their Offices in DOHA & Ras Laffan, QATAR
44. Chairman for SIL assessment (Risk Matrix & LOPA approach) for 4 nos tank farm

facilities LRTF/CCSL/CLSC/QSGTL & SPM facilities of QatarGas at their HQ in DOHA, QATAR

45. Chairman for SIL assessment (LOPA approach) workshop for Kuwait Oil Company (KOC) for GC 31 vendor packages in DODSAL office in Dubai UAE.
46. Chairman for SIL assessment (Risk Matrix and LOPA approach for SIL 3 SIF loops) workshop for CLPG facilities in Qatargas offices in Doha Qatar
47. Chairman for SIL assessment (Risk Matrix and LOPA approach for SIL 3 SIF loops) workshop for QG1 offshore facilities in Qatargas offices in Doha Qatar
48. Chairman for SIL assessment (LOPA approach) workshop for KOC Lower Fars Heavy Oil development program Phase-1 in Petrofac offices in Sharjah
49. Chairman for SIL assessment (LOPA approach) workshop for NAG LTFD project for Tatweer Petroleum Bahrain in Petrofac offices in Chennai.
50. Chairman for SIL assessment workshop (LOPA approach) for EF 1762: Jurassic Gas Facility 1CPF system for Kuwait Oil Company (KOC) in Flour office in Farnborough UK.
51. Chairman for SIL Assessment (LOPA approach) for Dahej Nagothane Ethane Pipeline project for Reliance Industries Limited, engineered by Larsen & Toubro-Gulf, in Mumbai.
52. Chairman for SIL assessment workshop (LOPA approach) for EF 1762: Jurassic Gas Facility 1 PLG system for Kuwait Oil Company (KOC) in Flour office in Farnborough UK.
53. Chairman for SIL assessment workshop (LOPA approach) for EF 1943: New Strategic Gas Export Pipeline from North Kuwait to MAA for Kuwait Oil Company (KOC) in AMEC Foster Wheeler Flour in London UK.
54. Chairman for SIL assessment workshop (LOPA approach) for GC-31: NEW GATHERING CENTRE for Kuwait Oil Company (KOC) in DODSAL office, UAE.
55. Chairman for SIL assessment workshop for ONGC's Daman Development Project for SWIBER Offshore – 7 well platforms (B12-field & C-24 field), 1 riser platform, pipelines and associated modifications in process (TCPP/TPP) platform.
56. Chairman for SIL assessment workshop (LOPA method) for EF 1945 Train 3 of Wara pressure maintenance project engineered by Worley Parsons, Manchester (WPM) for Kuwait Oil Company (KOC) in WPM offices in Manchester UK.
57. Chairman for SIL assessment workshop (LOPA approach) for GC-32: NEW GATHERING CENTRE FOR SEK for Kuwait Oil Company (KOC) in Flour office in Farnborough UK.
58. Chairman for SIL Assessment workshop for Delayed Coker Unit (DCU) & LPG treating units of, CPCL, CHENNAI, engineered by Engineers India Limited (EIL), New Delhi
59. Chairman for SIL Assessment workshop for NEP project for ILF consulting for DOLPHIN ENERGY in Abu Dhabi
60. Chairman for SIL Assessment for PLATFORMER revamp for BECHTEL for Reliance Industries Ltd (RIL) for Reliance Industries Ltd.in Delhi, India.

61. Chairman for SIL Assessment for HPCL Bottling plant in Bangalore, India.
62. Chairman for SIL Assessment for HNUU revamp project – Heater, Compressor and Utilities for BECHTEL for Reliance Industries Ltd. (RIL) in Delhi, India
63. Chairman for SIL Assessment for PLATFORMER revamp including Heater, Compressor & Utilities for BECHTEL for Reliance Industries Ltd. (RIL) Delhi, India
64. Chairman for SIL Assessment workshop for Abu Dhabi Company for Onshore Oil Operations (ADCO) - Qusahwira Full Field Development Project - Nitrogen package system for Engineers India Limited (EIL) in Delhi, India
65. Chairman for SIL Assessment for Utilities units of HNU Project for BECHTEL for Reliance Industries Ltd.
66. Participated as Lead Process Engineer in SIL Assessment of YANSAB Polyolefins, SABIC (LLDPE, Polypropylene & Product handling units) of Cracker complex.
67. Participated as Lead Process Engineer in SIL Assessment of Saudi Arabian Basic Industries Corporation Ltd (SABIC) – Saudi European Petrochemical Company (Ibn Zahr) Polypropylene Plants
68. Lead reviewer of SIL Verification report for HPCL Bottling plant in Yedyur, Bangalore, India
69. Lead reviewer of SIL Verification report for British Gas (BG) MB Platform & pipeline Project for Larsen & Toubro Mumbai India.

