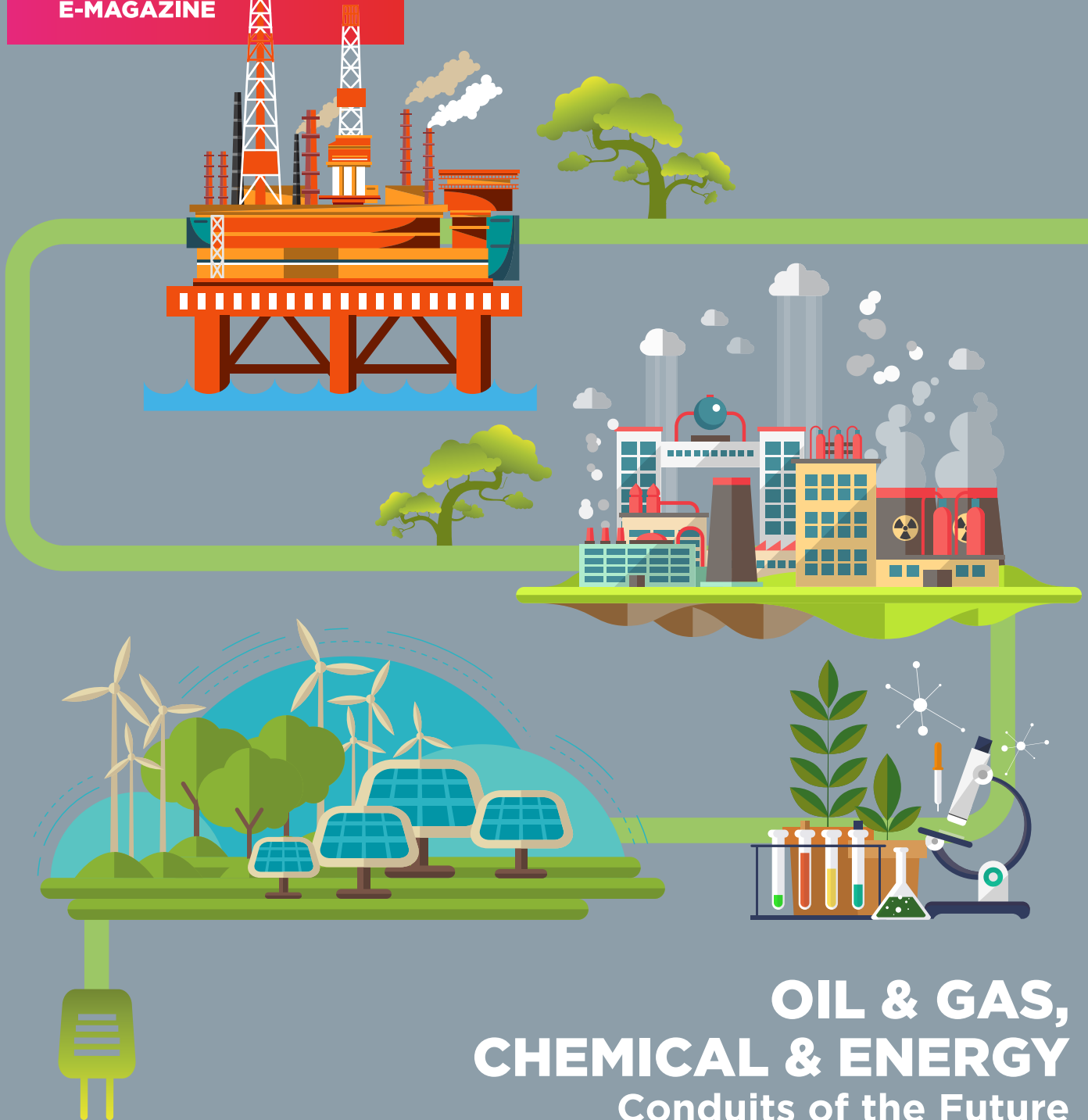


# EXCLUSIVE FROM MALAYSIA

**EFM**  
E-MAGAZINE

**ADVANCING BEYOND BOUNDARIES**

ISSUE #002, JUNE 2019



**OIL & GAS,  
CHEMICAL & ENERGY**  
Conduits of the Future

Produced by:



MALAYSIA EXTERNAL TRADE DEVELOPMENT CORPORATION

# CEO's NOTE

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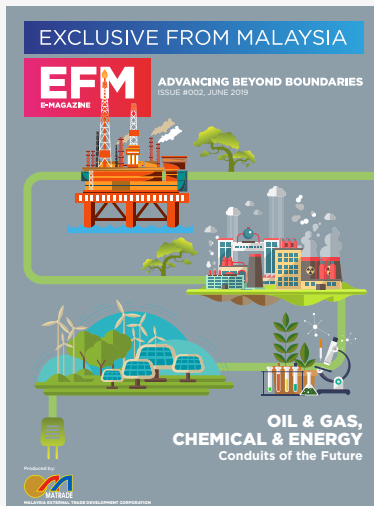


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**T**HIS second issue of the "Exclusive From Malaysia" (EFM) eMagazine introduces local oil and gas (O&G), chemical and energy companies who have championed sustainability, developed state-of-the-art technologies and implemented innovative solutions.

Keeping with our tagline, "Advancing Beyond Borders", we aim to promote Malaysian exporters at the global marketplace. EFM serves to highlight these Malaysian companies that stand at the forefront to provide products and services which clearly meet and exceed international standards.

The O&G industry is a traditional powerhouse of Malaysia, further fueled by increased exploration and production activities in the already vibrant and extensive world-class O&G ecosystem. Some companies featured here have developed in-house high-resolution geometric tools for pipeline inspection, leading-edge oilfield products that improve well economics, and robust mechanical seals and filtration systems.

Others, in the chemical sector, have developed highly effective and environmentally-friendly solutions. Furthermore, one company produces specially-designed fertilisers – a boon to the local agriculture industry.

Meanwhile, the gradual shift towards greener, cleaner sources of energy is making headway to temper the perpetual power demand growth. Forward-thinking companies featured have embraced energy efficient practices to reduce carbon output while increasing throughput.

We hope that this issue captures your interest and we urge you to contact the companies listed to explore opportunities and take advantage of their extensive knowledge and expertise. Thank you.

### Wan Latiff Wan Musa (Dato')

Chief Executive Officer

Malaysia External Trade Development Corporation (MATRADE)



EFM is an exclusive quarterly e-magazine, showcasing world-class Malaysian services and quality products. It is a reference for global partners and buyers who seek to extend their sourcing needs, thus elevating their business potential.

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# TESTING SEABED CONDITIONS IN WATERS

Helms Geomarine specialises in offshore soil investigation and geotechnical engineering services. It has competent management and technical resources to service the oil and gas, renewable energy and civil engineering industries around the world.



Helms' successful Seabed CPT operation in North West Australia

- 35kN push capability
- Up to 20m penetration from coiled rod
- Easily deployed compact sub-sea frame
- Real-time control and display
- Single coax connection for power and data
- Automatic safety cut-outs
- Low maintenance, low consumable use
- Easy to operate Windows™ based PC control

The unit was originally delivered in January 2014. Since then, it has been actively carrying out projects throughout Europe.

It is used in cable route surveys, pipeline route surveys, pre-dredge geotechnical surveys, mineral resource evaluation, nearshore/offshore site investigation, and UXO investigation.

**E**STABLISHED in 2005, Helms Geomarine Sdn Bhd (Helms) provides specialised services in collecting geotechnical engineering design parameters for the foundation design of offshore structures including oil platforms, pipelines, wind turbines, ports, and dredging or reclamation.

The data collection is by means of drilling and sampling and in-situ testing from a geotechnical vessel. Helms' ultimate customers are oil and gas companies as well as wind farm and port operators.

## HIGHLY ADVANCED TECHNOLOGY

Helms also owns and operates a seabed technology called the Neptune 5000 in addition to other specialised assets such as marine drilling rigs and Vibrocore.

The Neptune 5000 specialised equipment is the only one in Malaysia. It is used to test seabed conditions in waters up to 3,000m. Helms has performed projects using this specialised equipment in Singapore, Malaysia, Korea, Taiwan, Australia and the United Arab Emirates (UAE).

The Neptune 5000 Seabed CPT (Cone Penetration Testing) system is a heavy duty CPT that enables up to 20m in push depth. This highly advanced equipment is designed for thrusting 5cm<sup>2</sup> or 10cm<sup>2</sup> digital cones.

The unit can thrust up to a maximum of 70 MPa and has a depth rating of 3,000m. It is an excellent tool for investigating seabed conditions prior to seabed installations such as pipelines, power cables and underwater constructions. The measurements comprise penetration depths, core resistance, sleeve friction, pore pressure and inclination from vertical.

