



COMPANY PROFILE



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INTRODUCTION



Integrated Process Solutions Sdn Bhd (IPS) is the boutique engineering consultancy providing services in Process, Process Safety, Human Factors and Asset Integrity Management.

Impetus Energy Sdn Bhd (IESB) is a subsidiary of IPS, and mainly focuses on Pipeline & Subsea Engineering consultancy services.

IPS consist of more than 30 dedicated experienced personnel, headed by three principal professionals of whom each has more than 25 years of engineering experience in various upstream, midstream and downstream facilities.

VISION

IPS, together with IESB, aims to be the preferred consultants in Malaysia, being recognized globally, while successfully delivering the most challenging projects and achieving utmost levels of satisfaction for our clients.

MISSION

We achieve our vision by:

- **Providing reliable and timely services**
- **Delivering innovative solutions**
- **Continuous improving and learning**
- **Being attentive to customer needs**

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BOARD OF DIRECTORS

IR. MOHD RAFAEL SHAMSUDIN

Managing Director

Ir. Mohd Rafael is a Chemical Engineering graduate of the University of Louisiana at Lafayette. He is a registered professional with the Board of Engineers, Malaysia and has 35 years of experience in engineering management and process design of oil & gas facilities. He manages the day-to-day operations of the company, manages resources efficiently and effectively to achieve the company objectives.

He has served a broad business clientele internationally which include National Oil Companies and major Oil & Gas operators and operating facilities such as ExxonMobil, Talisman Energy, Shell, Petronas Carigali, Newfield, Petrofac, Petronas Kerteh Refinery and others.

In a lead capacity, he has vast experience in all phases of the business, project, design, engineering and construction management of the full range of Oil & Gas facilities at offshore platforms and onshore facilities such as refineries and gas processing facilities.

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IR. ZURAINI MOHD JALI

Chief Operating Officer

Ir Zuraini Bin Mohd Jali is a Mechanical Engineer graduated from Universiti Teknologi Malaysia in 1993. A registered professional engineer with Board of Engineers Malaysia, Mr Zuraini has 30 years experience in oil and gas industries, locally and regionally. He started with Noble Denton Malaysia as a Mechanical Engineer cum Surveyor and later with INTEC Engineering SEA as a pipeline/senior pipeline engineer served for 6 solid years.

Zuraini was later headed a multinational company, Pegasus International/Pegasus Oil and Gas Consultants and later was appointed Managing Director of Pegasus Asia Pacific Sdn Bhd, a subsidiary of Petrofac Engineering Services Sdn. Bhd. He joined IPS in 2018 as COO and overseeing corporate affairs, general management, project & operations management and has significant experience in business strategy, business development, tendering & bidding and contract negotiations.

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IR. MOHAMED AJMEL HAFIZ JAMALUDIN

Director of Engineering

Ir Mohamed Ajmel Hafiz Jamaludin a Mechanical Engineer graduated from University of Southern California in 1997. A registered professional engineer with Board of Engineers Malaysia, Ir Ajmel has 27 years experience in oil and gas industries, locally and regionally. He started with Petronas Carigali Sdn Bhd as a Subsea Engineer and later with Petrofac as a Lead Subsea Engineer

Ir Ajmel has extensive oil and gas industry experience throughout the project lifecycle, on assignments throughout Malaysia, NorthWest Africa and China. Capabilities include various aspects of development, projects and operations, with emphasis on conventional offshore gas, marginal field, deepwater and subsea development. Good knowledge of Petronas review and approval systems. He has experience in asset acquisition, field assessment and asset / infrastructure planning through sales point, including minimum facilities applications, and advanced integrated development workshop facilitation. He also has wide experience in cost engineering, front-end loading, conceptual engineering and FEED. This experience covers both green field development and brown field re-development.

