



ESP

ENERGY SPRING PILLARS

Energy Springs Pillars



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REGISTRATIONS/ السجلات
COMMERCIAL REGISTRATION

CR# 2050233758

سجل تجاري رقم: 2050233758

أرامكو السعودية: 10065548

SAUDI ARAMCO: 10065548

Representative

Name:	Mousa Al Eid (GM)
Position:	General Manager
Address:	Dammam, Eastern Province, KSA
Mobile:	+96656 494 2350
Email:	eidmj@enpillars.com ; info@enpillars.com

ESP

ESP aims at providing a comprehensive consulting and engineering services to the Upstream Oil and Gas industry. The Engineering Services encompass geotechnical, geophysical, hydrographic surveying, land surveying, environmental consultancy and Non-Destructive Testing (NDT) for Oil and Gas facilities of the energy sector.

The services cover both marine and land operations in Saudi Arabia, and plan to extends beyond the kingdom borders to neighboring Gulf Council Countries. ESP provide consulting services that cover a wide range of disciplines, including business management, exploration, field development, drilling, production facilities and project management.

The leaders of the Company are a core of rounded and highly qualified professionals who have long track records in major and independent oil companies. The Company management has been cultivating its rich and wide operation and engineering experience in its effort to provide an integrated solution and to execute projects to the highest standards.

The company strives to make the services available in the Kingdom of Saudi Arabia and neighboring Gulf countries and is ready for mobilization to meet stringent project schedule. ESP geophysical services encompass: Side Scan Sonar (SSS) Surveys, Sub bottom Profile (SBP), Vibro Coring samples, and Grab Samples

ESP provides geotechnical investigation onshore and offshore. ESP operates multi offshore jack up barges to support nearshore requirements and has strong international alliances for deep water Geotechnical studies. The company is currently bidding on a major surveying project with other local and international partners.

ESP provides diving services that includes subsea pipe lines repairs and maintenance, in addition to environmental diving in support, (EIA) services, Land Surveying services include GIS (Geographic information Systems) support and data leveraging. The Company owns and operates laser scanner and Total Stations.

PARTNERS

ESP local capabilities is greatly enhanced with international collaboration with entities that compliment ESP's services.

Professional Subsea Services (PSS)



Is a European Company specialized in non-destructive testing for subsea pipe lines, pipe line inspection and debris removal. PSS brings onboard a world class subsea welding capability which is highly professional and therefore is capable of replacing expensive dry-docking for vessels and offshore tankers.

Great Water Maritime (GWM)



PSS ltd. performs subsea inspections, maintenances, repairs of pipelines and cables. All operations are executed by divers and ROVs. GWM brings onboard marine architecture and consultancies. GWM specializes in the design, and engineering for jack-up, offshore facilities and Marine Naval architecture.

BIZONE Trading (Biozone)



BIZONE provides gas powder fire extinguishing system that is environmentally friendly. Biozone also provides chemical detergent for pipe cleaning.

ESP believe in doing business with principles. ESP will turn away from business dealing that are unethical or that violate the law and demand transparency in the commercial dealing for the company. ESP grows our business with

