

If there could be a better solution, then a good solution is not enough!

SPECIALIZED

ENGINEERING SOLUTIONS

www.arrowconn.com

ARROW CONSTRUCTION COMPANY LIMITED

Who **We Are**

Arrow Construction Company Limited is an engineering and maintenance contractor with expertise in both deepwater operations and onshore service delivery. We collaborate with international technical partners for support, affiliation, and supervision. Our extensive experience includes working with reputable brands such as 3X Engineering, Petroseal, Monti BV, Chesterton, Ceramic Polymers, Cape Environmental, Romacon, and Escher on various EPC projects, leak sealing, and pipeline repairs.

Our distinctive capabilities in oil and gas engineering maintenance allow us to handle leak sealing in complex scenarios without requiring shutdowns, regardless of temperature or pipe pressure. Additionally, our services encompass reinforcement, corrosion treatment, underwater repairs, fabrication, construction, and specialized procurement, all of which enhance our service delivery capacity.

Core **Values**

Excellence & Quality

We dedicate to achieving the best possible outcome meeting and exceeding the needs and expectations of customers.

Reliability & Consistency

Iwe have created a positive reputation through fostering long-term customer relationship.

Ethics and Integrity

We operate in a manner that is respectful, just, and consistent with moral values.

Respect and Teamwork

By integrating respect and teamwork, we create a more dynamic, inclusive, and successful environment.

Innovation

We are always looking for ways of improving processes to enhance efficiency or effectiveness of our engineering solutions.

Safety, Health & Environment

We conduct our operations with the environment in mind, while also taking into consideration the safety and health of our workers, and of our products.



Our OEM **Partnerships**

3X Engineering

3X Engineering is specialised in pipeline repair, pipe reinforcement and online leak sealing and operates in different sectors

Chesterton

Chesterton specialists and technicians work closely with customers in the field to help solve specific sealing and equipment reliability challenges.

Monti

Monti specialise in wind and renewable energy, oil & gas, automotive, marine, infrastructure, OEM, & signage, using stainless steel for durable solutions.

Petroseal

We specialize in repair, retrofitting, refurbishment, & re-engineering of recognized mechanical seals for various market segments in demanding process industries.

Cape

Cape Environmental Management Inc is an award-winning firm in environmental remediation and infrastructure construction, known for its integrity & safety.

BEISTEEL

Beisteel is a company specialized in steels and pipeline and other related work experties in oil and gas industry.

Escher

Escher is a group of four engineers who solve the most complex issues and come up with solutions for the energy transition.