PHSER workshop:

1. Chairman for PHSER (Stage - 4) for North Kuwait Excavation, Transportation & Remediation (NKETR) project of Kuwait Oil Company (KOC) through Kak-Lamor, / DNV, Kuwait.
2. Chairman for PHSER (Stage - 4) for South Kuwait Excavation, Transportation & Remediation (SKETR) project of Kuwait Oil Company (KOC) through Kak-Lamor, / DNV, Kuwait.
3. Chairman for PHSER (Stage – 2) for ADNOC Re-FEED Umm Shaif Gas Cap Condensate Project – Virtual workshop for Saipem, executed through DNV GL, Abu Dhabi, U.A.E.
4. Chairman for PHSER (Stage - 5) for ADNOC Zirku Facilities Capacity Enhancement (Train-5)- Virtual workshop for CCC Engineering Ltd., executed through DNV GL, U.A.E.
5. Chairman for PHSER (Stage - 3) for North Kuwait Excavation, Transportation & Remediation (NKETR) project of Kuwait Oil Company (KOC) - Virtual workshop for KLaamor, executed through DNV, Kuwait.
6. Chairman for PHSER (Stage - 3) for South Kuwait Excavation, Transportation & Remediation (SKETR) project of Kuwait Oil Company (KOC) - Virtual workshop for KLaamor, executed through DNV, Kuwait.
7. Chairman for PHSER (Stage - 4) for ADNOC Zirku Facilities Capacity Enhancement (Train-5)- Virtual workshop for CCC Engineering Ltd., executed through DNV GL.

8. Chairman for PHSER (Stage - 2) for ADNOC Umm Shaif Gas cap condensate for Technip FMC Paris in NPCC office in Abu Dhabi
9. Chairman for PHSER (Stage - 2) for ADNOC Umm Shaif Gas cap condensate through Petrofac International Ltd, in Petrofac office in Sharjah
10. Chairman for PHSER (Stage - 3) for ADNOC Zirku Facilities Capacity Enhancement (Train-5) through Chiyoda CCC Engineering Ltd., in Abu Dhabi U.A.E
11. Chairman for PHSER (Phase - 1) for ADNOC Offshore replacement of upper Zakum pipelines project in the offices of Worley Parson in U.A.E
12. Chairman for PHSER (Stage - 4) for KOC's project: EF 1852 Lower Fars Heavy Oil development program Phase-1 60MBOPD) in PETROFAC offices in Kuwait.
13. Chairman for PHSER (Stage-3) for KOC's project: Replacement of HIC affected separators in 7nos GC's in MECC offices in Kuwait.
14. Chairman for PHSER (Stage-4) for KOC's project: Replacement of HIC affected separators in 7nos GC's in MECC offices in Kuwait.
15. Chairman for PHSER (Stage-2) for KOC's project EF 1943: New Strategic Gas Export Pipeline from North Kuwait to MAA for Kuwait Oil Company (KOC) in AMEC Foster Wheeler office in London UK.
16. Chairman for PHSER (Stage-2) for KOC's new 48" CRUDE TRANSIT LINE TL-5 crude transit line from north Kuwait to the Central Mixing Manifold (CMM) in Technip office in Dusseldorf, Germany
17. Chairman for PHSER (Stage-4 & Stage 5) for KOC's Soil remediation project in SEK fields (Lot-A) in HERA AG Ambiental S.L office, Kuwait.
18. Chairman for PHSER (Stage-5) for KOC's Construction of Core Store & Laboratory Project, Kuwait.
19. Chairman for PHSER (Stage-4 & Stage 5) for KOC's Soil remediation project in SEK fields (Lot-B) in GS Engineering and construction company office, Kuwait.
20. Chairman for PHSER (Stage-3) for KOC's Soil remediation project in SEK fields (Lot-A) in HERA AG Ambiental S.L office, Kuwait.
21. Chairman for PHSER (Stage-3) for KOC's Soil remediation project in SEK fields (Lot-B) in GS Engineering and construction company office, Kuwait.
22. Chairman for PHSER (Stage-3) for KOC GC's heaters replacement project for Al-Ghanim International General Trading & Contracting Company (AIGTCC), Kuwait.
23. Chairman of PHSER (Stage-2) for Kuwait Oil Company (KSC) project – Construction of Sub-station & overhead lines project for Kuwait Ministry of Electricity & Water (MEW), Kuwait.
24. Chairman of PHSER (stage-2) for Kuwait Oil Company (KSC) - EF1920 New Water Centre for North Kuwait, Kuwait.
25. Chairman of PHSER (Stage-4 & 5) for Common Facilities Upgrade Project (CFUP) in IBN ZAHR, SABIC, K.S.A
26. Chairman of PHSER (Stage-3) for Common Facilities Upgrade Project (CFUP) in

