



AES

ADVANCED ENGINEERING SOLUTIONS

CORPORATE PROFILE

ENGINEERING AND CONSULTANCY SERVICES



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TABLE OF CONTENTS

- 1 Introducing AES
- 2 Offices & Contacts
- 3 Resources & Expertise
- 4 Projects Experience
- 5 Projects Execution Approach
- 6 Registrations and Certificates





1 Introducing AES

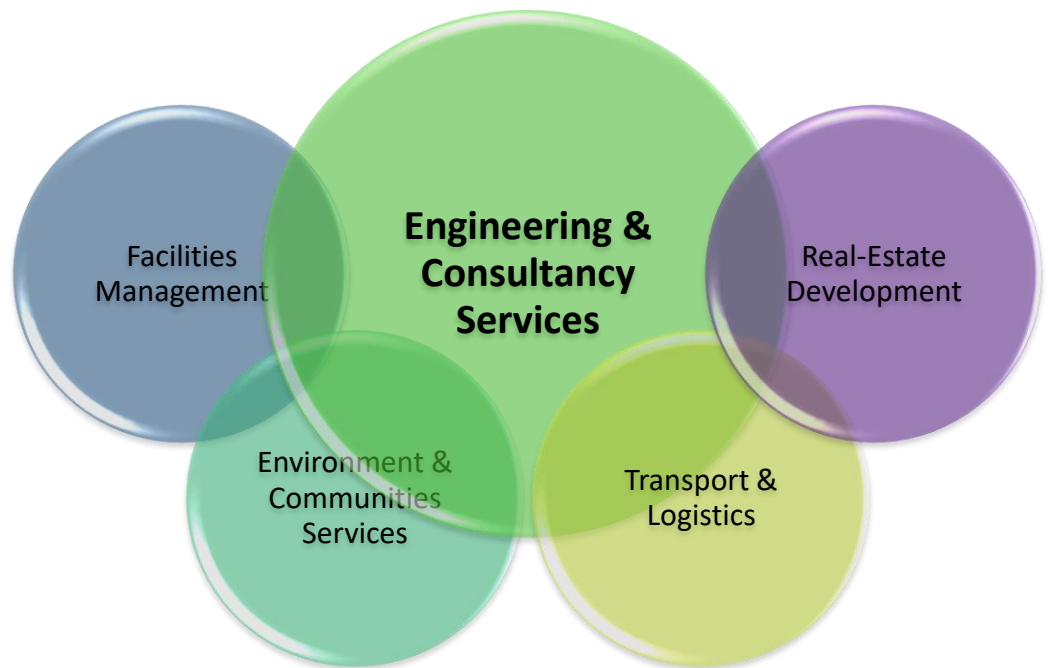
Since
2012

Projects
+150

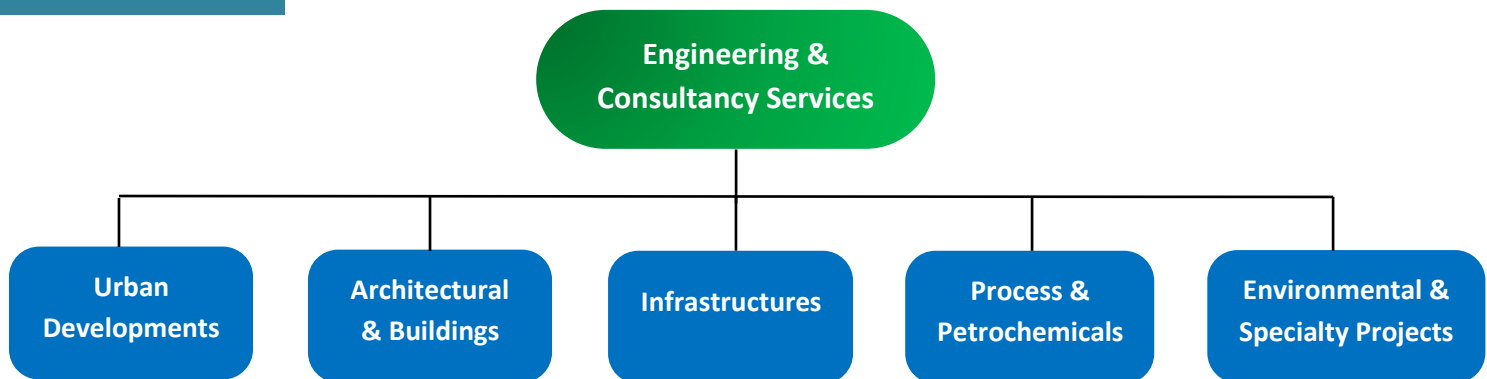
Staff & Experts
+60

Offices & Locations
+7

ADVANCED ENGINEERING SOLUTIONS (SG) PTE. LTD. (AES) is a registered corporation in Singapore with offices in Asia (Philippines), GCC (Bahrain) and in the Middle East (Lebanon & Turkey). AES corporate investments covers the fields of: 1) Facilities Management, 2) Engineering Design, 3) Environment & Communities Services, 4) Real-Estate Development and 5) Transport & Logistics. This profile is illustrating AES capabilities, experiences and resources in the field of **Engineering and Consultancy Services** in various sectors and specialties



AES provides engineering design and consultancy services to main clients and to several international consultancy firms as sub-consultant for major projects in addition to full engineering services to plants, businesses owners, construction contractors and local communities. The key specialties of expertise of which AES is providing unparalleled quality technical services and solutions cover:





2 Offices & Contacts

- **AES Singapore:**



ADVANCED ENGINEERING SOLUTIONS (SG) PTE. LTD.

Registration No. **UEN: 202211632W**

Address: 8 Marina View #39-04 Asia Square Tower 1, Singapore 018960

Tel: +65 65422309 , +973 38942642. Email: info@sg-aes.com

- **AESP Philippines:**



V5 Building, Office No. 302-308 3rd Floor, Hernaez Cor. Carmen Street

Bacolod City, Tel: +63-344458210/+63-9085161509/+63-9457194592.

- **Middle East:**



GCC Countries: Contact - +966-542827478/ +973-38942642 / +973-34007890



AES Lebanon: El-Koura – Kafr Aaqqa – Center Mitri, Tel +961-3196240 /

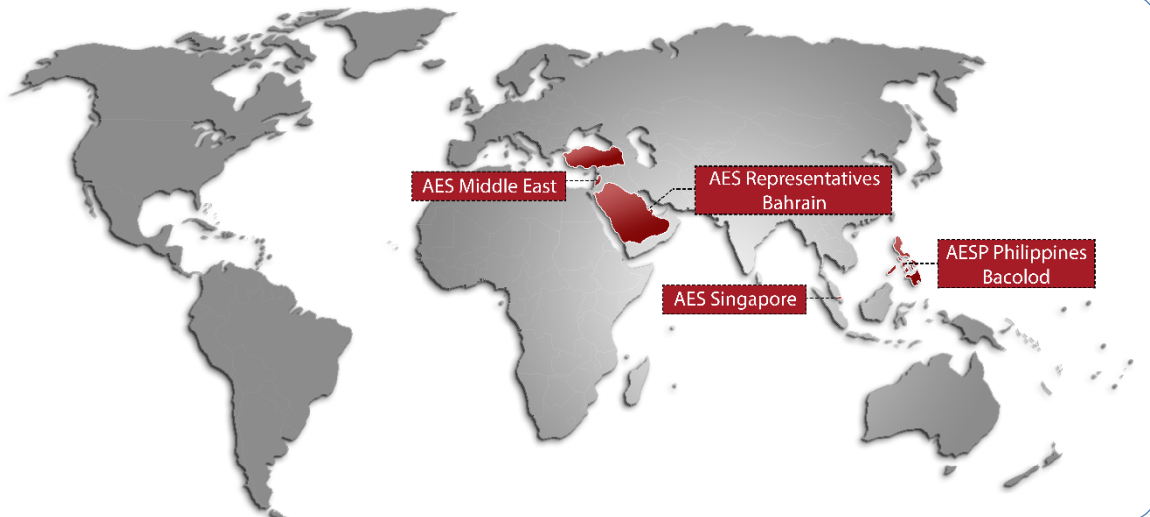


+961-6651637/ +961-71814788 / +961-71062684. Email: info@aes-leb.com

Turkey Representatives: Gaziantep, Turkey – Contact - Tel +90 551 587 9600



AES Offices & Partners





3 Resources & Expertise

Blend of experience and expertise that is well suited to the demands of any project. Engineering resources in the Middle-East and Asia supported by crew of designers, draftsmen and project support personnel. Our qualified resources on-site and in design/drafting offices provide substantial capacity to accommodate any size of fast-track and demanding projects.

Wide experience in auditing, assessing, evaluating and engineering of piping systems, fire protection, marine & port facilities, buildings, urban & land developments and infrastructures using well recognized modelling tools (SAP-2000, CAESAR-II, PIPENET, BIM & Others).