## EASY TO USE, LOW MAINTENANCE

The system can be mobilised to a variety of vessels ranging from fuel-efficient vessels of 30m Length Overall (LOA) to regular charter vessels upwards of 50-70m LOA. The high mobility and small footprint of 2.2m x 2.2m makes it perfect to be mobilised onboard vessels of opportunity.

## Main features of Neptune 5000:

- 5cm<sup>2</sup> detachable cone, 10cm<sup>2</sup> cone and T-bar cone

## SUCCESSFUL SEABED CPT OPS

In 2018, Helms' activities include completing its geotechnical campaign in Taiwan, reaffirming commitment to 2019's Taiwan project, expanding its engineering capabilities, completing seabed CPT and vibrocore in offshore Korea.

Helms will continue to beef up its CPT manpower and resources to support the seabed testing works as well as its ongoing offshore geotechnical drilling and downhole CPT projects in Taiwan, Indonesia and the Middle East.



Neptune 5000 Seabed CPT

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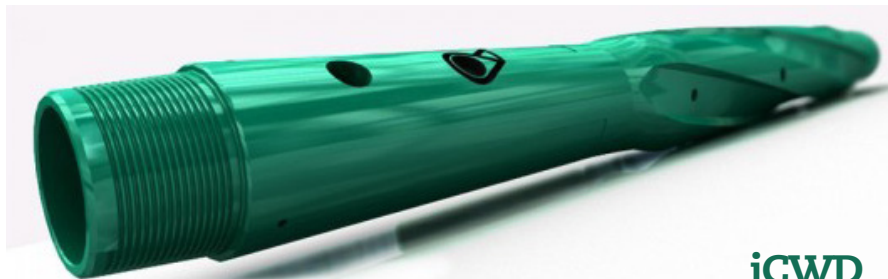
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# BOOSTING EFFICIENCY IN EXPLORATION AND PRODUCTION

MIT Technologies designs leading-edge products to empower the upstream oil and gas industry, combining global technology, deep local roots in major markets and unique expertise.



iCWD

**O**il and natural gas prices have been volatile over the past few years, however, the industry is still surging with potential. Oil and gas producers are still constantly seeking ways to access deeper and more challenging reservoirs, improve drilling performance, and accelerate time to first production in all projects.

Beginning in 2011, MIT Technologies designs and manufactures a portfolio of proprietary leading-edge oilfield products at the forefront of global drilling, completion, and production technology, all focused on reducing time taken and increasing returns.

The company aims to contribute to economic growth wherever they operate by using forthcoming technology to accelerate the oilfield industry and assures to maintain a culture of innovation and excellence in all that they do.

## INTELLIGENT INCEPTIONS

MIT Technologies has developed the Intelligent Circulation While Drilling (iCWD) sub, which sets a new benchmark for improving well economics.

The iCWD is a remotely operated sub that enables the driller to treat losses, place cement plugs or improve hole cleaning without the need to pull out of the hole, saving expensive rig time. Capable of being placed anywhere in the bottom hole assembly (BHA), the iCWD can be commanded to switch between any of its four modes of operations – default drilling mode, Bypass, Hole Cleaning, and Isolation.

Smart electronics and sensors enable the operator to run multiple tools in the same string, spaced out as required with each controlled and activated independently into any mode, in any order through commands sent from the Agile Activation system sent from the surface.

The Agile Activation system is an intelligent system that can activate and communicate with downhole tools through variations of RPM, flow rate or pressure, in under 3 minutes.

## QUICKER, LOWER RISK AND MORE POTENT

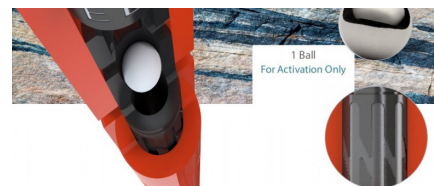
Mitigating drilling risks before they get out of hands means the difference between a well that is constructed efficiently and one troubled with non-productive time (NPT). Risks are magnified in complex applications such as extended-reach drilling (ERD), tortuous well paths, and need for spotting lost circulation material (LCM) or placement of cement plugs.

SWiFT is an efficient single ball activated circulating sub that enables the driller to treat losses and significantly reduce costs.

On activation, the ball is dropped & engages with a specially designed orifice. It shifts the inner sleeve to set the tool in bypass mode, opening the large ports for fluid circulation and LCM placement. On deactivation, the SWiFT cam enables the release of the activation ball into the ball catcher and sets the tool back into normal drilling mode without the need to drop another ball, eliminating any risk associated with multiple ball sizes.

SWiFT can also be equipped with the optional E-Log Environment Data Acquisition system to record shock, vibration and other parameters to its internal memory. The E-Log provides a cost-effective alternative to evaluate BHA behaviour, which enables the drilling engineer to optimise drilling parameters that reduce fatigue and improve penetration rate.

Having secured contracts with PETRONAS until 2025, and receiving tender for a major operator in the Middle East for the year 2019-2024, MIT Technologies aims to contribute to the economic growth of the oil and gas industry through providing top quality services for the upstream sector worldwide.



## Achievements

- Multiple patents in the USA, Australia, and Malaysia
- Good Design Award 2018
- Most Innovation Award, SOBA 2018
- 1 Innocert Innovation Award (Rated "AAA" in 2017)
- OTC Spotlight Award 2016



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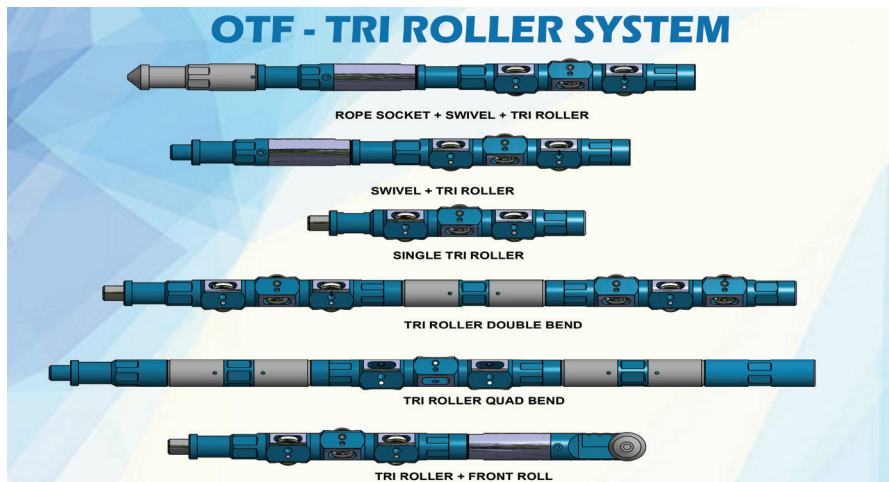
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# BEYOND DESIGNING AND FABRICATING OILFIELD TOOLS

Oracle Tools and Fabrications provides products and services to the world's energy and oil service companies, and also as a one-stop centre for well intervention and well completion solutions.



## QUALITY & SAFETY FIRST

Committed to quality and safety, Oracle Tools firmly believes it is essential that the products and services it provides are designed and manufactured to conform with industry accepted standards or other specifications of the customers, meeting their needs and expectations the first time, every time.

As to health, safety and the environment, the company is committed to achieving and maintaining the highest standards of safety for its employees, customers, suppliers and the public.

All Oracle Tools business units consciously operate in a manner that includes environmental matters as an integral part of its business plans.

**YEARS** of innovative developments and quality manufacturing have enabled Oracle Tools And Fabrications Sdn Bhd (Oracle Tools) to grow exponentially.

Today, this certified precision engineering company specialises in manufacturing and supplying oilfield and industrial tools to a wide range of customers the world over.

The inventor of modern-era oilfield tools and equipment has expanded its market presence to become one of the most recognised companies in the industry by providing tools that are of quality, safe, practical and economical.

## RIGHT TOOLS FOR THE JOB

### Oracle Tools' core products:

- Wireline and downhole tools – equipment used in operations such as production of oil and gas, well drilling, well intervention and well completion
- Flanges and flowlines – a flange and flowline is a method of connecting pipes, valves, pumps and other equipment to form a piping system
- Drilling tools – in the oil and gas industry, a drilling tool is designed to produce a generally cylinder hole (wellbore) in the earth crust by the

rotary drilling method for discovery and extraction

- Coil tubing tools – well intervention and well completion require products engineered to perform reliably and efficiently; coil tubing tools can be used to clean the wellbore and restore production
- Pressure control equipment – these are various equipment collectively referred to as wireline pressure control equipment, which help in controlling and maintaining the fluid pressure inside the wellbore whenever any well workover and intervention processes are being conducted
- Offshore cargo (container and basket) to assist in the transportation of fuel, chemicals, tools and equipment
- Miscellaneous tools and equipment

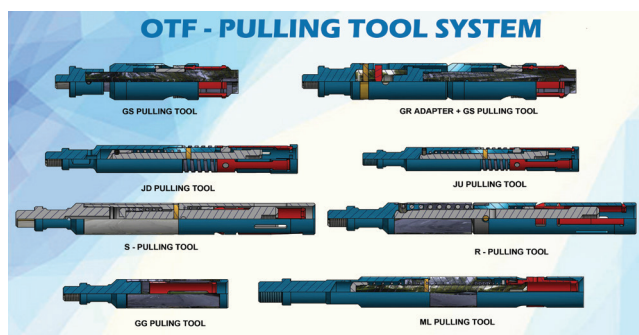
### Core Services:

- Engineering services
- Manufacturing and fabrications
- Trade supplier

## WORLD-CLASS GOALS

On the global front, the high-tech and R&D-focused company is determined to become a manufacturer and supplier of world-class oilfield tools and equipment, leveraging on advanced technologies offering accuracy and efficiency.