IBN ZAHR, SABIC, K.S.A

27. Process Lead (Team member) for PHSER (Stage 2) for polypropylene project in DOW offices in Charleston, West Virginia, U.S.A
28. Independent Process document review for PHSER 5 for Hot Oil Heater project of British Gas (BG) Panna platform in BG offices in Mumbai, India.

SIMOPS / MOPO workshop

1. Chairman for SIMOPS / MOPA workshop for Al Shaheen field - AB OBS EPCIC Project for North Oil Company (Qatar) - Virtual workshop for NOC through DNV GL, U.A.E
2. Chaired SIMOPS and MOPA workshops for BORL Refinery upgrade project in BORL offices in Madhya Pradesh, INDIA
3. Chaired SIMOPS (under HIRAC study) workshop for 36-inch offshore SBHT pipeline hot-tap for L&T / ONGC
4. Independent reviewer for SIMOPS Workshop for British Gas MB Platform and Pipeline project
5. Independent Observer for SIMOPS workshop for British Gas Offshore platform – Compression series project in Chennai
6. Chaired SIMOPS workshop for IBN ZAHR, SABIC PSA Units, Common Facilities Upgrade Project in Jubail Saudi Arabia (K.S.A)
7. Chaired SIMOPS workshop for IBN ZAHR, SABIC PP-II debottlenecking and PP-III project implementation in Jubail Saudi Arabia (K.S.A)

HAZCON / Constructability Review workshop

1. Chairman for Constructability review for LUKOIL's Gas Chemical Complex Stavrolen Feed Project for KBR's Ammonia plant in KBR, India.
2. Chairman for Constructability review for Russian OTEKO's Project OSBL scope in KBR offices, India.
3. Chaired Constructability review workshops for BORL Refinery upgrade project in BORL offices in Madhya Pradesh, INDIA
4. Chairman for HIRAC workshop for Hot Tap and associated works in 42" SBHT pipeline project for L&T (LTHE) in Mumbai.
5. Independent Observer for the HAZCON workshop for British Gas Offshore platform – Compression series project

Pre-commissioning Safety Audit

1. Carried out the Pre-commissioning Safety Audit of Modular Gas Processing Plant (MGPP) & Gas Gathering Station (GGS) of Hindustan Oil Exploration Company (HOEC)

2. Carried out the Pre-commissioning Safety Audit of Common Facilities Upgrade Project (CFUP) in IBN ZAHR, SABIC, K.S.A

Pre-Start-up Safety Review (PSSR)

1. Conducted the PSSR (PHSER Stage 5) for KOC's Soil remediation project in SEK fields (Lot-A) in HERA AG Ambiental S.L office, Kuwait.
2. Conducted the PSSR (PHSER Stage 5) for KOC's Construction of Core Store & Laboratory Project, Kuwait.
3. Conducted the PSSR (PHSER Stage 5) for KOC's Soil remediation project in SEK fields (Lot-B) in GS Engineering and construction company office, Kuwait
4. Member of Foster Wheeler PSSR team for Hot Oil Heater project of British Gas (BG) Panna platform in BG offices in Mumbai, India.
5. As project Manager led the PSSR for Common Facilities Upgrade Project (CFUP) in IBN ZAHR, SABIC, K.S.A

Process Safety Deliverables (Technical Safety)

Facilitated Process Safety design reviews and Prepared EPC deliverables relating to LPES and Fire protection (Active & Passive) on multiple projects.