- *Hydraulic Modelling & Studies (PIPENET / PIPE-FLO)*
- *Pipe Stress Analysis (CAESAR-II) – Dynamic Modal Analysis*
- *Pipe Flow Design - Steady State and Surge Analysis*
- *Structural Modelling (SAP, SAFE, ETABS, SLOPE/W & Others)*
- *Fire Protection Design Review - NFPA Compliance*
- *HAZOP, HAZID and Risk Assessment*
- *Signal Transmission & Fiber Optic Design*
- *Telecommunication Design*
- *Instrumentation & Low Current Systems*
- *Traffic Studies / PTV Vissim Modelling*
- *Electrical Studies (ETAP, DIALUX & Lightning Risk Modelling)*
- *BIM Modelling Capabilities*
- *Facilities Fire & Safety Design - Egress Design, Emergency Plans, Review & Qualification of Architectural & Master Plans*

Engineering Design

Project Feasibility Studies
 Conceptual Design Development
 Front End Engineering Design
 Procurement Assistance
 Bills of Materials & Cost Estimation
 Preparation of Tender Documents
 Projects Contracting Strategy
 Bid Stage Engineering Support
 Design Review
 Detailed Engineering
 Shop Drawings

Project Management

Client Representation
 Project Management
 Vendors Selection Assistance
 Project Startup & Setup Systems
 Project Control
 Governance

Technical Support

Construction Support
 As Building
 Preparation of Procedures & Methodologies
 Inspections
 Quality Surveying
 Claims Support & Management





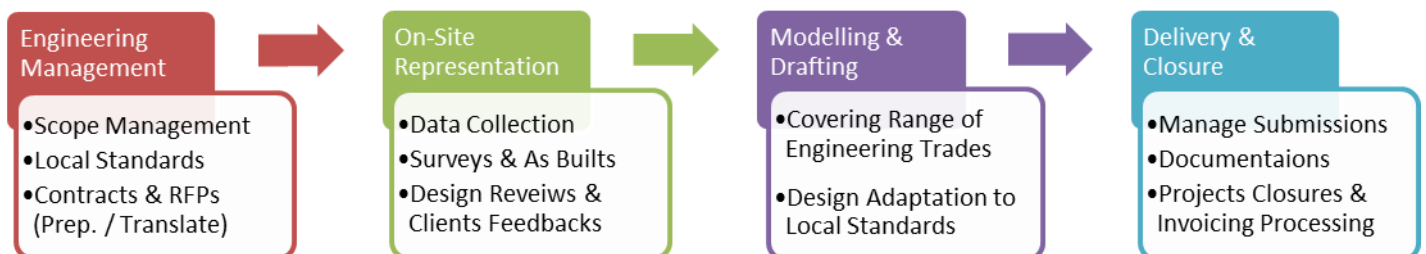
4 Projects Experience

AES have executed and delivered quality engineering work and services to prestigious clients with more than +150 projects carried out between years 2015-2020 in KSA, Bahrain, Kuwait, Philippines and Lebanon as directly engaged consultant in charge by clients or as sub-consultant with other affiliates. AES provided specialty technical services in the fields of Marine Engineering, Fire Safety, Process Engineering, Traffic Modelling using PTV Vissim, Structural & Geotechnical Modelling, Electrical Modelling using ETAP, DIALUX & other and Transport/Logistics Consultancy. AES developed proven experience in design and detailing of Railway & Roads Infrastructures with several EPC projects executed with main construction contractors and international consultants.

AES provided Architectural concepts and designs for several clients including personalized private villas, architectural programming and concepts for prestigious buildings, residential buildings, special needs and industrial functions buildings and facilities. In addition, AES have invested in the real-estate sector and developed several high quality residence projects in addition to contracts and engagements in facilities management and private communities services. Projects experience highlights and list are provided in this profile in accordance to the AES main fields of expertise.

5 Projects Execution Approach

AES follows the task force approach on which a dedicated *Project Manager* is assigned for each project who will assemble a team of expertise and resources to ensure project delivery. AES has the capacity to deploy resources to be on-site for Data Collection, As-Building, Engineering Coordination and providing short or long terms technical support in client's offices and project's sites. AES hubs for carrying out engineering design and drafting are located in several countries, strategically positioned to serve wide range of projects and clients and provide local support and representation to **International Consultants and Contractors** within short notice including **GCC Countries, Asia (Singapore, Philippines) and the Middle East (Lebanon, Turkey & with International Relief Projects in Syria)**. AES ensure quality engineering by employing latest design and modelling tools and carrying out rigorous checking and verification process with trained team in ISO-9001 procedures.



6 Registrations & Certificates

AES is legally registered entity in Singapore and Philippines and **ISO 9001:2015 Certified**. Registration and legal documents and certificates are attached to this profile for reference.





Asia, GCC & Middle East



Multi-Discipline Engineering Staff



Field Technical Support



Key Expertise

Hussam Kassab (Engineering Manager)

BSc. Civil Engineering, Project Management Professional - PMP® , NFPA - CFPS

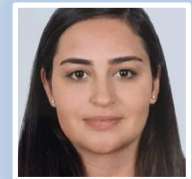
Over (35) years engineering, design, consultancy, engineering support and management experience. Extensive experience in multi-discipline technical environment related to Oil & Gas and Infrastructures, (Petrochemicals, Desalination, Bridges / Causeways, Railways, Terminals, Ports & Berths and Marine Structures). Proven experience in design concepts development, master planning, detailed engineering, statutory reviews and approvals and environmental issues. Main systems/equipment sizing and logistics considerations. Preparation of technical studies, engineering design, concepts developments, front-end engineering and RFP's preparations for PPP transactions as technical advisor and major EPC projects.



Bern Minada (Senior Architect & Master Planner)

BSc. Architecture, Member, United Architects of the Philippines

Over (30) years engineering and design on wide range of master planning and architectural projects. Enhancing the technical aspects for standard and LEED requirements. Planning, programming and design of functional and aesthetics for Urban Developments and buildings with various groups of occupancies including Industrial Buildings, Houses, Dwellings, Offices, Hotels, Hospitals, Medium Rise and High Rise Buildings.



Reem Hayder (Process Engineer)

MSc. Chemical Engineering – BSc. Chemical Engineering

Experience in preparation of key process deliverables including P&IDs, PFDs and piping main arrangements. Design and engineering of Water Treatment systems, Oil & Gas facilities, utilities systems ...etc.... Coordination with Piping/Mechanical, Instrumentation and Electrical design teams. Knowledge of preparations of project's documents, BOQs and specifications.



Mario Castrillo (Senior Instrumentation & Low Current Systems Engineer)

BSc. Electrical Engineering - Electronics Major

Over (28) years accumulated engineering & designing of Instrumentation and control for Oil and Gas Refinery, Petrochemical Plants, Downstream/Upstream Pipeline and Water Desalination Plants. Instrumentation control and monitoring for Distributed Control System (DCS), Emergency Shutdown System (ESD), Vibration Monitoring System (VMS), Boiler Management System (BMS), Programmable Logic Controller (PLC), Compressor Control System (CCS), Fire and Gas System (FGS), Remote Terminal Unit (RTU), Radar Tank Gauging System (RTG), Power Monitoring System (PMS), Flow Metering System (FMS) and others.



Jose Togada (Senior Mechanical Engineer)

BSc. Mechanical Engineering

Over (25) years years of combined experience in design, engineering and construction (management, execution, quality, design familiarization and related engineering standards) for major buildings, facilities and plants including Utilities Systems (HVAC, Fire Protection, Water Systems), Operation and Maintenance of Steam Generators with its auxiliaries and other industrial equipment and machineries for a sugar manufacturing plant and District Cooling Facilities.





Cezar Pagharion (Senior Electrical Engineer)

BSc. Electrical Engineering, Western Institute of Technology

Over (34) years diverse electrical design and engineering experience relating to petrochemical, gas and oil refining, high-rise buildings and offices associated with electrical design and supervision. Expertise covers design of 230Kv, 115kv & 69kv, switchyard and substations, overhead transmission and 13.8Kv distribution line, electrical power distribution system, power system protection, technical load evaluation, equipment sizing. Power System Analysis using ETAP PowerStation Software. Relay and Circuit breaker protection coordination study using Power Plot software. Conceptual (FEED) and Detailed Designs, technical specifications with thorough involvement in SAUDI ARAMCO and other SABIC projects.



Mustafa Hussain (Principal Structural Engineer)

BSc. Civil Engineering

Over (10) years experience in structural engineering design and modelling using SAP-2000, ETABS, SAFE and others. Static and dynamic analysis of railway and highway bridges, industrial facilities, buildings, deep foundations, pipe and box culverts, water retaining structures and high-rise buildings. Preparation of detailed design drawings, shop drawings, BOQs and projects specifications. Participated in wide range of projects in Saudi Arabia, Turkey and other locations in the middle east. Experience in modelling and detailing in BIM.

Ghadah Kassab (Traffic Modelling & Logistics Planner)

MSc. Transport Engineering and Planning – UWE, Bristol, UK , BSc. International Logistics

Experience in traffic planning and analysis of logistics and transport requirements for logistics hubs and urban and industrial developments including supply chain resources, analysis of linear & high-volume materials construction projects and design of transportation infrastructures, traffic management systems and enhancements of operational efficiencies. Capabilities in traffic simulation and modelling using PTV-VISSIM and worked on several major transport and traffic infrastructure-based projects.



Glaiza Espinoza (Design Specialist)

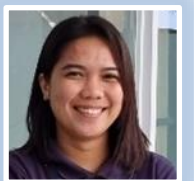
BSc. Information System

Design Assistant for master planning, marine & general engineering projects. Working with design team and principal engineers for development and detailing of project's deliverables including 2D & 3D rendering and generation of various views, conceptual design and detailing and setting up drawings drafting systems and controls. Experience in adjustments and production of CAD drawings for changes and modifications.

Arienne Dorengo (Lead Civil Engineer)

BSc. Civil Engineering, Philippines

Dedicated and highly skilled civil engineer in modelling, drafting and detailing of wide range of projects including housing projects, buildings, oil & gas facilities and infrastructures. Preparation of detailed design drawings, shop drawings, BOQs and projects specifications. Participated in wide range of projects in Saudi Arabia, Qatar, Philippines and other locations in the middle east. Experience in modelling and detailing in BIM.