Being ISO 9001 certified exemplifies Oracle Tools' commitment to continuous improvement while mitigating risk and increasing efficiency. All jobs are planned with limited downtime as the goal. Redundancy and contingencies are critical to all job planning completed by the company.



## Certification

- ISO Certified 9001:2015

# PROVIDING HIGH-TECH MECHANICAL SEALS FOR O&G INDUSTRIES

Local manufacturer ProEight is an expert in manufacturing mechanical seals and related technologies, with substantial advancements in terms of R&D and innovation.



**CycloDyne - High-Efficiency Particle Cyclone Separation Device.**



**R.S.T MECHAFLEX's revolutionary design is built to improve seal robustness.**

**D**URING a time when local oil and gas companies such as PETRONAS, Shell, ExxonMobil were relying on foreign Original Equipment Manufacturers (OEMs), problems such as high lead times were common as parts had to be outsourced. Striking while the iron is hot, Malaysian-born manufacturer ProEight filled the gap in local mechanical seals production.

ProEight, an engineering consulting company, specialises in Marine Engineering studies, installation of offshore structures, launching and upending of jackets and the feasibilities of installation of pipeline and risers.

## CLOSING THE GAP

The forerunners of ProEights products are its mechanical seals – a sealing device which is used to control the leakage between rotating and stationary parts. The R.S.T MECHAFLEX is a mechanical

seal with revolutionary design and simplicity that was built to improve seal robustness compared to conventional designs. It has been designed according to the API 682 4th Edition standards and includes the company's innovative sealing unit, FLEXICAL.

The Locally Improved Compression Unit, FLEXICAL is a breakthrough technology that is more robust and is able to increase the lifespan of mechanical seals. As an 'engine' of mechanical seals, its simple design leads to reductions in failure points. FLEXICAL is adept in taking large deflections and is able to minimise mechanical seal breakdowns on site.

MECHAFLEX and its sister design the R.S.T Series, have numerous innovative features such as flexibility – allowing full six degrees of freedom – excellent heat dissipation and exemplary reliability due to having fewer components than legacy compression units.

## EXPLORATIVE TECHNOLOGY

Through continuous study and research, ProEight has several new inventions such as the CycloDyne. It is a filtration system used in API piping plans such as those in plans 31 and 41, providing clean product liquid to the seal chamber for heat dissipation of mechanical seals.

CycloDyne separates solid particles from a product liquid through high-velocity vortex separation where heavier solid particles are directed downwards to the underflow, while lighter clean product liquids escape through the overflow and are flushed to the seal chamber.

Next on the ProEight lineup is the Tripeller. This technology employs computer numerical control (CNC) machining with a separable blade to improve the impeller's surface finish while providing breakthrough material strengthening through welding and various manufacturing methods. This technology is devised to be used in withstanding localised erosion such as with sand in pumps.

Combining Finite Element Analysis (FEA) and Computational Fluid Dynamics (CFD) simulations to detect the proximity

of localised erosion, blades and shrouds are further strengthened using cladding processes with high hardness materials such as Stellite to prolong the lifespan of the Tripeller under harsh environments.

ProEight has had over 20 years' worth of experience in innovating, designing, manufacturing and refurbishing mechanical seals and related technologies. Their customers are able to experience a reduction in maintenance costs, turnaround times, and an increase in engineering support and product improvement.



**FLEXICAL is similar to a single coil spring in design.**

## Achievements

- Star Outstanding Business Awards 2018 (SOBA)
- SME & Entrepreneurship Business Award 2018 (SEBA) - Awarded Technology Driven of the Year 2018
- Enterprise 50 Award – Entitled E50 Winner by SME Corp for Category Manufacturing-Related Services & Agro Based Industries 2016 & 2017
- Outstanding Export Achievement Award by MATRADE as the Most Active Company in Export in Oil & Gas Sector in the Year 2015
- 1-InnoCERT 2015 from SME Corp
- SIRIM Quality Award 2014

## Certifications

- API Specification Q1 - since December 2012
- ISO 9001:2015 - since March 2009

# PROEIGHT

## PROEIGHT SDN BHD

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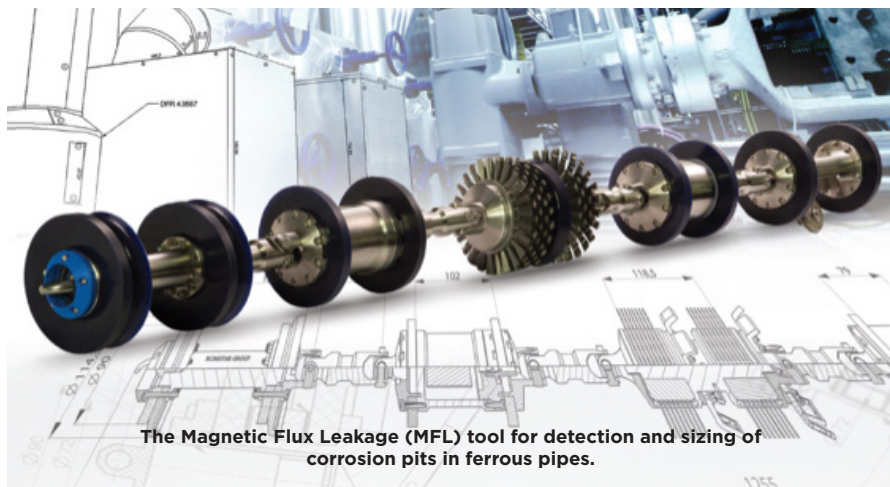
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**Website:** www.proeight.com.my



# INTELLIGENT PIGGING FOR ALL PIPELINE NEEDS

Romstar aims to become the leading Intelligent Pigging (IP) company in the Asia Pacific region and is getting there, given its capabilities as a successful import substitution company in Malaysia in pipeline inspection services.



The Magnetic Flux Leakage (MFL) tool for detection and sizing of corrosion pits in ferrous pipes.

**R**OMSTAR SDN BHD offers the full suite of pipeline integrity related services, from conventional cleaning, pre-inspection cleaning, enhanced and progressive cleaning for the more afflicted pipelines, to gauging runs, calliper tools and providing Intelligent Pigging (IP) services using high-resolution Magnetic Flux Leakage (MFL) tools.

These tools and services identify metal loss, internal and external corrosion, mechanical deformations and many other pipeline-related features without interrupting the pipeline flow process. This activity is also called the in-line inspection service.

Romstar is the first in the Asia Pacific to innovate and develop in-house high-resolution MFL and geometric tools for pipeline inspection services that conform to international standards of the pipeline inspection industry.

## OVERSEAS MARKETS

It has been servicing the Malaysian market since it started business in 1996. It also services the region while actively penetrating more international markets such as Indonesia, Thailand, China, Argentina, Bolivia and Iran.

In 2017, Romstar tools entered the Korean petrochemical market with a successful run on a 10-inch LPG pipeline owned by LG Chemical, the largest Korean chemical company.

Kuala Lumpur-based Romstar designs, builds and operates its own fleet of high-resolution MFL inspection and multichannel calliper tools. It has inspected more than 4,000 km and cleaned 50,000 km of offshore and onshore pipelines.

## ENHANCING PIPELINE INTEGRITY

Romstar has also developed and manage its own data interpretation software, ROMSOFT, which is capable of producing pipeline integrity reports with precision and accuracy to clients.

Not resting on its laurels, it is constantly working to further strengthen its market presence and enhance its obligation to nation-building in the Malaysian oil and gas sector. It does this by upgrading technologies related to pipeline integrity.

An ISO 9001:2015 certified company, Romstar has undergone extensive technical audits by major oil companies. The pipeline inspection service is a niche industry with major foreign incumbents, yet Romstar, a local company, manages to hold its own.

## COMPETITIVE EDGE

Nevertheless, Romstar has a competitive advantage in terms of resources and immediate deployment of tools to clients.