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FACILITIES ENGINEERING SUPPORT

- Field Development Plans (FDP)
- Feasibility Studies
- Concept Select
- Front End Engineering Design (FEED)
- Detailed Engineering Design (DED)

PROCESS

- Piping & Instrumentation Diagrams (P&ID)
- Process Simulation (Dynamic / Steady State)
- Line List
- Sizing (Equipment, Piping, Instrument, etc.)
- Relief and Blowdown Study
- Process Safety Time
- Heat and Material Balance
- Cause & Effects Matrix
- Process Safeguarding Memorandum
- Operating Procedure Manual
- Operating Procedure
- Safe Operating Limit & Envelope (SOL/SOE)

SPECIALIZED STUDIES

- Value Engineering
- Flow Assurance (Transient / Steady State)
- Surge Analysis
- Computational Fluid Dynamics (CFD)
- Fire & Gas Mapping Study
- Gas Dispersion & Thermal Radiation Study
- Acoustic / Flow Induced Vibration (AIV/FIV)
- Noise Mapping Study
- Corrosion Studies (CDBM, CMP)
- Reliability, Availability and Maintainability (RAM)
- Carbon Footprint Assessment

PROCESS SAFETY

- HSE Design and Safety Case
- Control of Industrial Major Hazard (CIMAH)/Demonstration Of Safe Operation (DOSO)
- Formal Safety Assessment (FSA) Studies
 - Fire and Explosion Risk Assessment (FERA)
 - Quantitative Risk Assessment (QRA)
 - Building Risk Assessment (BRA) including Facility siting
 - Escape, Evacuation and Rescue Assessment (EERA)
 - Emergency Survivability System Assessment (ESSA)
 - Temporary Refuge Impairment Analysis (TRIA)
 - Smoke & Gas Ingress Analysis (SGIA)
 - Dropped Object Analysis
 - Safety Critical Elements & Performance Standards (SCE & PS)
 - Hazard and Effects Management Process (HEMP) – Bowtie, ALARP Study, Critical Activity, Hazards & Effects Register (HER)
- Loss Prevention Studies
 - Firewater Design including Demand, Hydraulic, Surge.
 - Hazardous Area Classification
 - Safety Layouts and Drawings
 - Safety Equipment Datasheets and Specifications
 - HSE & Fire Protection Philosophies

PROCESS SAFETY

- Safety Workshop
 - Hazard and Operability (HAZOP)
 - Hazard Identification (HAZID)
 - Safety Integrity Level (SIL/IPF) Classification & Verification
 - Health Risk Assessment (HRA)
 - Constructability Review
- Process Safety Information (PSI)

HUMAN FACTORS ENGINEERING (HFE)

- HFE Screening
- HFE Awareness Training
- HFE Implementation Plan
- Valve Criticality Analysis (VCA)
- Safety Critical Task Analysis (SCTA)
- HFE 2D Drawings / 3D Model Review for LQ, CCR & Vendor Packages
- HFE Construction Site Verification

ASSET INTEGRITY

- Asset Register
- Safety Critical Elements & Equipment Criticality Assessment (SCE & ECA)
- Performance Standards (PS)
- Failure Mode & Effects Analysis (FMEA) / Equipment Reliability Strategy (ERS)
- Maintenance Plan (MPlan)
- Bill of Material (BOM)

SUBSEA UMBILICALS, RISERS AND FLOWLINES (SURF)

- Concept Study
 - Subsea Engineering
 - Pipeline Engineering

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CURRENT PROJECT & TRACK RECORD

Current Project:

1. FEED for NC8 GFD Project – Safety Studies
2. EPCC for LP Flare Knock-Out Drum at Regas Terminal Pengerang (RGTP) – Safety Studies
3. EPCC of LPG Treater Improvement for Special Scheme Inspection (SSI) at Gas Processing Plant Santong, Paka – Safety Studies
4. Conceptual Engineering for Baram Junior Cluster (BJC) – Safety Studies, Corrosion
5. DED of New Flare System at CPSF for Dragon Oil – Safety Studies
6. BED for Heavy Oil Tank at PCOGD – HAZID, HAZOP, Fire & Explosion Analysis, Firewater Studies
7. BED Wastewater Tank at PCOGD – HAZID, HAZOP, Fire & Explosion Analysis, Firewater Studies
8. BED for Glayzer Development Project – Safety Studies
9. Pipeline Integrity Assessment for PCSB-SKA – Free Span Assessment & Riser Fatigue Assessment
10. EPCC for Maleic Anhydride (MAN) Refiner & Briquetting Plant for Petronas Chemicals MTBE (Basil Project) – Safety Studies