Projects Experience



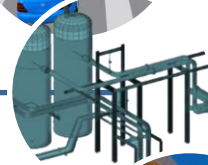
Urban Developments



Architectural & Buildings



Infrastructures



Process & Petrochemicals



Environmental & Specialty Projects



Highlights

Urban Developments

Tharwa Town Marine Works, Saudi Arabia



Marine reclamation works and shore protection design package for 4,400,000 m2 land development (Tharwa Town). Preparation of bid package, contract documents, administration of tender stage and technical support during execution of reclamation works (2016 - 2018).

Concept Master Plan for New Island-A - Saudi Side, KFCA Saudi Arabia



Preparation of concept master plan for development of the Saudi-Side New Island as commercial and entertainment hub.



Uqair Area Development Company, Phase-1 Land Preparations & Marine Works Development, AlUqair, Saudi Arabia



Design and preparation of tender package for land preparation and marine works including topography, geotechnical, marine structures and marina basin, hydrology review, logistics requirements and project master schedule.



Urban Developments

Cornish Al-Khobar Development Marine Works & Infrastructures, Saudi Arabia



Design of reclamation, shore protection and ground improvement for +3,000,000 m² new development with planning for infrastructure

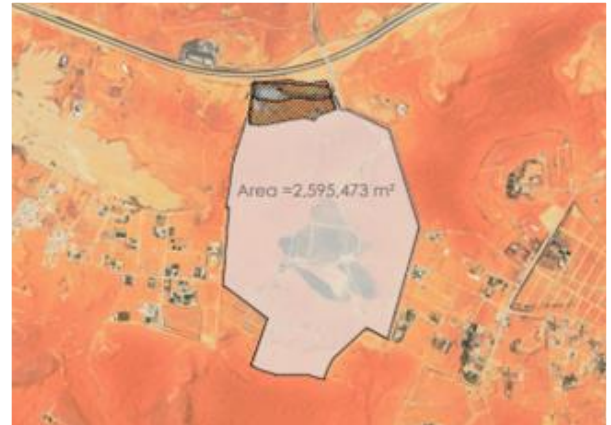


Entertainment Development

Concept Master Plan for Proposed Muzahmiya Complex

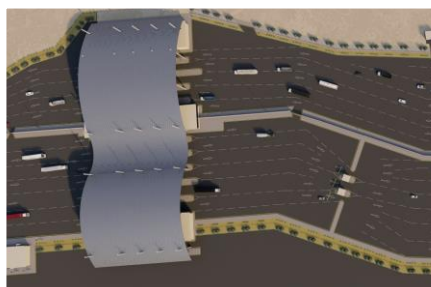


Preparation of concept master plan, zoning and phasing plan for a proposed development as commercial and entertainment hub in Muzahmiyah, near Riyadh City. The project involved several innovative space design.



Landscape & Irrigation

Design of Landscape & Irrigation Systems for Land Borders Customs Areas, Saudi Arabia



Design of landscape and irrigation systems for Saudi Arabia Land Borders Areas (Halat Ammar, Salwa, Al-Batha and Al-Khafji)

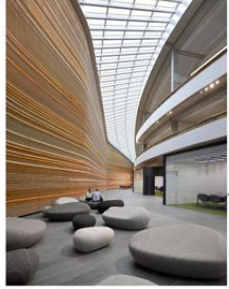


Architectural & Buildings

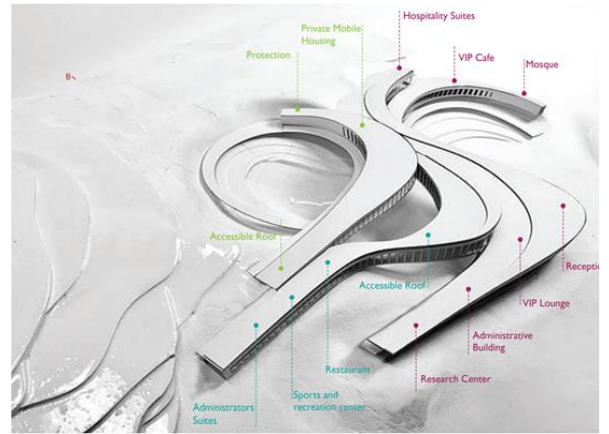
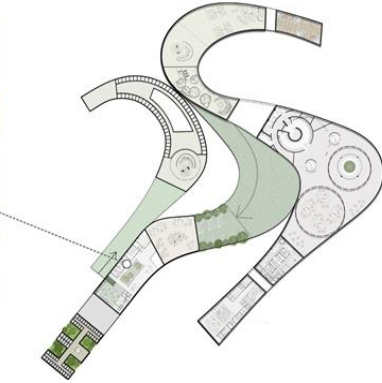
Architectural Concept for King Salman Reservation in Tubaig Saudi Arabia

Ground Floor Plan

Interior Look & Feel



Natural Environment Colors and Materials



Preparation of master plan and architectural design concept and theme for a prestigious project including HQ building and facilities required for King Salman Reservation in Tubaig.

North Hills Residence

Design & Development of Luxury Holiday Apartments & 8-Villas Resort - North Lebanon



Design, construction and full scale development of luxury apartments and villas in North Lebanon with landscape & interior design

Innovative Buildings

Design of Olayan Business Park Complex Buildings (BIBP) - Riyadh, Saudi Arabia

Preparation of structural design modelling and detailing for Al-Bustan Innovation Business Park. Large Project with over 55,000 m2 of built-up areas including offices, management HQ center, multi-story parking spaces and other facilities.

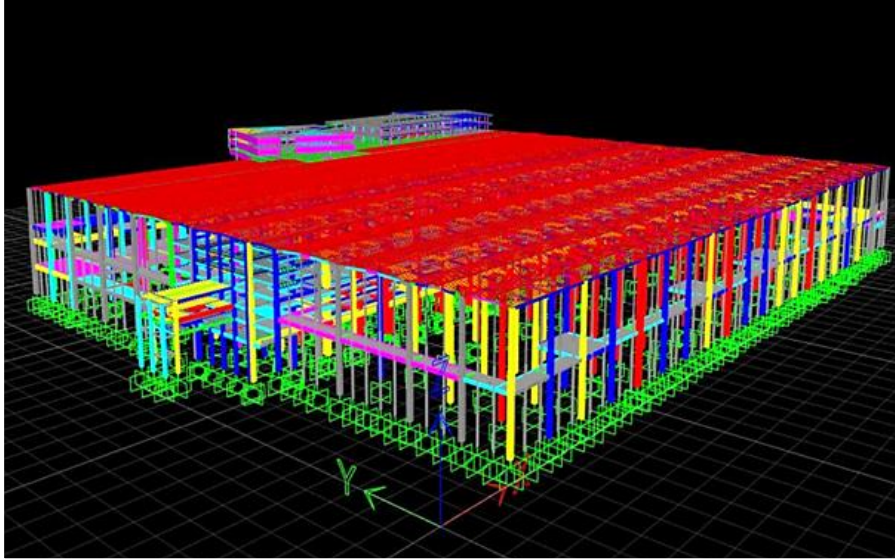


Architectural & Buildings

Specialty Building

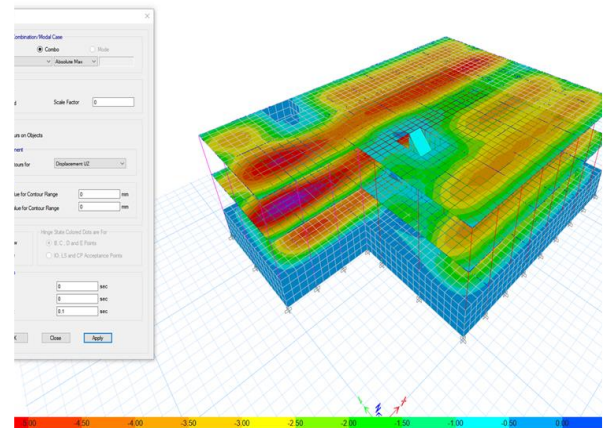
*OXAGON Terminal Main Warehouse Structural Modelling
NEOM, Saudi Arabia*

Preparation of structural modelling for technical design proposal of OXAGON Terminal, specialty building (L=500m, W=450m, H=85m).



Structural Assessment & Buildings Reinforcement

Saudi Telecom Company, Exchange Buildings, Saudi Arabia

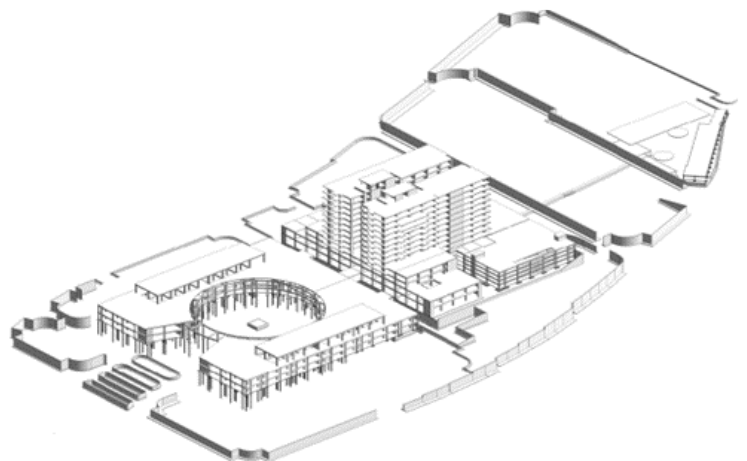


AES carried out structural assessment for more than (40) Exchange Buildings for Saudi Telecom Company including concrete repairs and structural strengthening design and supervision.