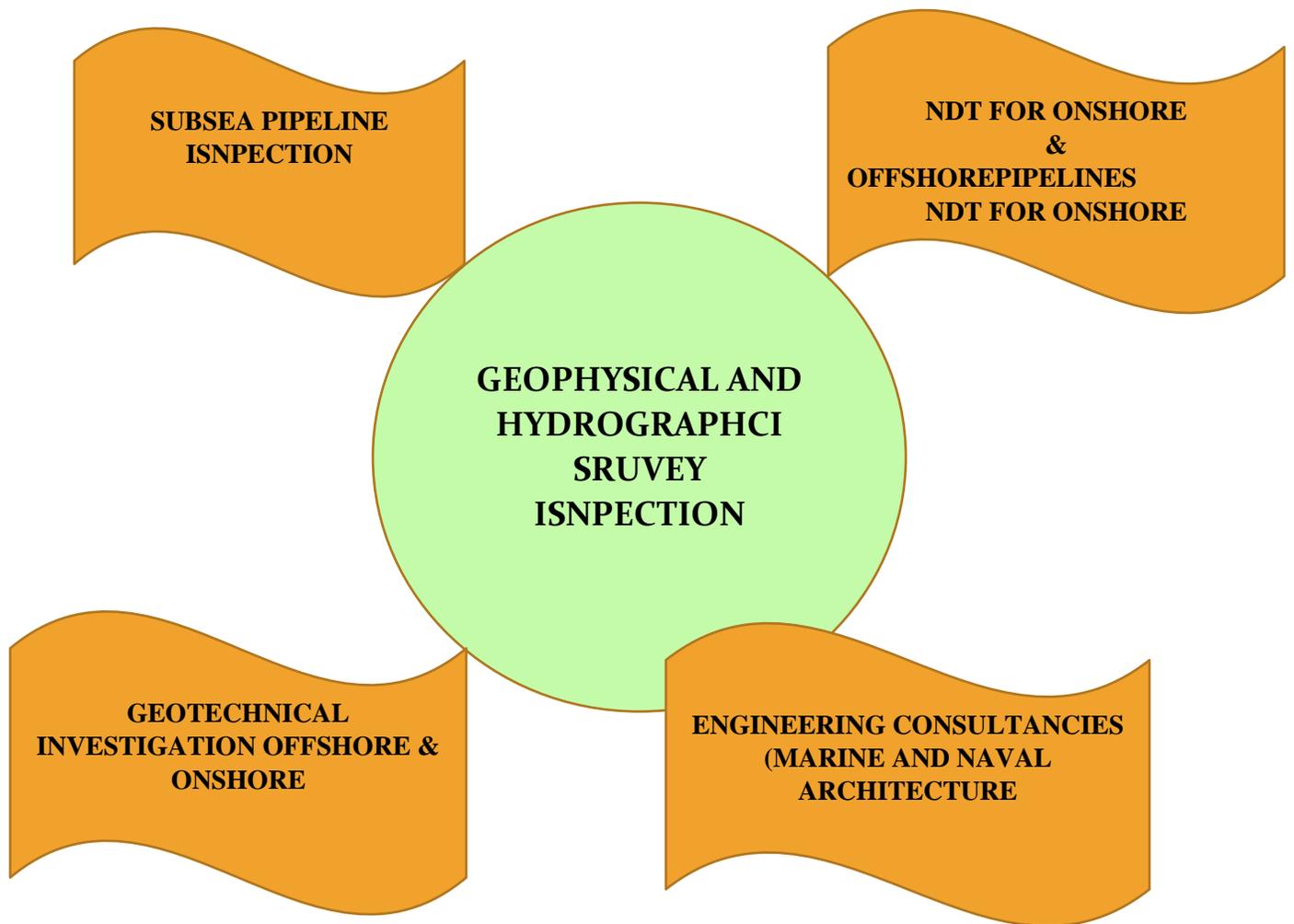
- *Quality clients*
- *An outstanding reputation in the marketplace*
- *Friendship and solid relationships with clients.*

OUR VALUES:

ESP provide unique services to the industry. Our strength's lies in through knowledge and experience. ESP values to capture the essence of how as a company and an individual to perform and deliver our services.