1. Facilitated the Multidisciplinary Design Review (MDR) workshop for CP6S and CP7S Compression Complexes that are part of QG-S RGE facilities.
2. Facilitated the Design Risk Assessment (DRA) workshop for CP6S and CP7S Compression Complexes that are part of QG-S RGE facilities.
3. Loss prevention philosophies / TOR / Reports – HAZID, HAZOP, SIL, PHSER, QRA, PSID, DRA.
4. HSEIA study reports - EERA / ESSA / SCEPS / COSHH / HRA / OHID / OHRA / Ergonomic studyreport, Hazardous Area Classification Schedule
5. Active & Passive fire protection design, Fire potential equipment rating.
6. Prepared the Human Factors Engineering Implementation Plan for Gato Do Mato FPSO project forShell Brazil executed through Tuff Offshore / Saipem

Other Professional experience

DNV GL (Feb 2013 – August 2018) Manager (Safety & Risk)

- Facilitated the FEED stage Design Review of Surface Facilities for Mangala "Alkali Surfactant Polymer (ASP)" Project for Vedanta (Cairn) India Ltd.
- Project Manager (on-going) for safety studies (10nos) for PENSPEN and ultimate client is Qatar Petroleum (QP).
- Project Manager (on-going) for safety studies (27nos) framework contact for Qatargas offshore (QG- 1/2/3/4 wellhead platforms and subsea pipelines) and onshore (QG-1/2/3/4 LNG trains, Common LNG berths, Laffan Refinery and

RLTO) facilities. Have chaired several HAZOPs & SIL assessment workshops under the frame agreement.

- Project Manager for safety studies (29 nos) for British Gas MB Platform & Pipeline Project for Larsen & Toubro. Scope included 29 Safety study reports / deliverables. Apart from managing the project, developed the HSSE Philosophy, Hazardous Area Classification (HAC) report, Health Risk Assessment (HRA) report, Ergonomic Study report and contributed to development of all safety deliverables. Chaired HAZOP for Well Head Control Panel (WHCP) & Chemical Injection System, Chaired HAZID for electrical systems and Chaired ENVID & HRA workshops.
- Project Manager for safety studies (11 nos) for British Gas Tapti Phase II compressor series Project for Larsen & Toubro. Developed the SCEPS report and contributed to development of all other safety study reports.
- Project Manager for HPCL Yediyur LPG Bottling Plant – developed the HAZID, HAZOP, SIL Assessment and SIL verification report
- Project Manager for Safety Studies for ONGC Assam Renewal Project Group A – HAZID, HAZOP & QRA for 5 nos of Group Gathering Stations (GGS) and Central Tank Farm (CTF) in Lakwa, Lakhmani and Moran fields.
- Preparation of EERA Study for 5 ONGC Cluster-7 well platforms for McDermott
- Conducted Training on HAZID & HAZOP for TOTAL OIL India Pvt Ltd
- Conducted HAZOP, & SIL Assessment & Verification Training for QatarGas & RasGas, Qatar.

Foster Wheeler India Pvt. Ltd. Sep 2007 – Feb 2013] **Chief Engineer – Design Assurance & Commissioning**

- As Design Assurance & Commissioning (DAC) Engineer for Ennore LNG regasification terminal FEED project, developed the THSE and Commissioning deliverables and provided design safety & commissioning inputs through engineering development and Safety reviews.
- Lead Commissioning engineer (Site) for ONGC LNG C2/C3 extraction plant. The site activities include review/approval of Purging, Drying and cool down procedures, performance testing of utility systems, generation of commissioning punch points, review/approval of SOP/Operating manual and OTS validation.
- As Lead Commissioning engineer (FEED & EPC) for 2 Refinery projects (PDRP & NRP), carried out Commissioning Home office activities such as Systemisation, Pre-commissioning & Commissioning procedures and Operating Manual for Alkylation's, Butamer, Spent acid regeneration (SARU), Sulphur Recovery (SRU), Flue Gas de-sulphurisation (FGD) Unit and treaters including Kero treater, FCC LPG treater & FCC Light Naphtha treater.
- Lead Process engineer for the In Salah Gas Project. The process scope included

preparation of Hazardous Area data schedule, DPDT diagrams, Line lists & Instrument data sheets.