Buildings Projects Cost Engineering

Makkah Courts Complex Buildings, Cost Engineering Support - Makkah, Saudi Arabia

Preparation of BOQs, materials specifications, tender design support for a major building complex in Makkah with extensive MEP systems. Project included review and development of architectural finishing drawings, Fire & Life Safety plans in addition to structural and earthworks materials take-offs.





Infrastructures

Transportation & Traffic Modelling

Traffic Modeling for Border Island Expansion KFCA, Saudi Arabia - Bahrain

Preparation of complete real-time traffic modelling for passengers and cargo vehicles movements using software PTV-VISSIM. The new expansion project is planned in 2-Phases, 2500 Veh./Hr. and 4000 Veh./Hr.



Railway Engineering

Sand Mitigation Study for Dammam-Jubail Railway Line, Saudi Arabia

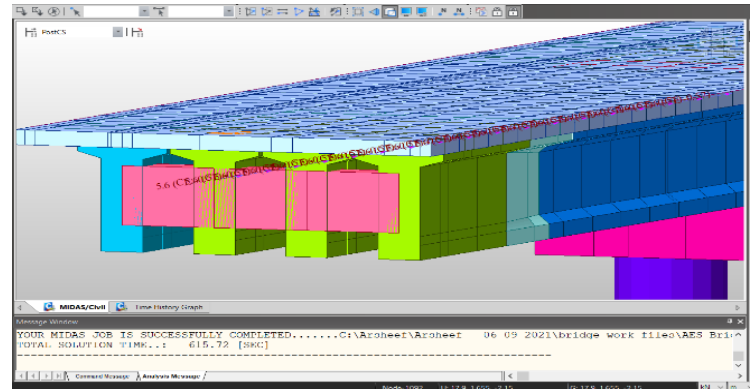
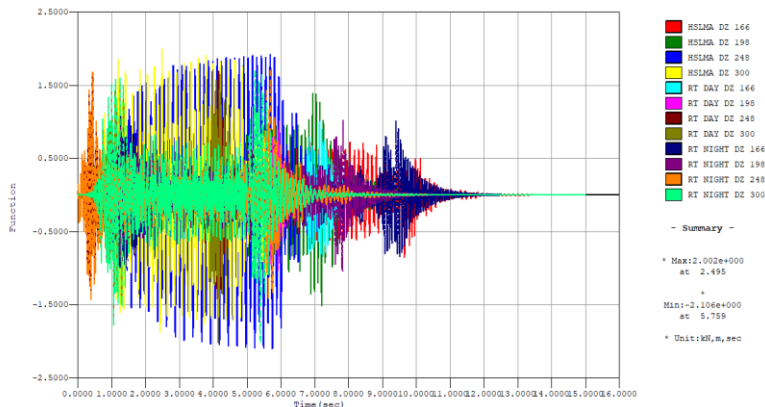
Preparation of complete sand mitigation design report for the new railway line connecting Dammam and Jubail (CTW-120 Project), including modelling of sand accumulation along the alignment (segment-by-segment), development of sand risk models and design recommendations of countermeasures with maintenance and operational planning.



Bridges Engineering

Design of Bridges & Culverts for Al-Jouf - Al-Qurrayat Railway Line Saudi Arabia

Preparation of complete structural design and shop drawings of Wadis crossings along Al-Jouf - Al-Qurrayat railway line including dynamic and static modelling of bridges to sustain High-Speed-Rail loads according to Eurocodes.

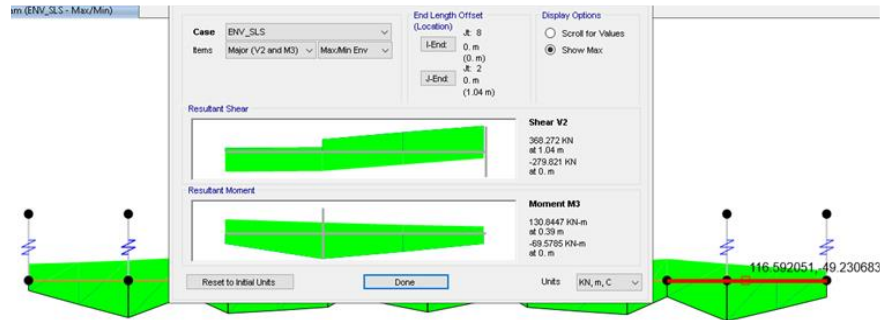


Infrastructures

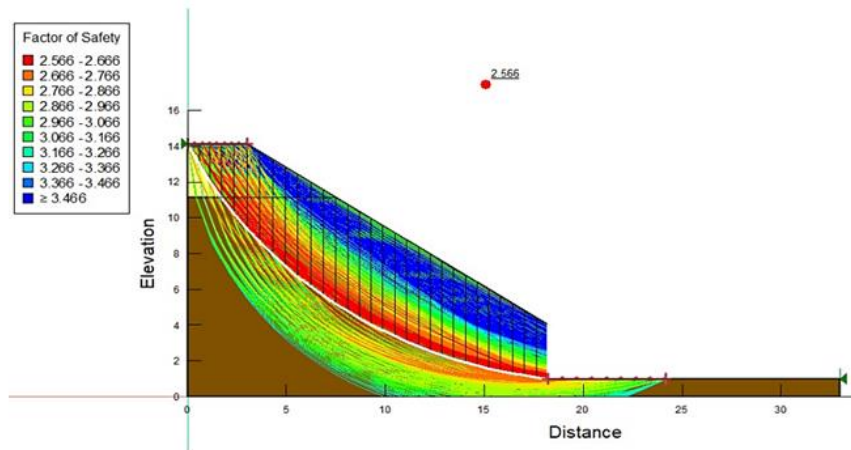
Railway Depot

NEOM Depot Tracks & Alignment Design, NEOM, Saudi Arabia

Preparation of complete technical design proposal for tender of NEOM Railway Depot including tracks, alignment, tracks slabs, RHEDA2000 and VP slabs option, earthing design, layouts and BOQs.



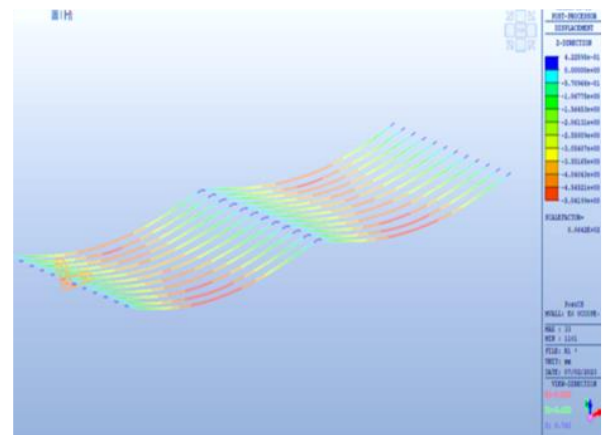
KHZM Pipeline Deep Excavation Stability Modelling & Design, Saudi Aramco, Saudi Arabia



Modelling and design of slope stability for deep excavation of major KHZM Gas Pipeline (120 km) for Saudi Aramco project in the southern area. Work involved modelling using Slope/W and stability design solutions.

Railway Bridges Structural Assessment

Hofuf Railway Bridges Structural Appraisal, Saudi Arabia



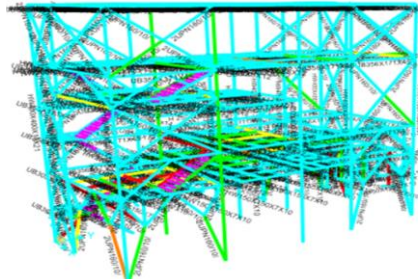
AES carried out structural assessment and design check for pre-stressed railway bridges of Hofuf railway line for SAR. Work included modelling of actual girders and foundations conditions.





Process & Petrochemicals

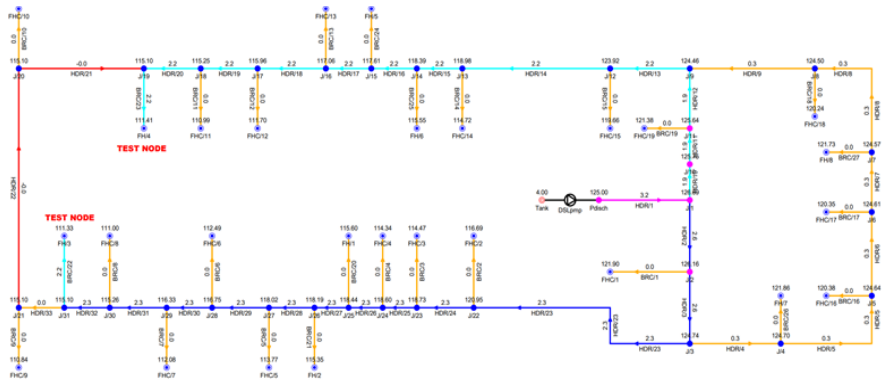
*BCI - Hydrochloric Acid Synthesis Plant
Bertram & (U-LUM) Process Units, Saudi Arabia*



Hydrochloric Acid Synthesis Plant, preparation of detailed engineering including process requirements review, structural, mechanical and electrical design for three (3) process buildings including stacks and associated LPS protection. (2019 - 2020).