- *To uphold the company's reputation and promote its interests at all the times.*
- *To deliver the highest standard of services*
- *To be honest and exercise integrity at all the times.*
- *To excel in work.*
- *To operate with care of the health, safety and security of ourselves, client's personnel and third parties.*
- *To maintain in strictest confidence all information acquired directly or indirectly in the course of work*

SERVICES





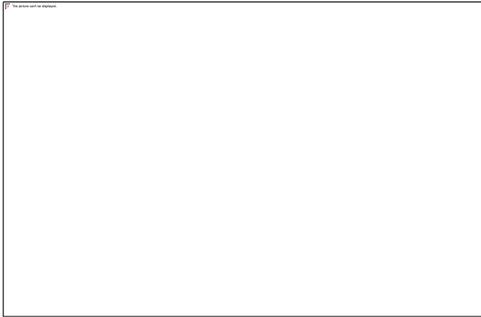
Pipeline inspection



Geotechnical



Surveying



Diving Services



Cathodic Potential Sub-Sea Pipeline



Geophysical Surveys

CLIENTS



Main PSS Customers

1. **Pre-qualification with major operators**
2. Total, Dragon Oil, Petronas, Sapura, PetroVietnam, Shell (Brunei)
2. **Strong safety culture**
4. Fully certified and trained in accordance with IMCA guidance **personnel**
5. Full **engineering support** of all our activity
6. **Exclusive solution** for various tasks. Developing the **time saving** and **cost effective** procedures



TOTAL



PETRONAS



PERSONNAL

Eng. Mousa Al Eid, General Manager



Over 35 years' experience in oil and gas upstream with National and International oil companies in production facilities including engineering, operations and projects. Managed mega projects and multiple departments for offshore and onshore services. Established good network in the region and gained others trust.

EQUIPMENT

Geophysical Surveys

Sub-bottom profiling surveys, side scan sonars and vibrio coring. This is for dredging requirements as well as pipe line route surveys.



Sub-bottom profiling surveys

Side scan sonars



Magnetometer

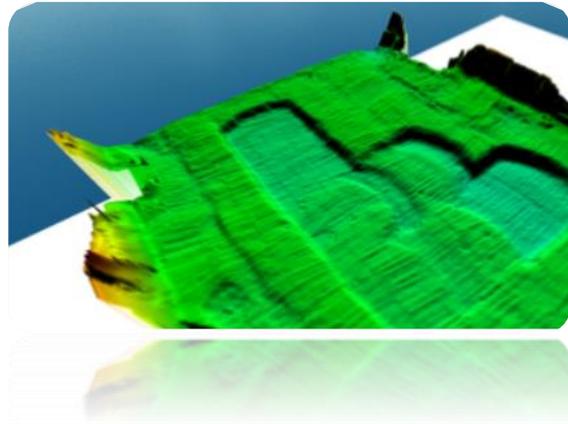
Bathymetric Surveys

The Company is equipped with single beam echo sounders and multi beam echosounders capable to perform any bathymetric survey from submeter water depth of 1000m both in the Arabian Gulf and the Red Sea coast of Saudi Arabia.

The equipment includes R2Sonci 2020, R2Sonic 2024 and Teledyne T-20 in addition to a long list of single beam echosounders.

The positioning systems include RTK and satellite-based systems.

Sonar Interface Module (SIM)



Sonic 2020 Receiver / Projector



Oceanographic Monitoring

The Company is capable of performing current speed & direction monitoring, Tide measurements & analysis, Conductivity_Temperature_Density (CTD) measurements.

The Company is equipped with a multitude of ADCP's (Workhorse Sentinel 600 and 1200 khz) to accommodate water depth up to 100m. CTD's of type AML to accommodate salinity over 40PPM in the extremely salty waters of the Arabian Gulf as well as a range of Vaelport MiDS CTD's.

Our tide gauges include pressure and radar tide gauges with ability to provide tidal analysis to establish vertical networks and to accommodate tidal predictions requirements.





Geotechnical Investigations

The geotechnical services include both land and marine. The Marine geotechnical for deep water is mainly dependent on our international collaborations with companies such as PSS and Geoequip. Whilst the nearshore Geotechnical services is provided by our team in-house. We have multiple mobile jack up barges that are road transportable.





Pipe Line Inspection for UT, CP etc.

Almarhon Engineering (in Conjunction with another Saudi Engineering Consult Company) pioneered the first combined visual inspection and CP surveys for Saudi Aramco. The ROV modified to allow for carrying CPT probes, cameras and UT equipment. This service is still provided for shallow water and can be expanded for deep



pipe line inspection.