Romacon

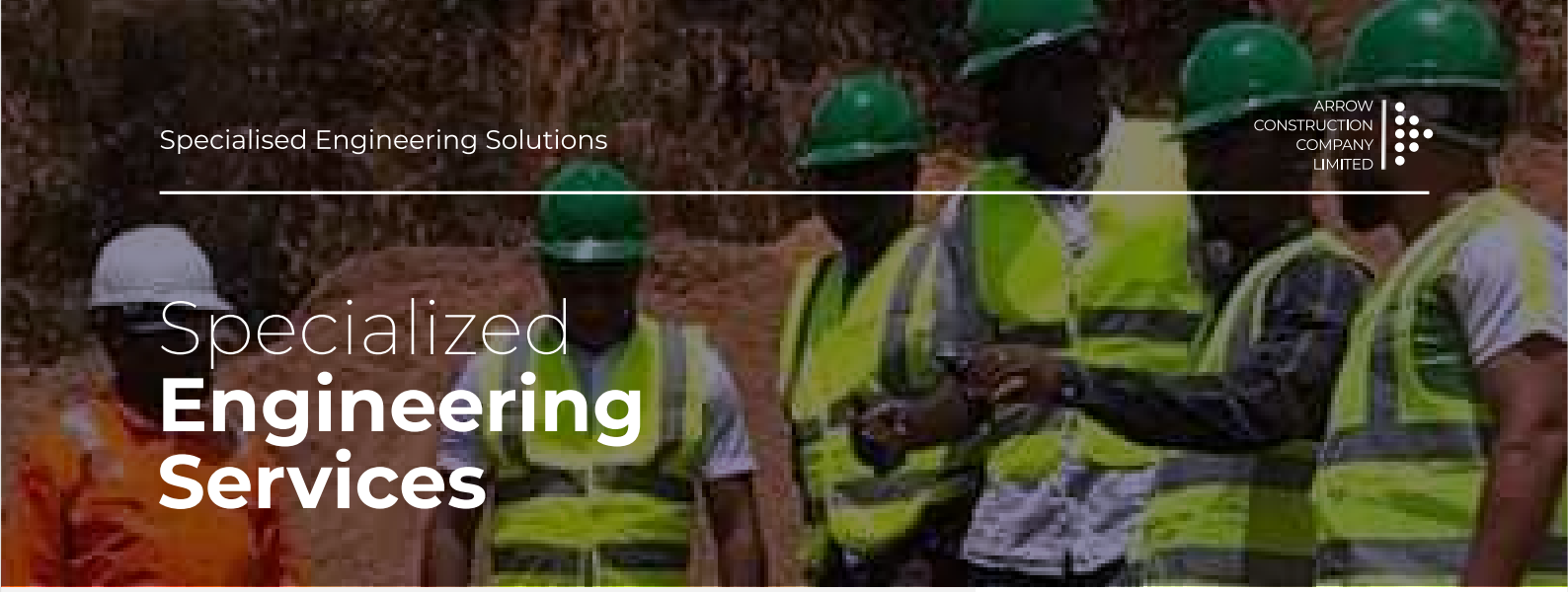
Romacon is a leading Supplier of High Pressure Pipeline Repair Products for on/off Shore Installations.

Engie

Engie Fabricom is the benchmark in the field of innovative multi-technical installations and services for the infrastructure, buildings, industry

What We **Offer**

- Engineering Works
- Onshore & Offshore Solutions
- On-Site Installation
- Flare Systems
- Pipeline Maintenance
- Equipment Supply Services & Leasing
- Marine Services



Specialized **Engineering Services**

We are a leading provider of specialized services in civil engineering, building, and construction. With a strong focus on engineering works, we excel in delivering innovative solutions for both onshore and offshore projects. Our expertise include comprehensive pipeline maintenance, ensuring systems operate efficiently and safely. We also offer on-site installation services, facilitating smooth project execution and minimizing downtime. In addition, We are adept in providing flare systems, designed to meet the rigorous demands of the industry. To further support our clients, we supply and lease a wide range of equipment, ensuring that all project needs are met with the highest standards of quality and reliability.

Engineering Services

- Onshore & Offshore Solutions
- Pipeline Maintenance
- Civil Engineering
- Engineering Works
- On-Site Installation
- Flare Systems
- Equipment Supply & Leasing







3x Engineering **Products**

STOPKiT®
ONLINE LEAK SEALING



These exceptional and competitive online repair kits are designed for addressing pipe leaks under pressurized conditions, suitable for pipe diameters ranging from 4" to 56".

Offshore **Onshore**

STOPKIT is the only efficient repair solution globally capable of sealing a leak in just a few minutes. This innovative system serves as an emergency response mechanism and comes in various models tailored to different hole diameters and environments—onshore, offshore, and subsea. The system works by directing all necessary stress to the defect site in the pipe. The hoop stress required to halt the leak is provided by the technical strap and screws. The strap's robust fibers are resistant to both temperature and stress.

TANKiT®
COMPOSITE REPAIR FOR DAMAGED TANK



TANKIT and REINFORCEKIT PATCH are two distinct products designed to repair tanks and vessels with internal or external damage and leaks. TANKIT serves as an emergency, temporary reinforcement solution, ideal for specific situations. In contrast, REINFORCEKIT PATCH offers a durable reinforcement solution, providing protection against external corrosion for up to 20 years. It can be applied under various conditions, following engineering assessments and calculations using the 3X R.E.A software.

We offer both temporary and permanent leak repair kits designed to rehabilitate tanks, vessels, and caissons with hole sizes of up to 100mm.