With its in-house Research and Development, Romstar currently owns 60 IP tools and targets to have 100 IP tools by the year 2023 to gain a bigger market share in the pipeline inspection services.

As a pioneer in the in-house high-resolution MFL technology for pipeline inspection services in the region, it adheres strictly to international standards. Undoubtedly, its extensive services have placed Malaysia on the world map while contributing positively to the national economic growth.



Romstar's progressive and high-quality cleaning pigs for pipelines can be customised to their clients' requirements.

## Achievements

- 2013 – Top Most Innovative SME, SME Innovation Award
- 2011 – Malaysian Brand certification
- 2011 – MITI Industry Excellence Award
- 2011 – PETRONAS Most Promising Vendor
- 2011 – Ernst & Young Entrepreneur of the Year Top Nominee for Technology
- 2010 – Prime Minister SME Innovation Award Best Innovation in Services Sector
- 2010 – Anugerah Menteri Sumber Malaysia
- 2010 – Enterprise 50
- 2010 – Malaysian Association of Research Scientists (MARS)

## Certification

- ISO Certified 9001:2015



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# ADVANCING CROP & ENVIRONMENTAL CARE

Ancom Crop Care is a manufacturer of various agro-chemicals and timber preservatives that has made its mark both locally & globally. It continues to penetrate more markets with its range of quality chemicals.



Shah Alam synthesis & formulation plant.

**INCORPORATED** in 1969, Ancom Crop Care Sdn Bhd (ACC) is the pioneer of crop protection in Malaysia. A wholly-owned subsidiary of Ancom Berhad, it is a leading agricultural & industrial chemical manufacturer with extensive international presence.

ACC helps to advance the industry with its exports to over 30 countries where the top 5 markets are Brazil, USA, South Africa, Thailand & the Philippines. Some of its key customers include Sipcam Nichino, Koppers, Nufarm, IOI Group, FGV, UPL, Lonza, Drexel, Sime Darby, Leads Agri, Sahai Kaset, Salim Agro and many more.

Furthermore, it is the only agro-chemical synthesiser in South East Asia and operates 2 plants in Shah Alam and Port Klang. The company's domestic and export business focuses on manufacturing, marketing and trading of agricultural chemicals and pesticides while its wholly owned subsidiary Timber Preservatives Sdn

Bhd handles the manufacturing & marketing of intermediate/industrial acid for wood preservatives and the glass industry.

ACC's activities can be divided into three categories. Firstly, the advanced synthesising of chemicals such as pre- and post-emergence herbicides, industrial acid/intermediate for wood preservatives. Secondly the formulation of generic and proprietary agricultural chemical compounds like Glyphosate, Diuron, Ancosar, premixes of Monex and Dasaflo, Glufosinate Ammonium, 2,4-D, Bromacil, Chlorothalonil, Brodifacoum (rat bait), and DMPP. And thirdly, the trading of herbicides, insecticides, fungicides, rodenticides and fertiliser.

## MAIN CHEMICAL PRODUCTS

ACC's advanced key products are Diuron, of which ACC is one of the top producers worldwide and Industrial Acid, which is used for the production of CCA, a specialty wood preservative. Glyphosate and Dasaflo are the other

key products for the domestic & regional markets.

Another advanced product of theirs which is set to make an impact is Monex, also a herbicide, used in the Malaysian oil palm sector as a replacement for Paraquat. ACC has already made plans to penetrate the regional oil palm growing markets with this product while an upcoming product is Bromacil, a specialised herbicide that will target various overseas markets.

## GROWTH AND SUCCESS

ACC has achieved record revenues for some years, derived mainly from export sales, and 2019 is forecasted to be the same. The strong growth is attributed to the following:

- Focused & visionary management direction
- Competitive & sustainable market strategy
- Strong support from key suppliers, partners and customers
- New market initiatives & penetration
- Diversified, better product & crop portfolio

ACC is always seeking new opportunities and aims to increase its portfolio of products, services and crop applications while advancing its future growth. It hopes to further expand domestically & internationally where recent market additions include France, India, Central Asia and Kenya.

## Certifications

- ISO/IEC 17025
- The US Environmental Protection Agency (EPA) approved manufacturing site
- Container Packing Certification (CPC) for Dangerous Goods (DG)
- Certification for Utility Innovation & Patented Trademark, 1998 under Perbadanan Harta Intelek Malaysia for AMMO (Glyphosate Monoammonium Salt Herbicide)



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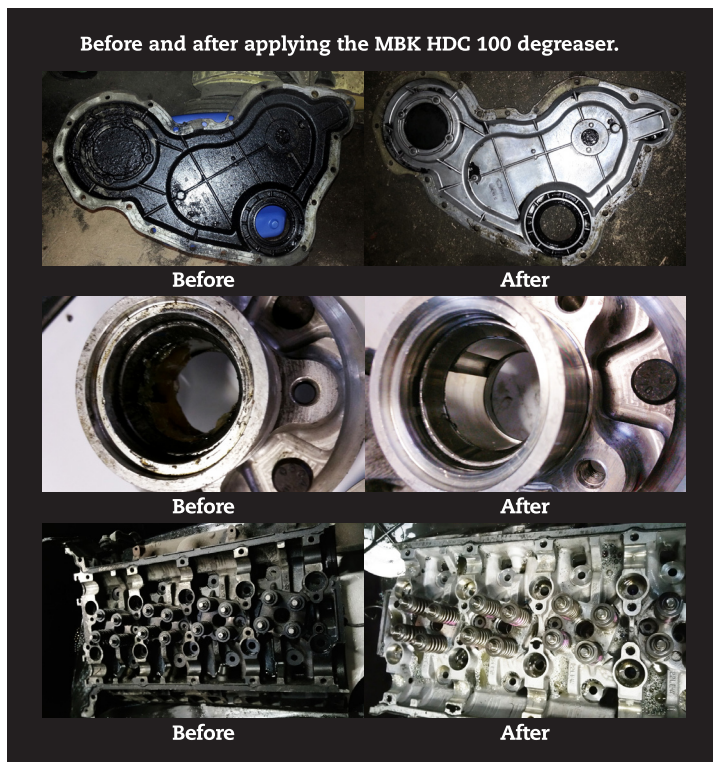
**Contact:** Mr Anthony Tan / Keith Fu / Wong Yan Qi

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# BIO-ENGINEERED SAFE & EFFECTIVE HEAVY DUTY (MRO) DEGREASING AGENTS

MBK Bio-Solutions™ from Palladium Consolidated Industries Sdn Bhd is the way forward when it comes to the treatment of oil, sludge and grease in the maintenance, repair and overhaul (MRO) sector. These maintenance and cleaning agents locally manufactured in Malaysia by the Palladium Group is by design, bio-engineered to be non-toxic, environmentally friendly yet highly effective.



## NATURAL, SAFE CLEANING SOLUTIONS

Seeking an alternative to harmful industrial cleaner, Palladium along with its research arm, looked into the production of plant nutrients and water-based bio-surfactants. In their bid to produce safer and more effective cleaning solutions, they have prioritised biotech research and development, and

## BETTER ALTERNATIVE TO INDUSTRIAL FLOOR CLEANERS

In one case study, the MBK HDC 100 was used in place of kerosene and industrial strength floor cleaners that removes grease and oil from surfaces at a reputable tractors and heavy machinery workshop. The product performed amazingly, cleaning and drying any grease and contaminants in mere minutes without leaving slippery residues.

On top of removing work hazards, it eliminates the health risk of kerosene usage and cleans surfaces without damaging it. Driving this point further, the MBK HDC 100 has the upper hand compared to industrial cleaners as it is able to remove grime and rust from components and tool parts with less than two hours pre-soak, needing only soft brushing to remove the carbon deposits on tools and part components. This translates to more than 35% cost savings.

Currently Palladium's cleaners are applied to many sectors such as the automotive, oil & gas, heavy machinery, marine & hospitality management. The Palladium Group of companies will continue to innovate and produce greener solutions that are safe for use while keeping the environment free from contaminants.

**F**OUNDED in 1981, formerly known as Palladium Enterprise Sdn Bhd by Mr Bashir Shariff, (now the Honorary Chairman of the group), built a legacy of personalised and curated boutique international consultancy in the area of trade and commercialisation. This business etiquette is what shaped the journey of the company for Mr Shariff's successor, YM Tunku Fauzi Malek; (Non-Exec Chairman) who champions a small team (with big hearts) that is positioned as an upcoming leader in the bio-science and bio-engineering manufacturing ecosystem. They specialise in the production of plant nutrients and water-based bio-surfactants, with a large focus in biotech research and development for safer, better and cost-effective cleaning solutions.

thus their hallmark product, the MBK HDC-100, was formulated. It is derived from plants that are indigenous to the Asian continent. This makes it an effective degreasing solution that is environmentally-friendly, safe, pH neutral, non-combustible and non-flammable.