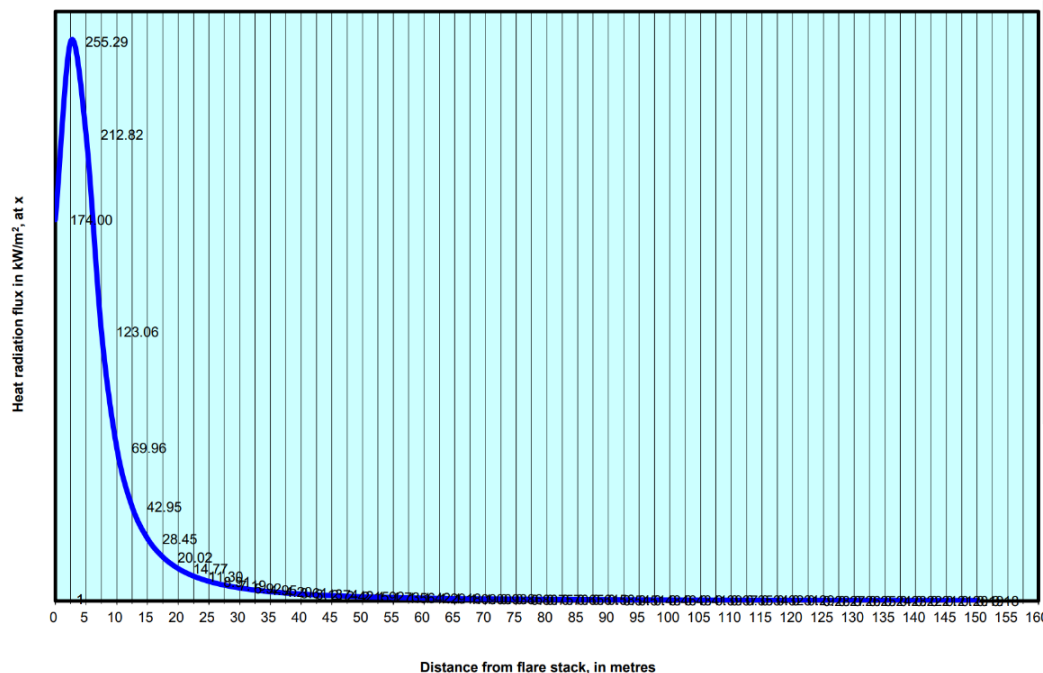
*Hydraulic Modeling for Firewater, CAT, GCC
Saudi Aramco Camp Facilities - Saudi Arabia*

Preparation of hydraulic modeling using (PIPETET PIPE-FLO) - fire protection systems, cross loop network analysis for several Saudi Aramco camps facilities.



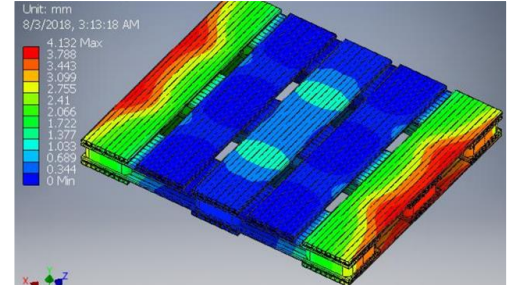
*Heat Flux Radiation Modeling for
Burn Pit, GCC , UTFG-6 Pipeline –
Saudi Aramco, Saudi Arabia*

Preparation of process calculations for estimation of heat flux on nearby equipment to pipelines burn pits and design of suitable radiation shield walls.



Process & Petrochemicals

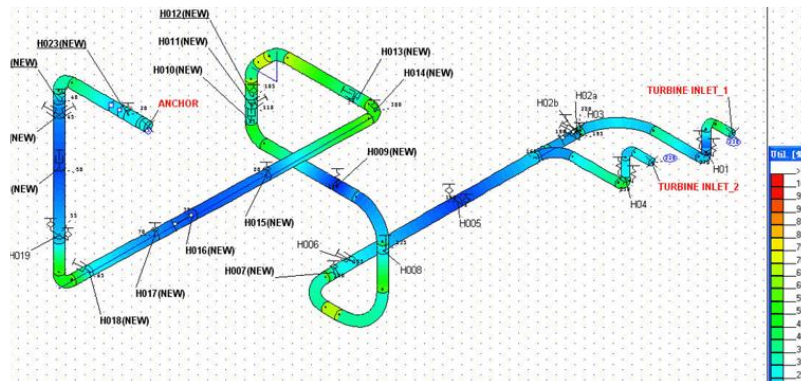
*Saudi Pallets Manufacturing Company (SPMC)
Plant Expansion, Saudi Arabia*



Detailed design for Roto-Molding technology plastic Pallets manufacturing plant in Dammam 2nd Industrial City including process equipment setting, cooling system design, E&I systems and civil/structural works. Preparation of tender documents, shop drawings and construction supervision. Stress Modelling of product pallets under racking and packaging loading cases.

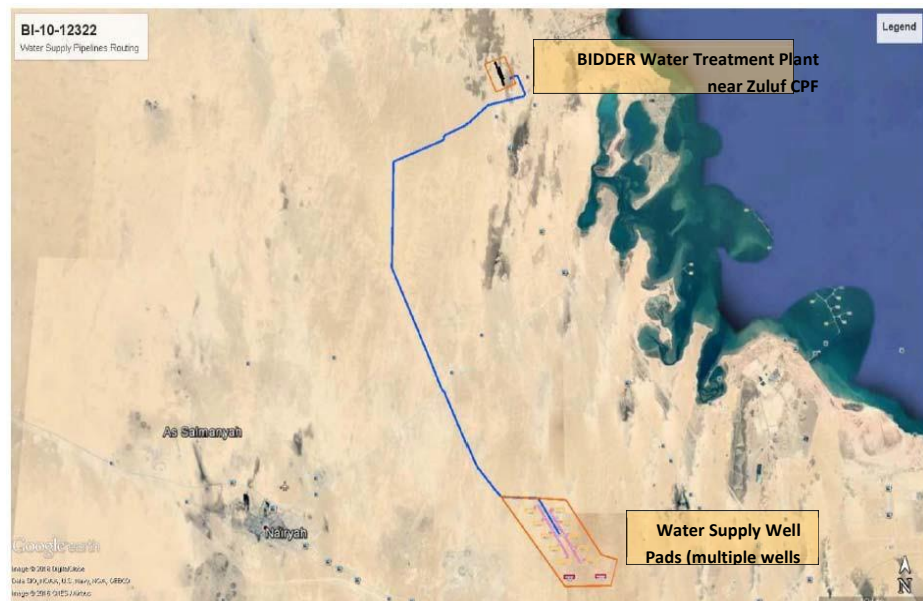
Pipe Stress Analysis (CAESAR-II) - Dynamic & Vibration Modal Analysis – Several Projects, GCC/CAT & Others -Saudi Arabia

Perform Pipe Stress Analysis by (CAESAR-II) for several pipelines and process equipment installations for various plants and pipelines project. 3D Modelling of piping and equipment arrangements.



Zuluf Saline Water Treatment Plant Preliminary Design & Technical Support Oil Field Water Injection (800,000 BPD), Saudi Aramco, Saudi Arabia

Prepare process & plant facilities design including saline water process packages, piping and facilities for technical proposal and financial cost estimates required for Saudi Aramco PPP tender. Work involved preparation of complete plant conceptual design and engineering in association with Veolia Water Technologies.





Environmental & Special Projects

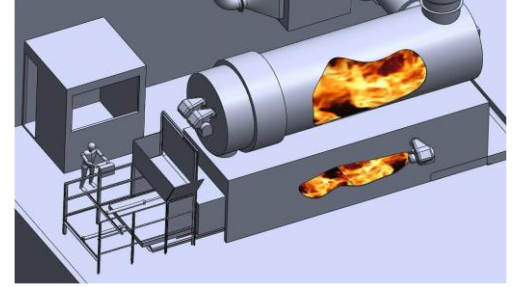
Design and Supervision of Nour Village for Special Needs Residents, Syrian Refugees Border, Kuwait Support



Preparation of master plan, detailed design of residential units and infrastructures and construction supervision for new village of 250-residential units including solar power provisions and supporting buildings and facilities. Design features and facilities for residents with special needs (lost vision).

Waste Management

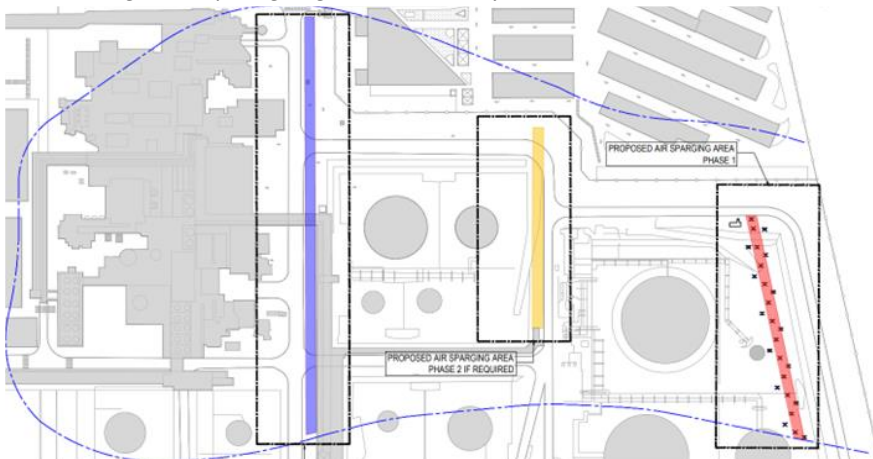
Conceptual Design of GSW & IHW Waste Plant for OSCAR Project, Saudi Aramco, Saudi Arabia



Concept layouts, infrastructures, utilities and facilities for new Saudi Aramco - Veolia plant (OSCAR Project) for GSW and IHW.