Combined CP and Visual at One Run



Land Survey

Our capabilities of accommodating a variety of some of the most arduous land survey task. The Company has been instrumental in providing railway route surveys for more than 1000KM from Taif to Riyadh and from Riyadh to Jubail. Building the main survey control points, carrying out precise levelling and static GPS surveys.

Navigation Charts Production

Almarhon Engineering are the only commercial entity that has the capabilities of producing IHO standard navigation charts. We have many years' experience in this area covering most major Saudi ports.

Nondestructive Testing:

ESP continued to expand its operations participating in the kingdom's rapid growth during this period to include Non-Destructive Testing (Advanced & Conventional) services. ESP aims to be a region market leader in Non-Destructive Testing (NDT) services and to be always known for quality, reliability, integrity and to meet increasing demand in NDT inspection services and business collaboration with a multinational inspection service provider who proven track record in the field of Advanced NDT services. Following some of our activities:

- Providing Onsite inspection services*
- NDT Level III Consulting Services*
- Engineering Services (Fitness for Service assessment-API RP 579-1/ASME FFS-1)*
- Sales & Distribution of NDT products*
- Pipeline integrity Management Services (Mechanical Integrity)*
- Transfer/introduce new Advanced NDT technologies to energy sector in the region*
- Provide Advanced & Conventional NDT services.*

ESP is committed to providing the most reliable Non-Destructive Testing services to clients at Saudi Arabia and Arabian Gulf region. ESP constantly endeavor to fulfil our customers varied testing needs and are deeply committed towards surpassing their expectations. E&SP value & Cherish their valuable suggestions & assistance in identifying important trends from time to time.

ESP has the expertise and experience to provide a high level of core services both onshore and offshore inspection as well as developing technical solutions to meet our clients' needs in oil and gas industries in the region. By virtue of our focus, core competencies, a committed team of professionals and our unrelenting quest for excellence, ESP is fully geared to provide the suitable method/technique to resolve your inspection challenges.

Inspection Services:

ESP serve range the industry with Inspection support services to resolve inspection challenges and provide solutions to ensure the integrity of equipment and pipelines facilities in Oil and Gas, Refineries, petrochemicals, offshore subsea facilities/pipelines and many more.

ESP is providing our clients innovative solutions on NDT inspection and also provide NDT Level III consulting with fullest support and necessary information to complete your assignment through our certified and well experienced level III persons, with a specified time period.

Following but not limited are some of our NDT Level III consulting and Non-Destructive testing (Advanced & Conventional) services:

- To help your organization in selecting the suitable Advanced & Conventional NDT method/technique for the application.*
- Preparation of NDT inspection procedures for various inspection methods, client and jobs.*
- Preparation test report formants an NDT technique sheets*
- Preparation of written practices as per ASNT recommended practice SNT-TC-1A/CP-189.*
- Validation of procedures*
- Review of all inspection procedures.*
- Phased Array Ultrasonic Testing*
- Corrosion Mapping*
- Acoustic Emission Testing (Inspection & Monitoring)*
- Electromagnetic Acoustic Transducer (EMAT)*
- Alternating Current Field Measurement (ACFM)*
- Manual Ultrasonic Inspection (MUT)*
- Magnetic Particle Inspection (MPI)*
- Liquid Penetrant Inspection (LPI)*