- Preparation of Performance test procedures for Sour Water Plant, LPG Fractionation Unit, Amine treatment/BTEX removal unit, Diesel Drying unit, Utilities & Wastewater treatment units in EPCL project.
- Systemisation and set-up of Turnover mechanism for Utilities of Singapore Parallel Train (SPT)
- Lead Reviewer of P&ID's of waste heat recovery system of Ethane separation plant project, Thailand
- Independent Process document review for PHSER 5 for Hot Oil Heater project of BG Panna platform in BG offices in Mumbai, India.
- Model review / Yellow line check of P&ID's of Aromatic, Olefins, Polyolefin and utility systems of Singapore Parallel Train (SPT) project.
- Chaired IOCL Paradip Refinery Project - FEED Stage HAZOPS - SWS, ARU, HCD, Offsites and Utility Units
- Chaired IOCL Paradip Refinery Project – EPC HAZOPS - Sour Water System, Amine Regeneration Unit, Hydrogen Compression Unit, Package Units, Offsites & Utilities
- Chaired Abu Dhabi Company for Onshore Oil Operations (ADCO) - Qusahwira Full Field Development Project – Flare Packages Units
- Prepared the process data for Area Classification for SWS, ARU units of Paradip refinery project.
- Carried out Fire risk potential rating of Equipment in Offsite & Utilities unit of Paradip refinery project.

Kuwait National Petroleum Co. (KNPC) [Mar 2007-Sep 2007] Sr. Process Engineer, Corporate planning dept

- Techno-economic Evaluation of new project proposals in Refinery and Gas Plants
- Process representative for study to identify and implement Integration opportunities between petrochemical and refinery units of Kuwait

YANSAB, Saudi Arabia (April 2005 – March 2007) Lead Process Engineer

As Lead Process Engineer for Polyolefins scope (LLDPE, Polypropylene & Product handling units) of Cracker complex

- Prepared part of ITB documents and participated in EPCM contractors' bid document technical review and bid clarification meetings.
- Prepared the process documentation required to obtain local environmental clearance for the project.
- Review / approval of all Process and Process safety deliverables generated through engineering.
- Participated in Plot plan reviews, & Model reviews (30, 60 & 90%).
- Conducted PHA reviews - HAZID / ENVID, OHID, HAZOP and SIL reviews during

FEED stage

- Prepared the Pre-commissioning / Commissioning scope of work for Polypropylene, LLDPE & Product handling units.
- Carried out systemisation and prepared the system Turnover packages for LLDPE & PP and Product handling units.
- Prepared the Standard Operating Procedures (SOP) for Polypropylene and Product handling units.

IBN ZAHR (SABIC), Saudi Arabia (Dec 1997 – April 2005) **Lead Process Engineer**

Worked in Technical Services department as Senior Process Engineer for PP, MTBE and utility plants

- Participated in the Design conference for the new world scale (500KTA) PP plant in DOW offices in Charleston, west Virginia, U.S.A
- Preparation of FEED package for in-house capital engineering projects involving plant modification / retrofit. Systems include Pneumatic conveying, Extruder pellet cooling/conveying, Refrigeration interchanger,
- Carried out Cost Benefit Analysis (CBA) for On-line self-cleaning filter in sea water service
- Prepared FEED package for Common Facilities Upgrade Project (CFUP). Upgrade facilities include SW/CW system, Compressed air system, FW storage & pumping system, C3 storage facilities, and DM water system.
- Chaired HAZID, OHID, HAZOP & PHSER (Stage-3, 4 & 5) for Common Facilities Upgrade Project (CFUP).
- Provided process engineering support for plant performance evaluation, S/D planning and support.
- Prepare procedures and process reports for new product/catalyst trial runs. Trials include homopolymer & copolymer grades in reactors & new pellet grades.
- Prepared the Standard Operating Procedures (SOP) for Polypropylene plant.