Adhering to standards set by the United Nations Sustainable Development Goals, MBK HDC 100 benefits the industry by replacing the use of toxic solvents and harsh chemicals, thus creating a safe workspace for workers to perform their duties.

The MBK HDC 100 has been validated by the standards of SIRIM, ASTM, MPOB & the OECD to be safe on human skin contact, marine life exposure, no flash point, no combustibility and readily bio-degradable.

## Certifications

### SIRIM Ref No (ETRC 257/16/1405)

- Flash Point Analysis (2018)
- Biodegradation Test (2018 - Oecd 301C)
- Fish Acute Toxicity Test (2017 - Oecd 203)
- Human Epidermal Skin Irritation Test (2017 - Oecd 439)
- Specific Gravity & Ph Analysis (2017)

### MPOB Ref No (BS015/17)

- Readily Biodegradable (2017 - Oecd 301D)



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# RIISING YIELDS IN AGRICULTURE

Smart Fert's SmartGro delivers a knockout in the fertiliser trade by ensuring quality, competitiveness and efficient nutrient delivery.



At Smart Fert, we are able to customise the fertiliser in terms of:

- NPK content
- Release duration (1, 3, 6, or 9-12 months)
- Colour of coating (Yellow, red, green)

Smart Fert also offers OEM supply of polymer coated fertilisers.

With a team of chemists who enforces strict quality control to ensure customers receive consistent, high-quality products, Smart Fert has been able to release a competitive product that works together with customers to produce efficient nutrient delivery and will continue to do so in the years to come.

**E**STABLISHED in 2009, Smart Fert Sdn Bhd has been an eminent manufacturer of Controlled Release Fertiliser (CRF) for the past 10 years. The company currently exports to over 20 countries worldwide including top agriculture producers such as China, Japan, and Australia. As of 2014, Smart Fert's annual capacity exceeds over 30,000 tonnes.

The frontline of Smart Fert products is the CRF that the company has been producing for over 6 years under the brand name SmartGro®. SmartGro is a premium CRF which has been equipped with the latest technology in biodegradable polymer coating.

## IMPROVING CROP YIELD, WHILE SAVING COSTS AND THE ENVIRONMENT

SmartGro is designed to release nutrients according to plant demand, which minimises the risk of leaf scorching and reduces fertiliser wastage. Likewise, the polymer coating reduces nutrient loss through leaching, volatilisation and runoff.

Next, fertiliser application rounds are reduced due to the 'timed release' effect

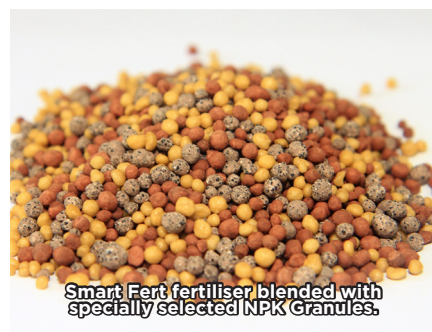
of the CRF. The release period can be controlled from 1 month up to 12 months; therefore, a 'single application' concept for the whole growth period is possible. The product also increases crop yield due to 'sustained feeding' and comes with added beneficial microbes to increase plant disease immunity and improves soil conditions.

SmartGro polymer coating also utilises vegetable oil, which is highly degradable and therefore environment-friendly. It also eliminates waterway pollution caused by leaching of excess nutrients when using conventional fertilisers.

## THE SMARTGRO PROCESS

As water is poured onto the fertilisers, the water penetrates the semi-permeable membrane through micropores in the fertiliser coating. Then, the moisture dissolves some of the nutrients within the capsule. As pressure increases, nutrients diffuse out through the coating into the soil at a regulated rate.

The rate at which nutrients are dissolved and released is controlled by the temperature, coating material and thickness of the coating. This process repeats until the pressure in the capsule reaches an equilibrium.



Smart Fert fertiliser blended with specially selected NPK Granules.



Polymer-coated urea fertiliser.

## Certification

- ISO9001:2005; Taraf Perintis MIDA for 'Polymer Coated Controlled Release Fertilizers Incorporated with Microorganisms in Coating Shell.'



## SMART FERT SDN BHD

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# VERSATILE CHEMICAL SOLUTIONS PROVIDER

Hextar Chemicals Sdn Bhd develops, manufactures, and distributes chemical products locally and globally.



Hextar Chemicals' factory.



Top of the line herbicides for crop care and management.

**H**EXTAR CHEMICALS started as a family-owned agrochemical marketing company when it was established in 1985. In the beginning, it served as a distributor of agrochemicals for the local market and has since moved into developing, manufacturing and marketing its own products to ensure consistency and quality. It is now a subsidiary of Hextar Group and functions as the key driver of the Hextar brand.

For more than 30 years, it has grown to become an international juggernaut, one that is trustworthy and boasts an extensive portfolio. Hextar Chemicals is now the go-to for crop management solutions, both domestically and globally, thanks to its specialised agrochemical products supply chain.

The Group of Companies have expanded across six other countries including Thailand, Vietnam, Australia,

Indonesia, Philippines and China. Hextar also serves and provides for suppliers and customers in more than 30 countries around the world. The companies are bolstered by competent and diverse teams, and sophisticated laboratories that are ISO/IEC 17025 accredited, and OECD GLP certified.

## SOLUTIONS FOR PESKY PROBLEMS

When it comes to agrochemical products, Hextar Chemicals has it all for crop and pest management – herbicides, insecticides, fungicides, rodenticides, nematicides, miticides and molluscicides. Additionally, it also provides reliable solutions for the Public Health sector to stave away termites, cockroaches, mosquitoes and more. These products are formulated in-house in their R&D centres with strict adherence to Organisation for Economic Co-operation and Development (OECD) guidelines.

They are safe, effective and intended to improve efficiency on production costs and have undergone field trials and tests.

## DIVERSIFIED OFFERINGS

Hextar Fertilizers Sdn Bhd was established in 2008 to complement Hextar Chemicals for more crop care and management offerings. It has since developed from manufacturing and marketing, to professional agronomic advisory and consultation services to its customers – planters and small agriculture enterprises.

A milestone was achieved with Hextar's venture into Industrial Chemicals. This marked Hextar's diversification as an extensive chemical solutions provider to include industrial and oilfield chemicals. These and other subsidiaries are fully supported by the Hextar Research & Development International Sdn Bhd, the Group's research arm. Dubbed the "backbone" of the company, the research arm provides continuous product support and formulation, and offers licence information and regulatory information overseas.

Hextar Chemicals and its principal company continue to provide a diverse range of products and services in order to serve various industries in both the domestic and international market.



A diverse range of chemical solutions.

## Achievements

- MITI Export Excellence Award 2012
- KDNKK Ethical Business Award 2010
- SOBA Star Outstanding Business Global Market Award 2011
- The Brand Laurette Award 2009
- Golden Bull Award 2003

## Certifications

- ISO 9001:2015
- OHSAS 18001:2007



## HEXTAR CHEMICALS SDN BHD

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# PROVIDING SUSTAINABLE BIO RESIN TO REPLACE CONVENTIONAL PLASTIC

Customers are turning to eco-friendly plastics in effort to minimise environmental impact nowadays. Indochine Bio Plastiques offers alternatives to PP and PE plastics for a greener, better future.

**E**stablished in Johor, Malaysia in 2005, Indochine Bio Plastiques (ICBP) Sdn Bhd was the first to specialise in the injection moulding grade bio-based resin. The “Pioneer Status” accorded by the Government of Malaysian in 2007 serves as testament. ICBP was established to produce biodegradable bioplastic resin in a borderless world for the global market.

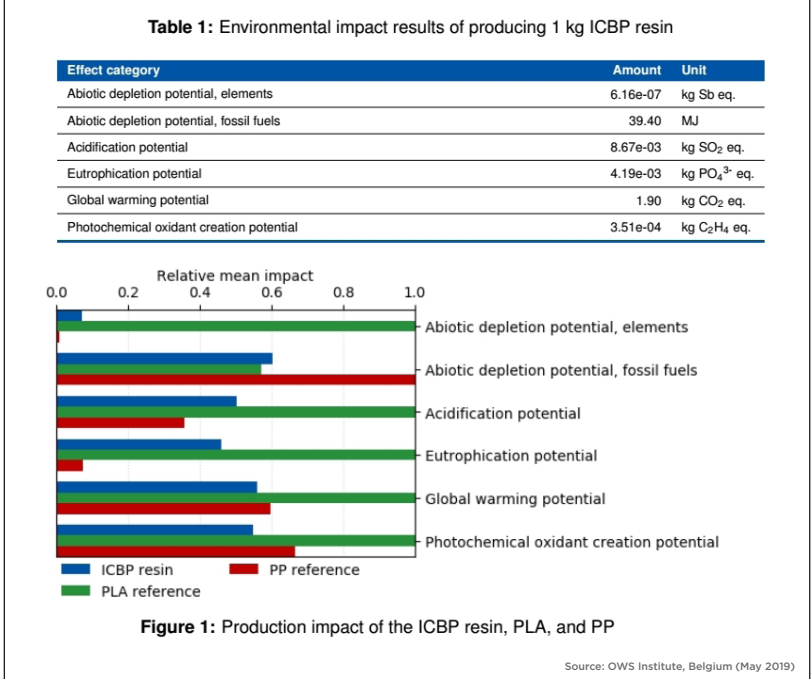
Doing its part for the earth, ICBP Bio Resin is 100% compostable and biodegradable and is positioned to replace traditional virgin Polypropylene (PP) and Polyethylene (PE) plastics. In addition, ICBP provides turnkey solutions within the Bio landscape industry, from managing the end-to-end design process to manufacturing specified quality products to meet client demands.