Onshore Facilities

- BED for Glayzer Development Project (Safety Studies)
- FEED for Handling Rich Composition in Feedstock at Gas Processing Santong, Petronas Gas Berhad (CHROME) (HAZOP, HAZID, QRA)
- BED/FEED for Pilot Plant for Low Carbon Syncrude Production for PRSB (Process, Safety Studies)
- EPCC of Wastewater Treatment Plant Improvement Project (AQUA) (Safety Studies)
- Onshore Gas Plant (OGP) Rosmari Marjoram Project (FMEA and HFE Studies)
- Provision Of EPCC-PGU-I Pipeline Replacement Graphite (QRA Study)
- BEPCC New Auxiliary Boiler Project at Petronas Chemicals Methanol Sdn Bhd – Sumilau Project (Safety Studies)
- BDEP for Bagan Luar Installation New Mogas Storage Tank (TK-18) Project (HAC and FW Studies)
- EPCC of TCOT Off Gas Reroute to GPP 2/3 at GPK, PGB – Project TREX (Safety Studies)
- FEED and EPCC for Southern Transmission Improvement and Readiness (STAR) Project (Safety Studies)
- EPCC for LNG Satellite Regasification Facilities for MAPA Gloves Sdn. Bhd. (Safety Studies)
- EPCC for Effluent Management at Source (EMAS) Project (Safety Studies,
- Ethylene Import / Export Facilities for Petronas Chemicals Olefin Project (Process Dynamic Simulation Study)

FPSO/FSO

- Revalidation Safety Case Studies for FSO Bechamas 2 (Safety Studies – 5 years contract)
- FPSO Bentara, Bentara A Infill, FPSO Mampu1 (Safety Integrity Level)
- Detailed Design Engineering of FPSO and Flowlines for Jitang Field Development Project (Process Engineering, Flow Assurance and Safety Engineering Support)
- EPCIC of FSO Facility for Full Field Development (FFD) Project at North Malay Basin Project (Process Engineering, Safety Engineering and HFE Study)
- Provision of Condensate Storing, Offloading Facilities and Services for Petronas Myanmar Operation for Petronas Carigali Myanmar (Hong Kong) Limited (Safety Studies and Flow Assurance)
- FSO Anjung Kecil (AJK) Early Field Development Project (Corrosion Studies, CFD - H2S Dispersion Study, Safety Studies)
- Detailed Design of FPSO Armada Perkasa Project (Process Engineering Support)
- APACHE Balnaves FPSO Project (Material Selection and Corrosion Study)
- TGT FPSO Crude Offloading Project (Surge Analysis Study, CFD and Corrosion Studies)
- Armada Perdana FPSO Crude Offloading Project (Surge Analysis Study)
- FPSO MERO 3 Project (HFE Study)

Infill

- DED for FDP SK Balingian Oil Temana Redevelopment Project (Safety Studies)
- Basic Engineering Design for Tukai Infill Project (Safety Studies)
- Engineering Services for Samarang Phase 3 Revisit Infill Project (Safety Studies and HFE Study)
- Provision of Detailed Engineering Design Work for NBO H4 Development Project (Safety Studies)
- Provision of South Acis (SASA & SAPA) Facilities Upgrade Project - Phase 2 (Safety Studies)
- PM-3 CAA 2020 Infill Flowline & Workover Campaign Project (Process Engineering and Safety Engineering Support)
- Engineering Services for Sabah and Peninsular Malaysia Projects – ERB West Infill Project (Safety Studies)
- Feasibility Study for Infill and WIM for Sepat EMP Project (Safety Studies)
- Detailed Design for Host Tie-ins at D18MP-A and Infill Drilling at D18JT-B Project (Safety Studies and HFE Study)
- FEED and Detailed Design for F9JT-A Infill Drilling Project (Safety Studies)
- BED for Samarang Redevelopment Phase 4 Project (Safety Studies, Pipeline)