TANKIT BENEFITS

No engineering, no calculations
Cold welding system
Quick installation
Ready to use
Easy to store

REINFORCEKIT PATCH BENEFITS

No defect size limitation
No pressure limitation High temperature (up to 150°C/302°F)
Permanent repair (for external defect)
No overload on damaged tank

REINFORCEKIT® BEAM

COMPOSITE REPAIR FOR DAMAGED BEAM



We offer both temporary and permanent leak repair kits designed to rehabilitate tanks, vessels, and caissons with hole sizes of up to 100mm.

REINFORCEKIT® BEAM design is performed using Finite Element Simulation

REINFORCEKIT BEAM is designed to reinforce structures affected by corrosion, offering a lifespan of at least 20 years. This product can restore structures that have lost up to 80% of their original thickness. Made from high-performance materials, REINFORCEKIT BEAM integrates metal inserts at the base of the structure through cold welding, effectively restoring its original mechanical strength. The structure is then wrapped in Kevlar tape and coated with 3X epoxy resin, finished with a specialized anti-UV and impact-resistant coating.

REINFORCEKIT® 4D (R4D)

COMPOSITE WRAP TECHNOLOGY



REINFORCEKIT 4D (R4D) is a durable composite repair solution designed for pipelines and piping affected by corrosion and mechanical damage.

Composite wrap

Pipe repair & reinforcement

Onshore - Offshore - Subsea

REINFORCEKIT 4D (R4D) is a wet lay-up system that helically wraps around corroded pipes to improve mechanical strength. This permanent composite solution uses Kevlar tape and a bi-component epoxy resin. R4D is designed for lasting pipe reinforcement. 3X ENGINEERING also offers R.E.A (Reinforcekit Engineering Analysis) software for designing repairs and defining material requirements per ASME PCC-2 & ISO/TS 24.817.

REFLANGEKIT®

ONLINE REPAIR OF LEAKING SF6 GAS FLANGES UNDER PRESSURE.



Online Installation



Non-invasive System

Flange Model

Power Plant

Onshore Use

REFLANGEKIT is an SF6 leak sealing technique for flanges that works online and under pressure. It features a double shell system: the first, a soft PVC shell, covers the flange and collects SF6 leaks, while the second, made of PET, contains a specific resin from 3X. An exhaust valve lets gas escape during resin injection. After the resin cures overnight, the valve is sealed. This innovative system protects the flange and bolts during injection and disassembly, allowing for easy, damage-free removal.

Chesterton Coating & Corrosion

Coating & Corrosion Products for Vessels, Tanks,Metals and Pipelines Especially for Harsh and Aggressive Environments

The Chesterton Solution for Oil, Gas & Mechanical Installations

Under our exclusive A.W. CHESTERTON franchise for the Nigerian market, we provide a comprehensive range of industrial chemicals, lubricants, seals for both rotary and stationary equipment, as well as sealants. Chesterton, a global company with nearly 140 years of expertise, offers specialized solutions for facility and industrial maintenance.

Services

- **Split seals**
- **Mechanical seals**
- **Industrial chemicals and lubricant**
- **Global expertise on coating and corrosion**
- **Flange repairs, leak sealing and management.**

We stock and supply high performance **industrial lubricants and chemicals,** our objective is to maximize products performance to reduce operational cost while increasing your productivity.

MRO chemicals

CLEANERS AND DEGREASERS: Economical, efficiency & safety.
GREASES: Chesterton specially made grease for bearing reliability
LIQUID LUBRICANT: Equipment life extension & energy servings
ANTI SEIZE: Ease of disassembly, reassembly and maintenance
METAL WORKING FLUIDS: For machining performance
THREAD SEALANT: To encourage Leak free plants
CORROSION PROTECTION: Asset preservation
PENETRATING OIL: Maintenance oil
FLANGE SEALANT: Leak free plants



Chesterton Products





Mechanical Seals

Our innovative, award-winning mechanical seals for pumps, agitators, mixers, and other rotating equipment simplify installation, enhance reliability, and extend fluid handling performance.

Mechanical Packing & Gasket

Chesterton provides high-performance sealing devices, including pump and valve packings, sealants, sheet gaskets, joint sealants, and semi-metallic gaskets for various applications.