## GREEN, RENEWABLE SOURCES

ICBP Bio Resin is a polymer derived from biologically renewable non-food crop by-products (cassava). ICBP Bio Resin has a significant advantage over petroleum resin, in which it has a lower processing temperature leading to 50% electricity savings. Thus, it incurs little cost in terms of production.

Furthermore, bio resin has a lower carbon footprint and greenhouse gas emissions than petroleum resins. While petroleum resin is toxic and harmful to us, ICBP Bio Resin is certified safe for food contact applications under US FDA and Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) standards.

ICBP processes 2nd generation feedstock, derived from the by-products of the cassava plantation industry – which are plentiful. ICBP Bio Resin is formed with adaptability in mind, rivaling those of petroleum resin. It is capable



of being used in injection moulding, extrusion applications and blow film, making it highly desirable and sustainable.

## GLOBAL FOOTPRINTS

ICBP holds itself responsible to defend and promote a healthy socioeconomic progression, disciplined principles and values. As a global player in the field of biodegradable and biobased plastics, they will continue breaking glass ceilings to push sustainable standards of living for all.

As a receiver of The Most Influential Sustainable Entrepreneur award by the United Nations Sustainable Development Goal Awards, ICBP will continue to strive for excellence and walk the talk.



## Achievements

- The Green Era Award 2017
- Mumbai Award - Top 50 Green Companies 2017
- The Global Green Awards 2014
- Pioneer Status - MITI Malaysia 2007

## Certifications

- REACH Compliance Certificate 2018
- DINCertco 2018
- TUV Austria 2018
- USDA Certified Biobased Product Certificate 2014



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# ZERO-WASTE REPROCESSING AND DEPOLYMERISATION OF RUBBER

Bridge Fields Resources reprocesses rubber scraps with 100% conversion into high-quality rubber gums without pilferage, ensuring branded items are kept safe while keeping the environment in mind.



NRG 90P



NBR 30

**M**ALAYSIA'S rubber products and derivatives are pervasive in communities around the world. As one of the top three exporters of rubber, we are poised to supply the ever-increasing demand for the commodity. However, increased demand also means more rubber wastage. This is where Bridge Fields Resources Sdn Bhd (BFR) steps in, taking all types of natural and synthetic rubber scraps and reprocess them into high-quality rubber gum.

The company's first foray into the rubber industry started way back in 1998; then, it was just reprocessing rubber tyres. Foreseeing the need to steer towards sustainability, the focus then was largely on Research and Development. The folks at BFR laboured to refine their technology, thus enabling conversions of various rubber types. Since the move to a new factory in 2004, the company is able to hold and supply 600 tonnes of rubber every month.

## TURNING TRASH INTO TREASURE

BFR now produces high-grade reprocessed rubber from rubber wastes and rejected latex materials and markets them as Grenviro™, selling it to rubber product manufacturing industries. With the help of the Chemico-Macheno De-polymerization (CMD) unique technology, the process allows for minimal degradation of rubber properties and 100% recovery process, without taking a toll on the environment.

Grenviro™ is now widely known in the industry. The reprocessed rubber products are meant to be alternatives for manufacturers who use RSS1 and SMR-L. They also retain 80-90% dry rubber content (DRC) which closely resembles virgin natural rubber.

Conventionally, rubber recycling uses heat that would result in the degradation of rubber to 50% of its original properties. The new technology is a synergy between mechanical and chemical processes and the usage of kinetic energy, without producing toxic discharge.

This technology led to the production of the NRG 90P, NRG PL2, NRG 80W, NRG HG, NRG UG, NBR 30 and NBR 31, among other rubber gum products. Some of the major feedstocks for reprocessing include latex compound (natural and synthetic), latex gloves, catheters, and various types of latex-based products. As a result of their efforts, manufacturing cost savings can be improved, without any huge compromise in quality.

## Some of the advantages of using Grenviro products include:

**Mixing Process:** Faster and smoother mixing is achieved. Reduces the requirement of energy thus the heat produced. As it is already processed, incorporation of fillers is accelerated.

**Molding Process:** Flows better in the mould. Clear design impressions are

obtained for intricate designs, reduces the entrapment of air and thus lessening the rejection rate.

**Extrusion Process:** Faster extrusion rate is obtained with reduced swelling.

**Vulcanizing Process:** Faster cure rate with no risk of reversion.

In recognition of the green reprocessing technology that's employed, BFR has started constructing its new plant (Phase 2) where all scheduled waste under SW321 for rubber will be obtained to assist all MFG in keeping the environment clean, by recycling all SW321 into usable rubber again.



NRG UG

## Certification

- ISO14000



**BRIDGE FIELDS RESOURCES**

## BRIDGE FIELDS RESOURCES SDN BHD

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# FROM MILITARY FOOTWEAR TO SMALL LEATHER GOODS

Kulitkraf's leather footwear and leather goods set to satisfy the ever-growing international market.



**F**OR military personnel, construction workers or those who need high quality, high endurance footwear for the rigours of their job, Kulitkraf Sdn Berhad has the right boots and shoes.

These are practical footwear that withstand tough conditions yet provide comfort to the wearer thanks to the company's attention to detail, craftsmanship, modern technology, R&D and innovation.

In addition to the domestic market, Kulitkraf currently exports to Brunei, Oman, Singapore and Sri Lanka, with plans to expand to more countries in the coming years.

## FULL PRODUCT OFFERING

Kulitkraf manufactures military, industrial and light service footwear. The military footwear is made for marching, combat, parachuting, jungle and desert operations, and other military purposes.

Its industrial footwear caters for the construction, fire department, heavy industries, oil & gas industry and other manufacturing industries while its light service footwear are for general and special purposes.

## DEDICATED PRODUCTION LINES

It has four production lines in the footwear section: Mock Welted Construction (MWC), Goodyear Welted Construction (GYW), Stuck On Construction (SOC) and Direct Injection System (DIS).

## DURABLE, COMFORTABLE FOOTWEAR

Footwear manufactured using the MWC method are suitable for heavy-duty activity especially marching, parade and other special operations for uniformed personnel. They are similar to GYW.

The uppers are directly stitched to the insole before being attached to the outsole and stitched again. The outsole is stitched with "lock-stitch" and this process is a combination of McKay and "stitch down" processes. Examples are CBWC 4109 and CBWC 9614 boots.

Footwear using the GYW technique of manufacturing are recognised as high-quality footwear. Rib welt is first attached to the insole, then uppers are directly stitched to the insole rib and welt. The welt is then stitched to the insole and directly stitched to the outsole. Examples are BRGS 0507 boots and OLG 706 shoes.

As for the SOC process, the uppers and the sole are stuck on using special glue. In addition, the side wall is stitched all around to give better adhesion to uppers. Examples are BRSM 9308 & BRSF 1915 footwear.

And the DIS method is suitable for making both light and heavy-duty shoes and boots. Examples are BRJ 7212 and ORJ 2210 footwear.

## PERSONAL ACCESSORIES

Kulitkraf's leather goods collection ranges from small items including key chains, coin purses, belts, card cases (ideal as gifts, souvenirs and for personal use) and fashionable handbags to briefcases and document bags for corporate as well as government clients.

## CONSISTENT QUALITY

Incorporated in 1968, Kulitkraf has grown from a tannery to a leading manufacturer of leather footwear and leather goods in Malaysia.

Its leather and components are subjected to stringent quality control inspection before being approved for production use.

To maintain consistency in quality, strict quality inspection is carried out regularly at the designated inspection points on the production lines.

All finished products require the quality controller's final approval before these are transferred to the factory store.

Efficient management, dedicated personnel, quality products and an innovative R&D team have established Kulitkraf's name in the leather industry.