SPIC & SPIC Petrochemicals (SPC) (June 1987 – Dec 1997) **Lead Process Engineer**

Worked in SPC Project Execution Team as Joint Manager Operations O&U department

- Review/approval of AFC drawings.
- In charge for Pre-commissioning / Commissioning of utility systems.
- DCS FAT review / approval and SAT of all units in utilities.
- Preparation of Start-up & Operating procedures for utility units.

Worked in SPIC in various positions - GET / Engineer / Sr. Engineer / Joint Manager in Operation of Fertilizer units Urea, Utilities and DAP plants. Activities carried out include

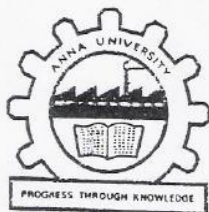
- Managing the operations of Fertilizer complex

- Manage and coordinate On-Site & Offsite Emergency Response plan (ERP's)
- Coordination with service departments on a routine basis for Plant operation, Shutdown and complex Turnarounds.
- Monitoring / Troubleshooting process units
- Optimizing plant operations and implementing energy conservation proposals to minimize losses / specific consumption.
- Commissioning / Trouble shooting the Pipe reactors (retrofit job) in Granulator & Driers of DAP plant.
- Led the Commissioning Team of SMO (SPIC Maintenance Organization for Commissioning GAIL's (Guna, M.P, India) LPG plant.
- Led the Commissioning Team of SMO (SPIC Maintenance Organization for Commissioning Finolex (Ratnagiri, Maharashtra, India) VCM and Utilities plants



The Syndicate of the Anna University hereby makes known that

..... ARUNKUMAR . A
has been admitted to the Degree of Bachelor of Technology
in CHEMICAL ENGINEERING, he having satisfactorily completed the
prescribed course of study at the Alagappa College of Technology and
having been certified by duly appointed Examiners to be qualified
to receive the same and having been placed by them in the
..... FIRST Class at the Examination held in the
month of MAY in the year 1987 .



Given under the Seal of the University

University Buildings,
Madras-600 025
Dated 11 MAR 1988

S. Venkatesan
Registrar

V. K. S.
Vice-Chancellor



CERTIFICATE

This is to certify that

Arunkumar Arunachalam

has participated in the following course of 21 hours and passed the examination necessary for successful completion.

HAZOP Leader Course

Course date: 08-Dec-21 - 10-Dec-21

The objectives of the course were to provide the participants with sufficient knowledge to enable them to lead HAZOP Studies. The course aimed to train the participants on the techniques to be used during the hazard identification process, to focus on the skills needed to prepare and lead HAZOP Sessions, to make practical and beneficial recommendations, (as well as to control the 'follow-up process' of the recommendations made, as an Internal HAZOP Leader).

The following subjects were covered in detail:

- Introduction to HAZOP and the case for HAZOP
- HAZOP Methodology and Guidewords
- Role of the HAZOP Leader and Roles of the Team Members
- Risk Ranking, 'SAMPLE' Risk Matrix and the Delphi Technique
- Selecting a HAZOP Section, Recording and Reporting
- HAZOP method for Continuous Processes, Batch Processes and Procedures
- Structured What-If Technique (SWIFT)
- Overview of HAZOP of Hardware Based Control Systems, PES and SIL Classification

Completion date: 10 December 2021

Certificate No.: 48565581-143834690

Signed on behalf of DNV

Maritime Academy India

This certificate was issued electronically and is valid without a signature.

DNV Headquarters, Veritasveien 1, P.O.Box 300, 1322 Høvik, Norway. Tel: +47 67 57 99 00. www.dnv.com



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CERTIFICATE

Arunkumar Arunachalam

Has successfully completed the Functional Safety
Certification Program requirements for

Functional Safety Professional

In accordance with
IEC 61511:2003

Date issued: 23-November-2013
ID number: TP13050738
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

Associate Member

This is to Certify that

Arun Kumar Arunachalam

was elected to the class of

Associate Member

on this day

Twenty Sixth January 2010

David Brown
Secretary

Helen Fennell
Hon. Registrar

IChemE
Institution of Chemical Engineers