Polymer Seals

Polymer seals enhance equipment performance by reducing premature failure and improving reliability. This leads to lower repair, maintenance, and operating costs, extending machinery lifespan and ensuring efficient operations.



Industrial Lubricants & Mro Chemical

CHESTERTON's lubrication solutions provide expert support for your production and maintenance processes. Their specialized knowledge delivers tailored guidance to optimize performance and efficiency.



ARC Efficiency & Protective Coatings

ARC-EPC products are engineered with advanced technologies and materials, including ceramic bead reinforcement and nanotechnology, ensuring durability and reliability in tough environments.

Blasting **Without Brit:**

Revolutionizing Surface Preparation and Corrosion Management with Monti's Bristle Blaster Technology

Our company Arrowconn represent Monti BV, Germany, OEM of Bristle Blaster in exclusive capacity, we offer applicator training, repairs and after sales services.
We are convinced that our bristle blaster technology will be of immense benefit to your maintenance programs especially for surface preparation and corrosion removal in pipes/metals during spot repairs. If this is so, we are willing to conduct a presentation at your earliest convenience to showcase the efficacy of this device.

We are authorized representative of MONTI BV of Germany, manufacturers of Bristle Blaster

Monti's Bristle Blaster technology is the most advanced solution for surface preparation and related applications in metals and pipeline maintenance. It achieves surface roughness levels of up to 120 microns, ensuring the integrity of the surface while creating an optimal texture and anchor profile.

The Bristle Blaster is eco-friendly; is tested in Atex zone 1 potentially explosive environment; is economical and cheaper than grit or sand blasting especially for spot repairs!

3 KEY FACTS

- Sa3 is approximately equivalent to NACE No1/SSPC-SP5 – (White metal blast cleaning)
- Sa2.5 is approximately equivalent to NACE No.2/SSPC-SP10 – (Near-white metal blast cleaning)
- Sa2 is approximately equivalent to NACE No.3/SSPC-SP6 – (Commercial blast cleaning)



BRISTLE BLASTER® ULTIMATE CORDLESS

CASC LiHD **18V**
Length (without battery) **460 mm**
Height (incl. handle) **240 mm**
Width **100 mm**
Weight **2,3 kg 15,1 lbs**
Output **700W**
Idle speed (15%) **2,300 rpm**



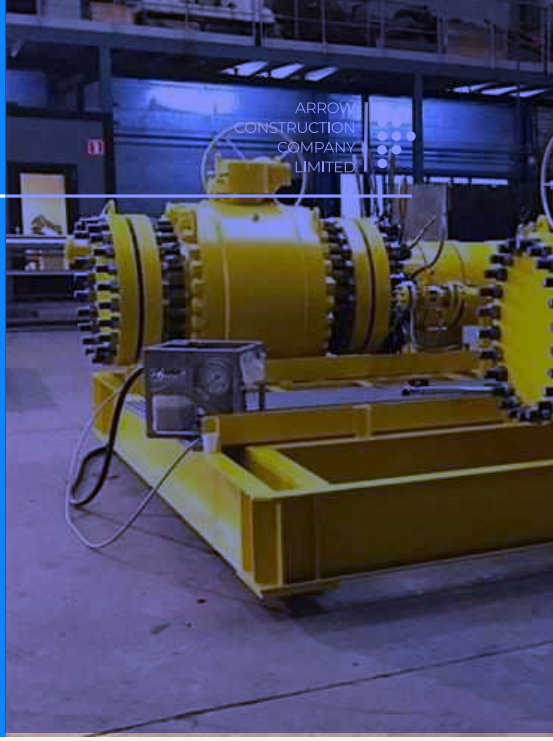
BRISTLE BLASTER® ELECTRIC SET

1 each 11 mm and 23 mm Adaptor Systems. 10 Bristle Blaster Carbon Steel Belts Blow Mold Case.