## Achievements

- Malaysia Good Design Mark by Malaysian Design Council (2010, 2011, 2012 and 2015)

## Certifications

- Certificate of SATRA - UK membership
- Quality Management System ISO 9001:2015 by SIRIM QAS International
- Product Certification Licence MS ISO 20345:2008 by SIRIM QAS International



## KULITKRAF SDN BERHAD

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# GREEN ENERGY, MOBILITY SOLUTIONS FOR DRIVING PLEASURE

Eclimo's ES11 electric scooters are made for better urban mobility and air quality while the Eclimo Power, a plug and play high-capacity battery pack, is a life-changing portable power supply in rural and remote places.



ES11 electric scooter.

**INNOVATIVE** products and services are making everyday life more convenient, safer, more efficient and eco-friendly at home, at work and on the move.

## CHAMPION OF GREEN TECH

Eclimo was founded in 2008 to champion Malaysia's contribution towards sustainable energy and unveiling the wonders of electric vehicles. Its main products and activities include lithium battery-powered Electric Powertrain Systems and vehicles design.

The company manufactures the ES11 electric scooter (to conserve the environment via reducing the carbon footprint and pollution) as well as lithium-ion battery packs Eclimo Power and modules.

It holds patents for its non-spot welding battery pack technology and direct-drive electric motor, both successfully commercialised.

## FUN TO DRIVE

Eclimo Sdn Bhd's ES11 is built as an inner-city runaround vehicle that brings back the fun of scooting around town besides being a convenient mode of transport in crowded cities and as patrolling vehicles

for buildings and residential areas.

Available in seven attractive candytone colours, the ES11's futuristic exterior with clean curves and resilient materials complements its inner power.

Weighing 155kg, the ES11 is powered by a lithium-ion battery of 3,078WH capacity, weighs 50kg and has a battery life of 1,000 cycles and charging voltage (input) of 110V/240V.

Its motor type is an 11-inch radial hub and has a maximum power of 6,000W, continuous power of 5,000W and 110Nm torque.

The high-performance two-wheeler has a top speed of 100km/h, climbing capacity of 20% and range per full charge of 100km based on an average speed of 50km/h.

## PORTABLE POWER SUPPLY

Meanwhile, the company's Eclimo Power is a high-capacity, lightweight plug and play battery pack of the future, powered by Lithium Ion technology.

**The advantages of Eclimo Power are as follows:**

- Charges fast and cheap – overnight full charging costs only RM0.15
- High capacity – 400watt-hour powers

more devices longer

- Portable and tough – easy to carry and store, and withstands impact
- Safe and eco-friendly – zero noise and zero air pollution
- Solar chargeable – compatible with solar-powered (PV) input

As a portable power supply, Eclimo Power can conveniently power mobile and logistics businesses, lighting and fans, computers and devices, audio-visual devices, emergency services, as well as outdoor and remote areas. In particular, such energy will change the lives of those living in places out of the power grid.

An optional solar panel that can produce energy to charge the Eclimo Power, users in rural and remote places do not need to purchase petrol nor maintain generators. Eclimo Power can power electrical appliances such as refrigerators to store medicines, for education, security and information.

Eclimo champions green technology and espouses zero-emission practices.



Eclimo Power, plug and play lithium-ion battery.

## Achievements

- 2016 – Malaysia Excellence Awards, 1st prize of Malaysia Entrepreneurial Company of the Year, Frost & Sullivan.
- 2015 – Anugerah Inovasi Malaysia 2015, 1st prize in product category, Electric scooter ES11, MOSTI.
- 2013 – SME's Innovate Doing Well by Doing Good, MOSTI and MTDC.
- 2011 & 2012 – SME Excellence Award, SMI Malaysia.



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# ENVIRONMENTAL-FRIENDLY ENERGY SOLUTIONS

Gading Kencana Sdn Bhd is an iconic Malaysian company in the renewable energy sector. Their focal point is on the reduction of power usage ranging from commercial to industrial use.



Solar panels are the way forward to cleaner, greener energy.

**GADING KENCANA SDN BHD** is an energy services company specialising in the engineering, procurement, construction, testing and commissioning of Solar Photovoltaic Energy Generation Plants. It also provides after-sales services of solar power systems including the operations and maintenance of solar power generation plants.

Gading Kencana's excellent reputation is built on experience and knowledge built over the years. It is one of the pioneers in the solar photovoltaic industry starting from distribution of solar powered garden lights to solar street lighting, moving on to solar power generation systems and storage for remote settlements and schools. It has constructed landmark solar photovoltaic rooftop projects such as the 546kW A-shaped array arrangements at Bosch plant in Penang and the 2MW building integrated rooftop in Rawang. Its latest achievement is the 30MWac solar power generation plant in Bidor; designed and constructed fully by Malaysians.

Since its inception in 1993, the company has stayed true to its commitment of securing long term customer satisfaction and building relationships. The company ensures all its solar PV systems deliver energy at optimal levels and is uncompromising when it comes to the quality of its technology or service. Gading Kencana became the first Malaysian

solar PV service provider to obtain the certifications for ISO 9001 in 2007 and OHSAS 18001 in 2012.

## SOLAR STREET LIGHTS TO REDUCE NIGHT TIME ACCIDENTS

Gading Kencana continuously innovate and improve the solar lighting technology to meet the high expectations and demand of the public. It has collaborated with the Public Works Department and Road Authorities and has installed over 2000 solar street lights at high accident road junctions and stretches. Night-time fatal accidents can be reduced by 65% when these areas are lighted. It also saves costs of lighting up the areas as the street lights do not require expensive cabling works for grid power connections.

## OFF-GRID POWER SYSTEMS WHERE CONVENTIONAL ELECTRICITY IS SIMPLY IMPOSSIBLE

Gading Kencana has designed and built off-grid solar power systems to provide continuous electricity for lighting and other instruments in remotely located schools and settlements. These solar PV systems provide environment-friendly power and cheaper compared to the use of diesel generators.

With the solar PV systems, the cells of the solar panels can convert sunlight to clean energy with no CO2 emissions - quiet and safe to operate.

## OPPORTUNITIES TO REDUCE ENERGY WASTAGE

Gading Kencana also provides consultations on effective methods to lower carbon emissions by reducing electricity consumption. Manufacturing plants employ Gading Kencana to assist them to reduce their energy wastages by conducting energy audits and implement energy saving measures identified by the company. Electricity and other energy consumption can be reduced via zero-costs, low-costs or high cost measures resulting in 20%, 30% or even 50% reduction.

## FUTURE HOPES

Using green energy as a substitute for fossil fuels will benefit the planet. All powers that be should work in tandem to preserve the environment by using clean green energy and reduce energy wastage with more efficient use of energy. Reduction in energy wastage means less need to increase power generation and this leads to more sustainable and eco-friendly energy industry.

## Achievements

- Asian Photovoltaic Industry Association (APVIA) Award 2019
- IEM Award for Contribution to the Engineering Industry in Malaysia 2019
- The Golden Globe Tigers Award for Solar Energy Leadership 2018
- ASEAN Energy Award On Grid; National Grid category 1st runner up 2018
- ASEAN Energy Award for Green Building category 1st runner up 2017
- MARA Entrepreneurship Award 2016
- Frost and Sullivan Award: Malaysian Solar Company of the Year 2016

## Certifications

- ISO 9001: 2015
- OHSAS 18001: 2007
- CERTIFIED Approved PV Services Provider by SEDA
- Certified Energy Manager by Energy Commission



### GADING KENCANA SDN BHD

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# CREATING ENVIRONMENTS THAT ENHANCE PEOPLE'S EXPERIENCE

A leading energy consultant in Malaysia, Green Quarter is also expanding internationally covering commercial, residential and industrial buildings to advance health and wellbeing in these properties.



for a family of four. The total renewable energy generated on site by photovoltaic panels amounts to 52MWh/year. Lights in the car showroom are fully (100%) powered by renewable energy.

Furthermore, rainwater harvested from the roof of the building is used for car washing and irrigation. This saves approximately 1,500m<sup>3</sup> or equivalent to the daily water requirements of 9,000 people as set by the United Nations (UN). Water stored also acts as detention storage to manage flooding from stormwater.

Last but not least, the CO<sub>2</sub> emission of the showroom is reduced by more than 50% that of a standard car showroom. The estimated reduction of CO<sub>2</sub> emission per year is 208 tonnes.

## INDUSTRIAL MEETS HIGH-END

In another project, Green Quarter completed a design fit-out for an office space in KL Gateway in Kuala Lumpur.

The office is now a dynamic workspace with an inviting communal space to welcome clients and guests, such as the pantry area. The pantry bar's counter is adequately fitted with charging stations. Also, the novelty of electromagnetic protection glass at the managing director's cubicle allows daylight to brighten up the room.

Being an industry expert with sustainability at the heart of Green Quarter, it approaches building design and engineering in a holistic manner.