Groundwater Remediation

Design & Pilot Testing of Ground Remediation System Utilizing Air Sparging, PetroKemya, Saudi Arabia



AES scope included design, installation and operation of Test Pilot system to examine influence zone and system effectiveness and preparation of design and tender package for the full-scale Ground Remediation Treatment System for Petrokemya (3-Phases). AES partners with ARM Associates for environmental consultancy.

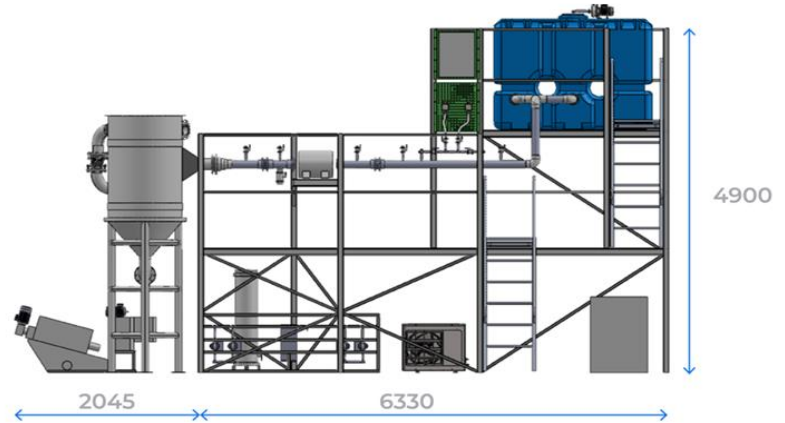




Treatment Technology Engineering

Engineering Consultancy for Acidic Wastewater Treatment Technology (PCR)

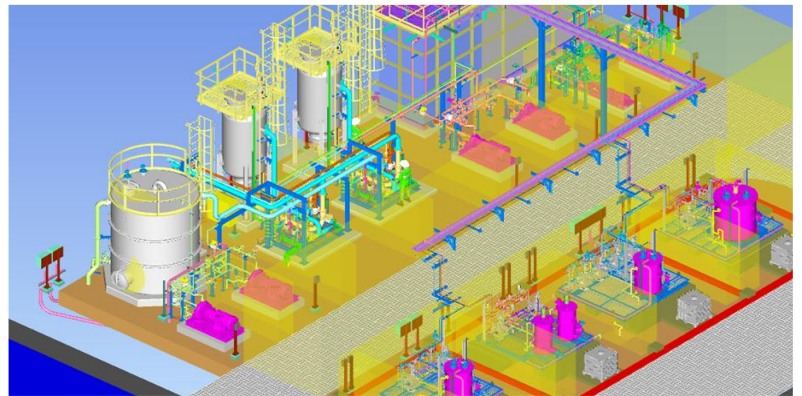
AES is partnered with Arabian for Science and Technology Co. (ASTC) as the engineering consultant for preparation of design and engineering documents and providing consultancy services for implementation of new acquired technology for treatment of Acidic Wastewater in SABIC and other industries in the Kingdom of Saudi Arabia.



Sewage Treatment Plants

QGWP - Detailed Design of Piping & Chemical Skids Design, Qatar Gas

AES is contracted by VEOLIA Middle East for detailed design of piping system, stress analysis, structural modelling and calculations and preparation of fabrication drawings including isometrics, equipment skids details, pipe supports, foundations and platforms design.



Key Clients



شركة الأومير للتجارة والمقاولات
Alomaier Trading and Contracting Co.



Urban Development & Master Planning (2015-2023)

Project No.	Title	Client	Scope	Year
1	Uqair Area Development Company (UADC), Phase-1 Land Preparations & Marine Works Development. <i>Al-Uqair, Saudi Arabia</i>	PIF / UADC Sub-Consultant	Design and preparation of tender package for land preparation and marine works including topography, geotechnical, marine structures and marina basin, hydrology review, logistics requirements and project master schedule.	2023
2	Concept Master Plan for Proposed Muzahmiya Entertainment Complex. <i>Riyadh, Saudi Arabia</i>	Private Investment Group	Preparation of concept master plan, zoning and phasing plan for a proposed development as commercial and entertainment hub in Muzahmiyah, near Riyadh City. The project involved several innovative space design.	2023
3	Al-Attas Land Marine Works Preparation of Design & Contract Documents. <i>Khobar, Saudi Arabia</i>	Saudi Tharwa	Preparation of reclamation and shore protection design for 2,000,000 m2 land development near Tharwa Town, Khobar.	2022
4	Marasi Al-Khobar Marine Works Preparation of Design & Contract Documents. <i>Dammam, Saudi Arabia</i>	RETAL	Preparation of reclamation and shore protection design for 1,800,000 m2 land development near Dammam Port.	2022
5	Concept Master Plan for Island-A - Saudi Side <i>Eastern Province, Saudi Arabia</i>	King Fahd Causeway Authority (KFCA)	Preparation of concept master plan for development of the Saudi-Side New Island as commercial and entertainment hub.	2022
6	North Hills Master Plan, Architectural & Land Development Design. <i>El-Koura, Lebanon</i>	North Hills Real-Estate	Master plan, architectural & development design for prestigious residential resort & holiday homes development.	2021



Urban Development & Master Planning (2015-2023)

Project No.	Title	Client	Scope	Year
7	Cornish Al-Khobar Marine Works Preparation of Design & Contract Documents. <i>Dammam, Saudi Arabia</i>	Saudi Tharwa	Preparation of reclamation and shore protection design for 3,500,000 m2 land development (Cornish Al-Khobar).	2021
8	KFCA Island Remaster Plan Local Engineering Technical Support. <i>Eastern Province, Saudi Arabia</i>	Intecsa-Inarsa / KFCA (King Fahd Causeway Authority)	Providing architectural and master planning local engineering support to Intecsa-Inarsa for the KFCA Island Remaster Plan (Marine & Infrastructures).	2021
9	Tender Documents for Land Development and Infrastructures - Obhur Land - Plots 9A and 9B. <i>Jeddah, Saudi Arabia</i>	Saudi Tharwa	Preparation of tender documents and specifications for development infrastructure - Obhur Plots 9A and 9B.	2020
10	Nahkeel - Tharwa Town Cornish Road Segment Design of Reclamation & Marine Works. <i>Dammam, Saudi Arabia</i>	Saudi Tharwa	Reclamation, shore protection and road infrastructure design for Cornish road connection of Nahkeel – Tharwa Town.	2020
11	Tharwa Town Development Marine Works Preparation of Design & Contract Documents. <i>Dammam, Saudi Arabia</i>	Saudi Tharwa	Preparation of reclamation and shore protection design for 4,400,000 m2 land development (Tharwa Town).	2017
12	Technical & Consultancy Support for Construction of New Island Reclamation. <i>Eastern Province, Saudi Arabia</i>	TYLOS - NCS / KFCA (King Fahd Causeway Authority)	Technical support to KFCA during master plan development and construction of marine works of New Island (Saudi Side).	2015



Architectural & Buildings Projects Experience (2016-2023)

Project No.	Title	Client	Scope	Year
1	Makkah Courts Complex Buildings, Cost Engineering Support. <i>Makkah, Saudi Arabia</i>	Intecsa-Inarsa Sa.	Preparation of BOQs, materials specifications, tender design support for a major building complex in Makkah with extensive MEP systems. Project included review and development of architectural finishing drawings, Fire & Life Safety plans in addition to structural and earthworks materials take-offs.	2023
2	STC Exchange Buildings Modelling & Structural Assessment. <i>Saudi Arabia</i>	Saudi Telecom Company (STC)	Buildings modelling and structural assessment for several STC Exchanges (40-buildings) in Eastern, Central and Western regions of Saudi Arabia. Engineering consultancy services including concrete repairs and structural strengthening design and supervision.	2022-2024
3	OXAGON Terminal Main Warehouse Structural Modelling & Design. <i>NEOM, Saudi Arabia</i>	ESEC / Intecsa-Inarsa Sa.	Preparation of structural modelling for technical design proposal of OXAGON Terminal, specialty building (L=500m, W=450m, H=85m). In addition to building MEP systems preliminary design and BOQs preparations.	2023
4	CEER Manufacturing Facilities Steel Structures Alternative Design. <i>Saudi Arabia</i>	ESEC / Intecsa-Inarsa Sa.	Preparation of buildings design and technical solutions for tender stage support including Production, Assembly Shops, Painting Shops, Battery Shops and other buildings.	2023



Architectural & Buildings Projects Experience (2016-2023)

Project No.	Title	Client	Scope	Year
5	OLAYAN Al-Bustan Business Park Buildings Structural Design. <i>Riyadh, Saudi Arabia</i>	AYESA - Spain / Basic Engineering Co.	Al-Bustan Business Park, design of prestigious multi-purpose buildings with total built-up area over 55,000 m2 including offices, HQ & multi-story parking.	2023
6	Riyadh Stone House Private Resort. <i>Riyadh, Saudi Arabia</i>	AZAZ Architects / Private Development	Design of luxury private resort residence and facilities with guest villas, pavilions and other facilities. Resort re-treat near Riyadh with Wadi views.	2023
7	Al-Ula Visitors Center Building – Structural Design. <i>Al-Ula, Saudi Arabia</i>	AZAZ Architects / Al-Ula Authority	Structural Design of specialty visitors center building in Al-Ula.	2023
8	Master Planning & Architectural Theme Proposal Concept for King Salman Reservation in Tubaiq – Headquarter Facilities. <i>Riyadh, Saudi Arabia</i>	PROF Consult / King Salman Bin Abdulaziz Royal Reserve	Preparation of master plan and architectural design concept for a prestigious project including HQ building and facilities required for King Salman Reservation in Tubaiq.	2021
9	North Hills Residence-I Building Design & Construction Supervision. <i>El-Koura, Lebanon</i>	North Hills	Preparation of detailed design including architectural, structural & MEP and construction supervision.	2021
10	Private Villas, Architectural Themes & Detailed Design Development. <i>Kuwait City, Kuwait</i>	Private Clients	Preparation of architectural design concept and detailed design including architectural, structural & MEP systems.	2021
11	Mountain Residential Building Modernization and Rehabilitation. <i>Hammana, Mount Lebanon</i>	Private Clients	Color schemes, cladding design, structural and finishings repairs and MEP systems rehabilitation.	2021