PROJECTS EXPERIENCE

Location	Client	Project Description	Status
KSA- Eastern Province	Assystem End USER King Abdullah City for Renewable and Alternative Energy (KCARE)	Nuclear Power Plant environmental assessment study which include monitoring of oceanographic parameters (current speed and direction), continuous Conductivity, Temperature and Salinity monitoring, fauna and flora sampling, in addition to: Geophysical survey of 15.6km x 7km for two sites. This include high accuracy bathy, sub bottom profiling and side scan sonar	Ongoing
Jizan Area	Mettito	Pre-Engineering marine study which include: - Monitoring of oceanographic parameters (ADCP, CTD's and Tide). - Bathymetric Survey - Side Scan Sonar Survey Geotechnical investigations: - Offshore boreholes to a depth of 30m - Soil analysis and study.	Ongoing
Makah region (Allith City) Jabal Allith Island	Saudi Investment Agency	Pre-Engineering Study which include: Oceanographic and Environmental assessment Topographic Survey of the entire islands (total 400 ha) Bathymetric Survey Geotechnical: Provide machinery for soil investigations	Ongoing

		- Provide expertise in navigating the equipment and transporting the equipment to the island	
Eastern Province Jubail Industrial Port Jubail Commercial Port	NPS	- IHO Standard Navigation Survey for the entire King Fahad Port in Jubail which include the commercial, industrial and main Jubail channel	Ongoing
Red Sea and Eastern Province	ITALCONSULT	- Pre-Engineering Study for naval bases design. - This include soil investigations for both marine and land. In addition to geophysical survey including (Bathy, Side Scan, Ssubottom Profiling). - EIA (Environmental Impact Assessment) Study	Completed all the 4 sites successfully.
Red Sea	Sete	8site along the Red Sea from Magna to Farasan Island - Hydrographic - Diving - Geotechnical - Monitoring	Completed
Eastern Province & Bahrain	Saudi Aramco AB PL from Khobar to Bahrain total 75Km of subsea PL	Pipeline inspection survey which included: - Pipeline Alignment Survey - Pipeline Visual inspection with Remotely operated Vehicle - Pipeline CP Survey - Pipeline NDT (UT Measurements)	Completed
Eastern Province	- NPS - National Ports Services	- Multi beam bathymetric Survey	Ongoing (6 Weeks duration)

Al-Naseem Project	- China Harbour Engineering Arabia Co. Ltd	- Bathymetric Survey - Topographic Survey - Volume Calculations - Mapping / Charting - Client Representation with Municipalities	Successfully Completed
Riyadh Bus / Light Train (Ar Riyadh Development Authority) ADA main	- Halcrow Engineering 	- Topographic Data Acquisition for over 200Km of roads and highway in the City of Riyadh - Mapping	Successfully Completed
Dammam Industrial City Drainage	- Halcrow Engineering 	- Mapping and Cross sections for 20km	Successfully Completed
Ghazlan waterfront Bathymetric Survey	- Saudi Crescent Survey Company	- Area outside the Ghazlan water intake was surveyed using single beam to determine water depth - Tidal measurement and analysis	Successfully Completed
Laser Scanning	- Royal Commission	- 30km of pipeline laser scanning for multiple pipelines extending in the industrial park.	Successfully Completed
Shoiba Project	Saudi Aramco  Sub Cont. to Mustang DHL 	- Oceanographic Studies - Meteorological Observation - Hydrographic Survey – Multi Beam - Topographic Survey -	Successfully Completed
Jubail National Port	National Ports Service Co. Ltd 	IHO first order survey for the channel and Basins	Successfully Completed 2015