**E**stablished in 2012, Green Quarter Sdn Bhd specialises in green building design and engineering. It's a group of passionate professionals with one common goal of creating an environment that enhances people's experience.

The company is involved in various green building and energy improvement projects across Malaysia while focusing on expanding internationally covering commercial, residential and industrial buildings.

## IMPROVING WELLBEING IN BUILDINGS

It approaches its projects based on the guidelines of the Green Building Index (GBI), GreenRE, Green Mark, Leadership in Energy and Environmental Design (LEED) and WELL Building Standard (WELL).

Additionally, with the qualification in M&E engineering, Green Quarter conducts simulation modelling using innovative simulation engines and advanced technical tools such as energy modelling software to help its clients optimise energy consumption in their buildings and achieve long-term financial savings.

## What it does:

- Green certification – provides facilitation services to obtain certification for targeted green building certification programmes
- Dynamic energy modelling & strategy
- Renewable energy study and solid water reduction
- Lighting simulation and design (daylight and artificial)
- Condensation, solar and thermal comfort analysis
- Computational fluid dynamics (airflow) analysis
- Mechanical and electrical engineering
- Energy audit fundamentals
- Overall thermal transfer value analysis (building envelope)

## HONDA CAR SHOWROOM (IPOH)

In 2018, the company was awarded the Provisional GBI Gold Rating for a car showroom project. The rating was based on the design assessment of the building, making it the first car showroom in Malaysia to be awarded a green building certification Gold rating.

The building's Building Energy Intensity (BEI) is 50% better than a standard MS1525 car showroom. This results in about 300MWh/year of energy saved, or the equivalent of 80 houses

## Achievement

- Silver Award under the Terrace Category of "My Dream Home 2016", a home design competition jointly organised by Haven, The Edge Malaysia and Pertubuhan Akitek Malaysia (PAM)

## Certifications

- Green Building Index
- GreenRE
- BCA Green Mark
- US Green Building Council



## GREEN QUARTER SDN BHD

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# UNIQUE BREAKER FLUID FOR DOWNHOLE ACTIVATION

SESB's distinctive breaker fluid, CONFI-N SURF, efficiently removes oil-based mud cake and dramatically improves retain permeability of the reservoir.



**S**COMI Energy Services Bhd (SESB), listed on the Main Board of Bursa Malaysia, is a subsidiary of Scomi Group Bhd. Backed by over 60 years of experience and expertise, it provides services to the oil and gas, and coal industries.

Combining the skills and technology of each of its core businesses – oilfield services, offshore support vessels, marine logistics – it offers comprehensive integrated upstream drilling services and marine logistics solutions.

CONFI-N SURF is a one-of-a-kind solution to remove oil-based mud/synthetic-based mud (OBM/SBM) filter cake and barium sulphate scale left on wellbore side while drilling.

It is available in both alkaline and acidic base to give clients the option to tailor the formulation according to the downhole operation requirement.

Test performances of OBM DIF cake removal show that 94% retained permeability has been achieved using CONFI-N SURF, a custom-made technology that can be fine-tuned for each particular application.

## UNRIVALLED STIMULATION FLUID

CONFI-N SURF consists of a surfactant and chelating agent or weak acid. It also contains some other additives capable

of reversing filter cake wet-ability from oil-wet to water-wet as well as dissolving both  $\text{CaCO}_3$  and barite contained in the filter cake.

The stimulation fluid has high thermal stability and low corrosion potential and is environment-friendly.

CONFI-N SURF also delivers all the advantages of conventional stimulation technologies without the shortcomings normally associated with conventional stimulation products.

As a standalone fluid breaker, CONFI-N SURF dramatically improves the permeability in both carbonate and sandstone reservoirs by dissolving calcium carbonate and controlling iron at the same time.

## CUSTOM-MADE TECHNOLOGY

CONFI-N SURF is a highly concentrated blend of surfactants and powerful water-wetting agents designed to effectively remove OBM filter cake. It removes residues from the formation and remediates any oil residual blockage, thus reducing formation damage.

## Its benefits include:

- Water-wetting capability – ultra-low interfacial tension
- Superior removal power – increased cleaning solid and OBM filter cake removal efficiency

- Maximum production recovery
- Maximise emulsion blockage removal leading to increase in oil production
- Cost-efficient
- High thermal stability
- Effectively dissolve Barite &  $\text{CaCO}_3$

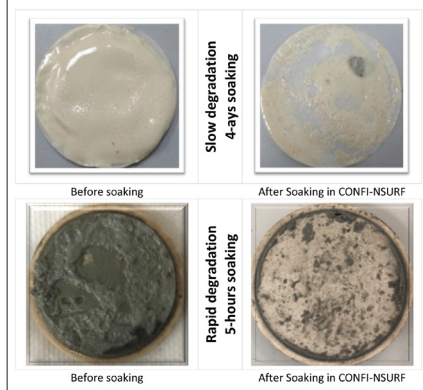
Wellbore damage removal and nanochemistry are integral parts of CONFI-N SURF. Nanoemulsions are clear, stable, isotropic liquid mixtures of water and surfactant, frequently in combination with a co-surfactant.

In contrast to ordinary emulsions, nanoemulsions form upon special kinetic equipment mixing of the components and do not require the high-shear conditions generally used in the formation of ordinary emulsions.

CONFI-N SURF has been extensively tested with impressive results. The technology can be used in conjunction with other Scomi chemistry to address multiple situations.

With SESB's synergies in oilfield and marine services across 42 locations in 21 countries, the enlarged entity aims to capitalise on opportunities and create value for clients and business partners.

## 94% retained permeability achieved using CONFI-N SURF



## Certification

- ISO9001:2015

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# CLEAN, SUSTAINABLE ENERGY FOR A BRIGHTER TOMORROW

Helios Photovoltaic started from humble beginnings with big dreams – to bring green alternative energy to the masses and exact change.



Nanga Peraran, Kapit, Sarawak.

**INCORPORATED** in 2010 in Malaysia, Helios Photovoltaic started as an EPC (Engineering, Procurement, Construction) company for smaller solar power systems. Since then, it has undertaken numerous rural electrification projects for off-grid villages in remote regions of Sarawak, East Malaysia.

Helios Photovoltaic continued on its green trajectory to provide affordable alternative energy while upholding global environmental standards within Malaysia. Its unabating passion for green energy saw the company collaborating with various government agencies and even a local university, allowing them to deepen their offerings.

The company also has its global footprint in Singapore, with the expansion of Helios PV (Asia Pacific) Ptd Ltd - specialising in Rooftop Solar Leasing - and Helios PV (KZ) LLP in Kazakhstan, whereby a 5MW Solar Farm is in the midst of completion.

## REDUCING FOSSIL FUEL RELIANCE

Building on its momentum, the company initiated its Solar Leasing scheme for installation of Rooftop and Self-Consumption in 2018. It became the first solar company in Malaysia to make Solar Leasing package available for customers.

The PV Energy System Leasing requires a minimal upfront investment, designed and installed the way

customers want it. Helios Photovoltaic will operate and maintain the systems at their own cost while customers need only pay for green energy consumed. This is metered and billed at a fixed or discounted rate pegged to prevailing electricity tariff.

In Singapore, the push to reduce reliance on fossil fuel power is enabled by the Space Rental scheme, whereby upon inspection, the company could be interested in renting your roof and fix its Photovoltaic (PV) panels. This would significantly lower the carbon footprint of buildings and contribute to the customer's Corporate Social Responsibility.

## EMPLOYING THE RIGHT TECH

Helios Photovoltaic provides solar systems designed to withstand increased loads. These stations are built to run around the clock without disruptions. The company also source distribution agencies from various panel suppliers and ensure all components have high efficiency and credible manufacturers' warranties. In addition, the company is also a registered distributor and supplier for Suntech solar panel, a manufacture of tier 1 solar panels.

In order to meet clients' objectives, Helios Photovoltaic selects the right technology with careful calibration to optimise the full power of solar energy. The team will perform an initial power study; design an optimum PV system (on- and off-grid); offer technical engineering services for projects; manage the construction work scope; consult on future expansion and power requirements and ensure compliance on all safety equipment.

## LIGHTING UP LIVES

As per its tagline, "Tomorrow's energy today", Helios Photovoltaic's diverse and eco-conscious teams take its mission to heart. The company has provided sustainable, low-cost PV solutions, coupled with diesel generators for increased energy reliability to connected communities across Southeast Asia.

They pledge to surpass clients' expectations and deliver quality innovation with integrity from start to completion. The company aims to be one of the pre-eminent Solar System Integrator of on-grid with the Solar Leasing scheme and off-grid solutions as well as Building Integrated Photovoltaic (BIPV).



Nanga Tunoh, Kapit, Sarawak.

## Achievement

- APEA 2016 (Energy Industry)

## Certification

- ISO certification 9001:2015

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