Architectural & Buildings Projects Experience (2016-2023)

Project No.	Title	Client	Scope	Year
12	Two Story & Three Story, Bedrooms Dormitory. <i>Bacolod City, Philippines</i>	Basic Chemicals Industries (BCI)	Preparation of concept and detailed design including architectural, structural & MEP systems.	2020
13	Pavia Deca Homes Additions (Expansion of Existing Residential Homes). <i>Iloilo City, Philippines</i>	Pavia Deca Development	Preparation of detailed design including architectural, structural & MEP systems.	2019
14	Buildings Codes & Fire Exits Review & Drawings, Hydrochloric Acid Synthesis Plant. <i>Jubail, Saudi Arabia</i>	Basic Chemicals Industries (BCI)	Review of buildings architectural design for egress routes, fire exits, corridors ...etc... and modify design drawings accordingly.	2019
15	Hydrochloric Acid Synthesis Plant - Interior Design & Color Schemes -Selected Buildings. <i>Jubail, Saudi Arabia</i>	Basic Chemicals Industries (BCI)	Architectural finishing, colors and themes selection for the main plant's buildings. Exterior and interior 3D rendering and views.	2018
16	Design of Piping Fabrication Shop. <i>Dammam, Saudi Arabia</i>	General Consolidated Contractors Ltd. (GCC)	Preparation of detailed design including architectural, structural & MEP for industrial workshop building.	2017
17	Design of New Plant Extension - Dammam 2nd Industrial City. <i>Dammam, Saudi Arabia</i>	Saudi Pallets Manufacturing Company (PAXXAL)	Preparation of detailed design including architectural, structural & MEP for PAXXAL new plant expansion.	2017
18	Fire Protection Design Review - NFPA Compliance for Khafji Joint Operation (KJO). <i>Al-Khaffji, Eastern Province, Saudi Arabia</i>	Saud Consult / Khafji Joint Operation (KJO)	Design review and NFPA compliance certification for facilities and buildings upgraded by KJO.	2016



Infrastructures Projects Experience (2016-2023)

Project No.	Title	Client	Scope	Year
1	Design of NEOM Railway Depot Connector Tracks Works and Slabs <i>NEOM, Saudi Arabia</i>	MARTINIUS / Intecsa	Design of 55 km main depot tracks including tracks slabs, elevated tracks pedestals, turnouts, earthing & bonding. Design included structural modelling and design of joints, layouts of electrical power posts. Project work included quantification of civil/structural, electrical and signaling works.	2023
2	Design of Landscapes & Irrigation Systems Saudi Arabia Land Borders Customs Areas <i>Land Borders, Saudi Arabia</i>	Saudi Customs Borders / PROF Consult	Design of landscape and irrigation systems including 3D rendering for several Saudi Arabia Land Borders Customs areas including Halat Ammar, Al-Batha, Salwa and Al-khafji.	2022
3	Traffic Study & Modelling at ITHRA Building <i>Dhahran, Saudi Arabia</i>	Gulf Consolidated Contractors (GCC) / Saudi Aramco	Traffic study for and preparation of real-time movement using PTV-VISSIM modelling for the main highways junction at ITHRA building for impact during construction works related to landscape and irrigation at ITHRA Building.	2022
4	NEOM Gayal & Spine Water Pipelines Bid Stage Engineering Support <i>NEOM, Saudi Arabia</i>	Al-Yamama Contracting	Preparation of BOQs, preliminary design and technical proposal assistance activities to facilitate bid submissions of two(2) NEOM water transmission pipelines projects.	2022
5	KAFD Solid Waste Transfer Pipeline <i>Riyadh, Saudi Arabia</i>	King Abdullah Financial District / Basic Engineering Co.	Design of solid waste transfer system including ducts, supports and suction system for King Abdullah Financial District (KAFD).	2022



Infrastructures Projects Experience (2016-2023)

Project No.	Title	Client	Scope	Year
6	THAAD Sites Bid Stage Engineering Support <i>Ministry of Defense, Saudi Arabia</i>	Al-Yamama Contracting	Preparation of BOQs and preliminary design to facilitate bid submission for THAAD project.	2022
7	KHZM Pipeline Deep Excavation Stability Modelling & Design, Saudi Aramco. <i>Saudi Arabia</i>	Gulf Consolidated Contractors (GCC) / Saudi Aramco	Modelling and design of slope stability for deep excavation of major KHZM Gas Pipeline (120 km) for Saudi Aramco project in the southern area. Work involved modelling using Slope/W and stability design solutions.	2022
8	Traffic Modelling for Border Island Expansion, King Fahd Causeway Authority Remaster Plan. <i>Saudi Arabia / Kingdom of Bahrain</i>	Intecsa-Inarsa / King Fahd Causeway Authority	Preparation of complete real-time traffic movement using PTV-VISSIM modelling for the new expansion project 4000 Veh./Hr.	2021
9	Design of Service Roads for CTW120 Railway <i>Dammam, Saudi Arabia</i>	SAR / Al Omaier	Detailed design of railway service roads required for Dammam – Jubail Railway line.	2021
10	Design of Remedial Works for Qurayyat - Al-Jouf Railway Line. <i>Al-Jouf, Saudi Arabia</i>	SAR / Al Omaier	Detailed design of railway structures including bridge, culverts, hydrology structures, railway tracks and miscellaneous remedial works for Al-Jouf – Qurayyat line.	2021
11	Preliminary Design & BOQ Development for NSR Remedial Works Tender. <i>Ras Al-Khair, Saudi Arabia</i>	SAR / Al Omaier	Preliminary design and quantities estimates of railway structures for bid stage support, NSR railway line.	2021
12	ETAP Modelling for Step & Touch Potential Main Substations Grounding – New HAS Plant. <i>Jubail, Saudi Arabia</i>	Basic Chemicals Industries (BCI)	Carrying out Electrical Transient Analysis for the step and touch potential to verify the design of the main substations grounding.	2020



Infrastructures Projects Experience (2016-2023)

Project No.	Title	Client	Scope	Year
13	DIALUX Lighting Levels Modelling for HCIS Requirements – New HAS Plant. <i>Jubail, Saudi Arabia</i>	Basic Chemicals Industries (BCI)	DIALUX modelling for exterior and interior lighting at the main gate house and security fence to comply with HCIS requirements.	2020
14	Nahkeel - Tharwa Town Cornish Road Design – Geometry & Infrastructures. <i>Dammam, Saudi Arabia</i>	Saudi Tharwa	Coastal road & infrastructure design for cornish connection between Nahkeel and Tharwa Town. Alignment, sections & details.	2020
15	Design of Railway Bridge Crossings – Jubail Industrial City. <i>Jubail, Saudi Arabia</i>	TRICORP / SAUD CONSULT Royal Commission	Detailed design of railway bridge crossing - Jubail Industrial City.	2019
16	Re-design of Culvert-1 for Royal Commission Railway Crossings. <i>Ras Al-Khair, Eastern Province, Saudi Arabia</i>	SAR / Al Omaier	Modifications of detailed design of railway box culverts crossing – Ras Al-Khair.	2019
17	Preparation of Railway Sand Mitigation Design, CTW 120, Jubail – Dammam Junction. <i>Dammam, Saudi Arabia</i>	SAR / Al Omaier	Preparation of Sand Mitigation design for CTW Railway Project (108 Km) between JIC and Dammam. Sand flux & risk evaluations.	2018
18	Railway Crossings & Pipe Bridges of Eastern Utility Corridor – Design Shop Drawings. <i>Ras Al-Khair, Eastern Province, Saudi Arabia</i>	SAR / Al Omaier	Design verification and preparation of detailed shop drawings for railway ballasts, embankments, bridges & culverts crossings.	2017
19	KIMS Care Hospital Traffic Impact Assessment Report – Um Al-Hassam. <i>Kingdom of Bahrain</i>	TYLOS - NCS / KIMS Care	Preparation of Traffic Impact Assessment for new hospital in Bahrain. Mapping, field traffic counts and PTV VISSIM modelling.	2016



Process & Petrochemicals Projects Experience (2015-2023)