Manpower Supply	<p>General Commission for Survey</p>  <p>Kingdom of Saudi Arabia General Commission for Survey</p>	<p>Provide Consultants Senior Survey engineers Project managers</p>	<p>Successfully Completed</p>
Surveying Services	<p>Maaden</p>  <p>MA'ADEN مَعَادِن Saudi Arabian Mining Company شركة التعدين العربية السعودية (mining authority in Saudi)</p>	<p>Provide engineers Equipment (GPS < total stations, etc. Data acquisition Mapping Volume calculations.</p>	<p>Successfully Completed</p>
General Commission for Survey. KSA- CORS Project	<p>NoviaSat, Riyadh</p>  <p>NOVIA Sat</p>	<p>Provide Survey Engineers for CORS projects, Kingdom Installation of Continuous Operation Reference Station Network</p>	<p>Successfully Completed</p>
Riyadh Metro	<p>ITALFER</p>  <p>ITALFERR GRUPPO FERROVIE DELLO STATO ITALIANE</p>	<p>Provision of Surveying Services Survey crews' provisions. Setup of control point for the factory to produce pre-cast panels</p>	<p>Successfully Completed</p>
Weather Station Jizan Qunfudah- Yanbu - Jeddah Al Wajh Rabigh Duba Magna Al Khaji Mardoua Ras Tanura Qurraya Ras Abu Qamis	<p>General Commission for Survey (GCS)</p>  <p>Kingdom of Saudi Arabia General Commission for Survey</p> <p>(previously Military Survey Depth)</p>	<p>Installation of Tide and Oceanographic Stations Civil Work (Installation of Marine Grade Brackets, Mast and communications stands Installation of Tide Gauges Installation of Current Meters Construction of Bench Marks of National Geodetic Survey (NGS) US standards Precise Leveling Static GPS observations Data Processing and Reductions Data Analysis</p>	<p>Successfully Completed</p>



Advanced Water Technology – Al-Khafji SWRO Desalination Plant

Scope of Work

Oceanographic Studies

- *CTD's*
- *ADCP*
- *Hydrographic Studies*
- *Water Analysis*
- *Soil Analysis*

Bathymetric Survey

- *Single beam*
- *Installation of tide gauge*
- *RTK positioning system*
- *Qinsy online software for data acquisition*
- *20m line spacing*
- *ASCII x,y,z data*
- *3D View image*
- *Tide Gauge Telemetry*
- *Radio data transmittal from tide gauge to dredger*
- *Setup of system to integrate it with dredger system*
- *Topographic Survey*

Geotechnical Services Offshore

- *Bore holes*
- *Soil analysis*

Project Status Completed



Jubail - Kingdom of Saudi Arabia

- *Huwaylat, Fanateer and Mardumah Approach Channels*
- *Scope of Work*
- *Oceanographic Survey*

Project Status Completed



Yanbu III Desalination Plant

Scope of Work

- *Oceanographic Studies*
- *Meteorological Observation and Analysis*
- *Hydrographic Survey*
- *Topographic Survey*

Project Status Completed



Yanbu – Marafiq

Scope of Work

- *Bathymetric Survey*
- *Topographic Survey*
- *Volume calculation for dredging*

Project Status Ongoing



Ras Tanura Refinery – Aramco

Scope of Work

- *Bathymetric Survey*
- *Topographic Survey*
- *Volume Calculation Dredging in Reclamation Area for Aramco*

Project Status Completed



Jizan Sea Port

Scope of Work

- *BM Verifications*
- *BM's Construction*
- *Topographic Survey 450mx300m*
- *Mapping Report of Survey BM Verifications*
- *BM's Construction*
- *Topographic Survey 450mx300m*
- *Mapping Report of Survey*

Project Status Completed



Jubail and Ras Al-Khair National Port

Scope of Work

- *Multi Beam Hydrographic Survey (Basin and Berth)*

Project Status Completed



Qurrayah Desalination Plant – Saudi Aramco
Scope of Work

- *Bathymetric Survey*
- *Volume Calculations*
- *ROV inspection of the seabed*

Project Status Completed



Tanajib – Saudi Aramco

Scope of Work

Pre-dredge Survey

- *Underground Pipe Line alignments (construction Support)*
- *Bench Marks Installations*

Project Status Completed



Dareen Fishery Boat

Scope of Work

- *Barge Navigation from DRT P/L to Dareen Jetty*
- *Bathymetric Survey for Dareen Fishery port*
- *Tidal measurements and analysis*
- *Bench Mark verification and Topographic survey*

Project Status Completed



Ghazlan Pre & Post Dredge Survey

Scope of Work

- *Pre-dredge survey*
- *Volume Calculations*
- *Tidal Observations*
- *Tidal Analysis*
- *Post-Dredge Bathymetric Survey*

Project Status Complete