BRISTLE BLASTER® PNEUMATIC TOOL

Free Speed: **3,500 rpm**
Air Pressure: **90 psi/6.2bar**
Average Air Consumption: **17 cfm/500 l/min**
Air Hose Size: **17 cfm/500 l/min**
Weight: **2.4 lbs / 1.1 kg**



Leak Repairs without Shutdown - **Petroseal**

Pipes | Flanges | Elbows | T-pipes | Valves

Our franchise with Petroseal of France capacitates us to perform optimally on leak sealing and pipeline maintenance without shutdowns, not minding the temperature or pressure.Our objective is to expand our confirmed unique capability and capacity in pipeline maintenance to accommodate leak sealing in complex situations without shutdowns.

The Petroseal approach is to “box in” the leaks with metallic or specially made enclosures and injecting compressed chemical compounds through it which stops the leaks online!, our unique approach here enables us to perform leak sealing and pipeline maintenance online and onsite under high pressure and/or high temperature.It prevents unscheduled shutdowns, saves money and is non destructive







Clamp for Pipeline Repairs - **Romacon**



ROMACON repair clamps are specifically engineered for the effective and permanent repair of broken or damaged high-pressure pipelines. These clamps are versatile, making them suitable for use in both offshore and onshore transmission pipeline systems, particularly within the demanding environments of the oil and gas industry.

Design & Features

One of the standout features of ROMACON repair clamps is their user-friendly design. Installation is straightforward and does not require any specific surface preparation, which can significantly reduce downtime during repairs. This ease of installation is crucial in high-pressure situations where time is of the essence.Additionally, ROMACON repair clamps are designed to function as fully compensatory pressure vessels. They undergo rigorous hydrostatic testing, certified to 1.3 times the rated working pressure, in compliance with ASME Section VIII, Division 1, clause UG-99. This testing ensures that the clamps can withstand the high pressures typical in pipeline operations, providing operators with confidence in their reliability and safety.





In the oil and gas sector, where pipeline integrity is paramount, ROMACON repair clamps offer a robust solution for emergency repairs or long-term fixes. Their adaptability to various pipeline materials and diameters makes them an ideal choice for a wide range of applications, from transportation of crude oil to natural gas transmission.By employing ROMACON repair clamps, operators can mitigate the risks associated with pipeline failures, ensuring the continued safe and efficient transport of vital resources. The reliability and durability of these clamps play a significant role in maintaining operational continuity and reducing the potential for environmental hazards.

Process Modules - **Escher**



We represent Escher Process Modules' products and services which include but not limited to:

- Gas gathering applications
- TEG/MEG/DEG regeneration systems
- Oil and gas condensate treatment units
- (Pre) assembled process units and modular
- Application of low temperature and phase separation
- Flare stacks derrick supported or guyed & retractable flare
- Glycol and/or methanol, molecular sieve or silica gel processes

Escher Process Modules BV is a global expert in process module. They are one of the world leading process and instrumentation companies with more than 75 years experience in process engineering and design. Their expertise spans a variety of sectors, enabling us to engineer, fabricate, package, and supply a range of specialized products.

Their offerings include Oil & Gas Treatment Systems, which encompass gas dehydration and separation, as well as advanced Combustion Systems, such as flare systems and thermal oxidizers. Additionally, we provide high-quality Process Vessels designed to meet the diverse needs of our clients.

Escher Process Modules prioritize safety, quality, and on-time delivery. The process solutions integrate innovative, value-added technology and insights gained from decades of experience.

We place a strong emphasis on sustainable system design and efficient project execution, ensuring that we not only meet but exceed the expectations of our customers.







Flare Stack Inspections - **JSE**

Arrow Construction partner with **JSE Engineering of UAE** to provide remote facility inspection services using Remotely Operated Aerial Vehicles (ROAV).

This solution offers cost-effective benefits for in-service flare inspections, including visual and thermographic analysis. Our ROVs are uncrewed, motorized aerial vehicles that can be remotely controlled or operate semi-autonomously. They can loiter and carry payloads from 1 kg to 8 kg, making them suitable for inspections in hard-to-reach areas.

We also provide aerial thermography services with an IR camera and thermographer. The key advantage of this technology is that it allows us to gather information about the flare without interrupting operations, ensuring safe analysis of burners and structures while minimizing risks to personnel.