Project No.	Title	Client	Scope	Year
1	Jafurah Sewage Treatment Plant Detailed Design & CMMS Technical Support. <i>Jafurah, Saudi Arabia</i>	SinoHydro / Saudi Aramco	Prepare process & plant facilities design including saline water process packages, piping and facilities for technical proposal and financial cost estimates required for Saudi Aramco PPP tender.	2023 - 2024
2	Zuluf Saline Water Treatment Plant Preliminary Design & PPP Technical Support – Oil field Water Injection (800,000 BPD). <i>Tanajib, Saudi Arabia</i>	Al-Yamama Group Co. / Association with Veolia	Prepare process & plant facilities design including saline water process packages, piping and facilities for technical proposal and financial cost estimates required for Saudi Aramco PPP tender.	2022
3	Saudi Pallets Manufacturing Company (SPMC) / PAXXAL Inc. Plant Expansion Design & Construction Supervision. <i>Dammam, Saudi Arabia</i>	Saudi Pallets Manufacturing Company (SPMC)	Detailed design for Roto-Molding technology plastic Pallets manufacturing plant in Dammam 2nd Industrial City including process equipment setting, cooling system design, E&I systems and civil/structural works. Preparation of tender documents, shop drawings and construction supervision. Stress Modelling of product pallets under racking and packaging loading cases.	2022
4	Engineering Support For Saudi Aramco Pipelines Design @ KHZ3. <i>Haradh, Saudi Arabia</i>	General Consolidated Contractors Ltd. (GCC) / Saudi Aramco	Engineering support for design and construction of new Saudi Aramco pipelines @ KHZ23.	2021
5	Offshore Seawater Intake & Cooling System with Overflow Piping for New Hydrochloric Acid Synthesis Plant. <i>Jubail, Saudi Arabia</i>	Basic Chemicals Industries (BCI)	Hydraulics, piping/mechanical and structural design of offshore and on-shore facilities of Seawater Cooling System of the new Hydrochloric Acid Synthesis Plant.	2020



Process & Petrochemicals Projects Experience (2015-2023)

Project No.	Title	Client	Scope	Year
6	Hydrochloric Acid Synthesis Plant, Bertram, PA-07 (U-LUM) Process Buildings, Stacks and B-25 (Veolia Building). <i>Jubail, Saudi Arabia</i>	Basic Chemicals Industries (BCI)	Preparation of detailed engineering including process requirements review, structural, mechanical and electrical design for three (3) process buildings including stacks and associated LPS protection.	2020
7	Design of Lube Oil Plant. <i>Dammam, Saudi Arabia</i>	General Consolidated Contractors Ltd. (GCC) / Saudi Aramco	Preparation of detailed design including process requirements, structural & MEP for lube oil processing building.	2020
8	Analysis and Design of Radiation Shield UTFG-6 & UTKHCL-3 Burn Pit - Saudi Aramco Pipelines. <i>Khobar, Saudi Arabia</i>	General Consolidated Contractors Ltd. (GCC) / Saudi Aramco	Preparation of process calculations for estimation of heat flux on nearby equipment to pipelines burn pits and design of suitable radiation shield walls.	2018
9	Hydraulic Modeling (PIPENET & PIPE-FLO) - Fire Protection Systems - Saudi Aramco Camps. <i>Eastern Province, Saudi Arabia</i>	CAT, CPP & GCC Saudi Aramco Contractors	Preparation of detailed design for several Saudi Aramco temporary facilities camps including architectural, structural & MEP systems with hydraulic cross-loop modelling of firewater networks.	2015 - 2016
10	Pipe Stress Analysis (CAESAR-II) - Dynamic & Vibration Modal Analysis – Pipelines Projects. <i>Khobar, Saudi Arabia</i>	General Consolidated Contractors Ltd. (GCC/CAT & Others)	Perform Pipe Stress Analysis by (CAESAR-II) for several pipelines and process equipment installations for various plants and pipelines project. 3D Modelling of piping and equipment arrangements.	2015 - 2022



Environmental & Waste Management Projects Experience (2021-2023)

Project No.	Title	Client	Scope	Year
1	Engineering Consultancy for Acidic Wastewater Treatment Technology (PCR) <i>SABIC, Saudi Arabia</i>	ASTC – SABIC	AES is partnered with Arabian for Science and Technology Co. (ASTC) as the engineering consultant for preparation of design and engineering documents and providing consultancy services for implementation of new acquired technology for treatment of Acidic Wastewater in SABIC and other industries in the Kingdom of Saudi Arabia.	2023-2024
2	QGWP – Sewage Treatment Plant, Detailed Design of Piping & Skids. <i>Qatar Gas, State of Qatar</i>	Veolia – Qatar Gas	Sewage Treatment Plants QGWP - Detailed Design of Piping and Chemical Skids, Qatar GasAES is contracted by VEOLIA Middle East for detailed design of piping system, stress analysis, structural modelling and calculations and preparation of fabrication drawings including isometrics, equipment skids details, pipe supports, foundations and platforms design.	2023
3	Design and Engineering Services for PETROKEMMYA Air Sparging System for Ground Redemption Program. <i>Jubail, Saudi Arabia</i>	SABIC – PETROKEMMYA / ARM Associates	AES is partnered with ARM Associates (leading environmental consultant in the GCC region) to carry out the conceptual and detailed design for the Air Sparging System required by PETROKEMMYA for redemption of ground contaminated by accumulation of industrial wastes including hydrocarbon and other chemicals. The project involved air sparging wells, process decomposition monitoring, compressed air system and soil testing.	2023



Environmental & Waste Management Projects Experience (2021-2023)

Project No.	Title	Client	Scope	Year
4	Engineering Consultancy Services for the OSCAR Project - Industrial Hazardous Waste and General Waste Plant. <i>Dhahran, Saudi Arabia</i>	Saudi Aramco – Veolia Joint Venture	AES is hired by Veolia to provide engineering and consultancy services related to the plant's facilities and infrastructures. project is a JV between Saudi Aramco and Veolia. Preparation of master plan, RFP package and FEED design for major Industrial Hazardous Waste (IHW) and General Waste (GSW) Plant in Dhahran, Saudi Arabia.	2022
5	Zuluf Saline Water Treatment Plant Preliminary Design & PPP Technical Support – Oil field Water Injection (800,000 BPD). <i>Tanajib, Saudi Arabia</i>	Al-Yamama Group Co. / Association with Veolia	Prepare process & plant facilities design including saline water process packages, piping and facilities for technical proposal and financial cost estimates required for Saudi Aramco PPP tender.	2021
6	Engineering Feasibility Study for Hills Sanitary Landfill. <i>Koura, Lebanon</i>	Holcim / Koura Municipalities	Preliminary technical and financial feasibility study for transforming the cut hills into sanitary landfill with environmental controls and gas collection system. Project also addressed garbage collection and recycling schemes in the region.	2021





Registrations & Certificates





CERTIFICATE CONFIRMING INCORPORATION OF COMPANY

Company Name : **ADVANCED ENGINEERING SOLUTIONS (SG) PTE. LTD.**

UEN : **202211632W**

This is to confirm that the company was incorporated under the Companies Act, on and from **05/04/2022** and that the company is a **EXEMPT PRIVATE COMPANY LIMITED BY SHARES**.



TAN YONG TAT
ASST REGISTRAR OF COMPANIES & BUSINESS NAMES
ACCOUNTING AND CORPORATE REGULATORY AUTHORITY
SINGAPORE

Dated : **05/04/2022**
Receipt Number : **ACRA220405134050**



Authentication No. : T22259961T

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Business Profile (Company) of ADVANCED ENGINEERING SOLUTIONS (SG) PTE. LTD. (202211632W)

Date: 05/04/2022

The Following Are The Brief Particulars of :

UEN	:	202211632W
Company Name.	:	ADVANCED ENGINEERING SOLUTIONS (SG) PTE. LTD.
Former Name if any	:	
Incorporation Date.	:	05/04/2022
Company Type	:	EXEMPT PRIVATE COMPANY LIMITED BY SHARES
Status	:	Live Company
Status Date	:	05/04/2022

Principal Activities

Activities (I)	:	GENERAL BUILDING ENGINEERING DESIGN AND CONSULTANCY SERVICES (71121)
Description	:	
Activities (II)	:	
Description	:	

Capital

Issued Share Capital (AMOUNT)	Number of Shares *	Currency	Share Type
100	100		

* Number of Shares includes number of Treasury Shares

Paid-Up Capital (AMOUNT)	Number of Shares	Currency	Share Type
100			

COMPANY HAS THE FOLLOWING ORDINARY SHARES HELD AS TREASURY SHARES

Number Of Shares	Currency
------------------	----------



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LETTER OF CONFIRMATION

This is to confirm that

AESP Architectural & Engineering Services Affiliated with Advanced Engineering Solutions (AES)

Office Address: Dr. 9, 722 Metropolis
Tower, Lacson St., Mandalagan, Bacolod
City, 6100 Philippines

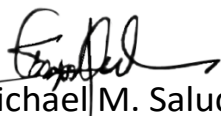
has been approved for the scope

Provisions of Architectural and Engineering Services

ISO 9001:2015

Approved Program with No.: **120866/A/0001/UK/En**

After completion of the stage 2 audit, Technical review of the audit report will be performed by the certification office and for posting of the final review result and recommendation.


Michael M. Salud
General Manager





Certificate of Registration

This certificate has been awarded to

AESP Architectural Engineering Services

722 Metropolis Tower, Lacson St., Mandalagan, Bacolod City, 6100, Philippines

in recognition of the organization's Quality Management System which complies with

ISO 9001:2015

The scope of activities covered by this certificate is defined below

Provision of Architectural and Engineering Designs

Certificate Number **120866/A/0001/UK/En**

A certificate number of 0001, confirms the Client has a single site Certified & the site is their Head Office or Main site in relation to the Certified scope with URS. A certificate number of 0002, or greater (e.g.: xxx0/B/0002/UK/En) refers to a client that has more than one site certified with URS, as such, the following statement shall apply - 'The validity of this certificate depends on the validity of the main certificate'.

Date of Issue of Certification Cycle	Issue Number	Certificate Expiry Date	Certification Cycle
28 May 2022	1	27 May 2025	1
Revision Date	Revision Number	Original Certificate Issue Date	Scheme Number
28 May 2022	0	28 May 2022	n/a

For detailed explanation for the data fields above, refer to <http://www.urs-holdings.com/logos-and-regulations>

Issued by

On behalf of the Schemes Manager





AES Singapore

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