Topsides (CPP/Wellhead/Riser)

- BED for Glayzer Redevelopment Project (Safety Studies)
- BED for Irong Cluster (Irong Timur and Berantai East) Gas Development Project (Safety Studies)
- FEED and EPCC of 5 WHPs, 5 Subsea Pipeline and Host Tie-in Works at JDA Block B-17, C-19 and Block B-17-01 Phase 6 Development for CPOC (Safety Studies)
- Detailed Engineering Design for Pemanis Satellite (PESA) Topside for PTTEP's Sarawak SK309 Development Project (Safety Studies)
- FEED for Sabah and Peninsular Malaysia, Kumang West Development Project (Safety Studies)
- Feasibility Study for SMP-A Topside Crude Processing Bypass Debottlenecking Project (Process Engineering and Safety Engineering Support)
- EPCC of Sepat-A Topside Project (Carbon Footprint Assessment and Flaring and Venting Framework Compliance Study)
- Design One Build Many (D1BM) Project (HFE Study)
- Restoration of Bekok-C Central Processing Platform Project (Operating Procedure and Operating Procedure Manual)
- D35 Field Development Plan Project (Process Engineering)
- East Belumut A Central Processing Platform Project (CFD Study)
- Pegaga Development Project (Surge Analysis)
- EPC for Fixed Offshore Works for Timi Field Development Project (Safety Studies)

Living Quarters (LQ)

- Detailed Design Engineering (DDE) Services for Living Quarters (LQ) inclusive of Helideck for Kasawari Gas Development Project (Safety Studies and HFE)
- Life Boat, Galley and Kitchen Modification at Sumandak Selatan SUPG-B Platform for PSCB-SBA Project (Safety Studies)
- EPCIC of FSO Facility for Full Field Development (FFD) Project at North Malay Basin Project (LQ - Safety Studies)

Material Selection and Corrosion Study

- New 7km Pipeline for Saffron (Pipeline Corrosion Analysis)
- BED/FEED for Pilot Plant for Low Carbon Syncrude Production for PRSB (Material Selection Study)
- DED for Butadiene Supply Facility to NBL, PrefChem (Corrosion Rate Calculation)
- BEPCC for New Auxiliary Boiler at Petronas Chemicals Methanol (Sumilau)- (CDBM, CMP)
- Miri Crude Oil Terminal (MCOT) Effluent Discharge Quality (EDQ) for PCSB-SKO (Material Selection and Corrosion Study)
- H₂S Study and Anjung Kecil (AJK) Early Field Development Project (Material Selection & Corrosion Study)
- APACHE Balnaves FPSO Project (Material Selection and Corrosion study)
- D1 ONGC & Material and Corrosion Study
- Corrosion-Erosion Study for Kinarut and Semarang Kecil

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OUR CLIENTS



REPSOL



Ranhill Worley



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HEALTH, SAFETY AND ENVIRONMENTAL POLICY

In pursuit of high HSE standards and in adherence to all legislative requirements IPS shall :

- Observe and fully comply with all legislative requirements;
- Provide a healthy and safe workplace for staff, clients and the public;
- Promote the health of its workers;
- Identify the hazards and assess the risks to prevent accidents;
- Protect and preserve the environment;
- Ensure safe working practices are followed.

QUALITY POLICY

IPS has an established Quality Policy as part of its Quality Management System in accordance to ISO 9001 requirements. We aspire;

- To achieve client satisfaction by providing quality services
- To continually improve the effectiveness of the Quality Management System and;
- To comply with client and any other applicable requirements.

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