Pipeline Fabrication & Civil Construction

For your fabrication needs, think Arrow Construction. We provide expertise across the entire fabrication process, delivering a worry-free, turnkey solution.



Civil **Construction**

Infrastructure Development

From roadways and bridges to drainage systems, we specialize in constructing robust infrastructure that supports community growth and development.

Earthworks and Excavation

Our expert team handles all aspects of earthworks, ensuring that the foundation of your project is solid and compliant with all safety standards.

Site Preparation and Grading

We provide comprehensive site preparation services, including grading and land clearing, to ensure a smooth start to your construction project.



Pipeline **Fabrication**

Custom Design and Engineering

We collaborate with you to develop customized pipeline solutions that meet your specific requirements, ensuring optimal efficiency and performance.

Precision Fabrication

Utilizing state-of-the-art technology and skilled craftsmanship, we fabricate pipelines that are durable, reliable, and designed to withstand the toughest conditions.

Quality Assurance

Our rigorous quality control processes guarantee that every piece of fabricated pipeline meets industry standards and regulations.

Equipment **Supply**

Over the years, we have built a solid reputation for excellence by prioritizing customer satisfaction and maintaining a diverse supply of top-tier equipment.









- **Excavators**
- **pay loaders**
- **Rollers**
- **Dump trucks**
- **Cranes**
- **Lowbed trucks**
- **Graders**
- **Flatbed trucks**

At Arrow Construction Company, we specialize in providing top-notch equipment supply services tailored to meet the diverse needs of our clients across various industries. With a commitment to quality and reliability, we offer a comprehensive range of high-performance equipment, from construction machinery to specialized tools and safety gear. Our dedicated team of experts works closely with clients to understand their unique requirements, ensuring they receive the right equipment for their projects on time and within budget. With competitive pricing and a strong emphasis on customer satisfaction, we are your trusted partner for all your equipment supply needs, helping you achieve your goals efficiently and effectively.

Marine **Services**

We believe in protecting our oceans and waterways. We implement sustainable practices across all our services and are dedicated to minimizing our ecological footprint. By choosing us, you're partnering with a company that values environmental responsibility.

Marine Logistics

Vessel Maintenance

Environmental Management

1. Vessel Maintenance and Repair

Routine Inspections: Regular checks to ensure optimal performance and safety.
Hull Maintenance: Cleaning, painting, and repairs to maintain structural integrity.
Engine Services: Comprehensive engine diagnostics and repairs.

2. Marine Logistics

Transportation Solutions: Efficient movement of goods via maritime channels.
Supply Chain Management: Tailored logistics to meet the unique needs of marine operations.
Custom Clearance: Expert handling of all documentation and regulatory requirements.

3. Environmental Management

Waste Disposal Solutions: Safe and compliant disposal of marine waste.
Pollution Prevention: Strategies to minimize environmental impact during operations.
Sustainability Consulting: Guidance on best practices for eco-



Work History - Excerpts

Here are just a few highlights of the many successful projects we've executed

Repair Operation	Clients	Location	Product	Period
Internal Corrosion on 3/4" – FS – 21204 – B51 Line	Total E&P	Ofon - OML 102	3X Reinforcekit 4D	Mar 2019
Supply of Chesterton 803 Solvent	TPPPP	-	803 Marine Solvent	Feb 2019
Internal Corrosion	OERL	Ebok Field OML 67	Reinforcekit 4D	Aug 2022
Supply Of Chesterton 710 Anti – Seize Comp'd	BIBL	Ebok Field OML 67	Reinforcekit 4D	May 2021
External Corrosion	OERL	MOPU - OML 67	Reinforcekit 4D	Jul 2019
Supply of 3X ROLLERKIT	APS	-	3X Rollerkit	Feb 2024

278+ Projects

29+ Clients

21 Indigenous Technicians

5 Expatriates














Our **Clients**

We have successfully and satisfactorily provided top class engineering and field support services to these customers. With our expertise and experience, we have taken on complex projects in challenging environments and delivered to customer requirements.





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ARROW
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COMPANY
LIMITED