## We Provide Engineered Solutions

# to Protect Defend and Preserve vour Assets

# **About us**

Dutchwerk Middle East was established in 2019 in the UAE through a consortium of companies from the Netherlands. England, Mexico, Middle East, and India. It is in the Industrial Area of Musaffah, Abu Dhabi, UAE, strategically positioned as a hub for industrialized activities, especially in the oil and gas sector, utilities, marine industry, power energy, and EPC's.

Dutchwerk Middle East is dedicated to delivering high-quality of products and engineered solutions for asset integrity management, by ensuring the efficient operation, long-term reliability and safety of critical infrastructure to our clients in the Middle East region, GCC and South Asia.





To be the leading solutions provider of innovative technology and asset Integrity management and engineering services in the oil and gas, marine and utilities industry, recognised for the integrity of our people, the ethics of our business practices and the quality of our services



To develop lasting client relationship by providing exceptional stakeholder value through an efficient asset management program that ensures reliability, technical integrity, safety, protection and regulatory compliance

#### **Key Features**

- A Our top priority is always safety with quality
- Go Carbon Neutral, Emission free products and services
- Skilled and competent engineers using cutting-edge techniques
- Driven by European technology and supported by gasuine
- Strong knowledge and provisions for turnkey services
- Provide Total PIMS package with support and field work expert
- We enhance asset performance and operational effectiveness
- We reduce risk and minimize downtime and reduce operational cost

# Perfection What Tehnical Support **Sets Us Apart** Core for the

#### Certifications



















# The place where you'll find the perfect solutions

Dutchwerk™ offers a unique combination of products and services, along with innovative use of technologies, delivering:

#### **Products**



Solutions



Liquid Applied Coatings Services Visco-elastic Corrosion Prevention System Field Joint Coating and Insulation Services High Temperature and Chemical Resistance Coatings | Metal repair composites corrosion Inhibitors Pipe repair Kit



Engineered Composite Solutions Structural Repair Clamps Internal Weld Sleeves Pipeline Emergency Renair

Clamps



Merit-Epoxy Grouted Pipeline Repair Clamps | Merit-Epoxy Grouted Structural Repair Clamps



Strengthening

#### FlexiGuide

Flexi Guide - Conductor Stabilizing and Protection System | CK 68-Subsea Marine Growth Removal Tool



Online QPCR Test Kit for microbial Induced Corrosion



Intelligent pigging solution

# **Services**

- **Asset Integrity Management**
- **Cathodic Protection Services**
- Corrosion Prevention, Monitoring & Inspection Services
- Hot Tapping, Online & Offline Corrosion Coupon Retrieval
- Oil Field Microbiology & Corrosion / Erosion Data Analysis
- Onshore & Offshore Diving, Inspection & Survey Services
- Onshore, Offshore, Subsea Oil & Gas Field Maintenance Services
- Pipeline Integrity Management Service (PIMS)
- Emergency Pipeline Repairs Services (EPRS)
- Above Ground Storage Tank Repairs, Reinforcement & Rehabilitation



#### **Industries**

Renewable Energy



Industrial



Oil & Gas



Construction



Onshore



Marine



Offshore



**Power Plant** 





BRISTLE BLASTING SOLUTIONS

Power Tools and Machines

# ABSOLUTELY GRÜNDLICH

**QUALITY MADE IN GERMANY SINCE 1987** 

Discover the power of our specialized powertools. Innovative surface preparation solution to achieve blasting quality without grit on onshore or offshore, whether removing, cleaning or profiling. Montipower's Innovative blasting technology ensures the best possibe bond. The world's best coating and sealants deserve the best surface preparation.

Our surface preparation grades comparable with Sa2 1/2 [SSPC-SP 10 / NACE No.2] to Sa3 [SSPC-SP5/NACE No.1] with roughness level of upto 120µm [4.72 mil] Rz.



# **BRISTLE BLASTING**

THE BRISTLE BLASTER OFFERS DISTINCT ADVANTAGES OVER CONVENTIONAL SURFACE PREPARATION METHODS AND WILL YIELD SUPERIOR RESULTS-WITH FAR LESS TIME AND EFFORT

- Removes corrosion, coatings, mill scale and other contaminants
  - without removing healthy material
  - without grinding or polishing
- **>** Generates anchor profiles ranging from 2.5 to 3.3 mil (65-85 µm Rz) including on weld seams, edges, around bolts and on surface irregularities
- Cleans and profiles quickly and economically using safe and durable Bristle Blaster Belts; eliminating the need for costly abrasive blast equipment.
- Suitable for spot repairs as well as larger areas where other processes are prohibitive; does not use / produce hazardous material
- Restores corroded and pitted surfaces to near-white metal or white metal appearance
- Improves integrity of treated surface; generates compressive residual stress for crack growth resistance, improved fatigue life and improved corrosion resistance.
- The bristle Blaster Pneumatic is ATEX-approved and includes Dust control
- Reduces surface preparation time by 75%





#### RED IS THE NEW GREEN

The bristle blasting process is eco-friendly in that, it does not use or generate hazrdous Waste, thereby "greening" industry's approach to corrosion removal and surface preparation of steel components.

#### **INDUSTRIES**

























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- www.montipowerme.com











# BRISTLE BLASTER®

**POWER TO IMPROVE SURFACE PROTECTION** 

Bristle Blaster® Electric Single



Vinyl Zapper®





Bristle Blaster®
Pneumatic

**Bristle Blaster® Cordless** 



**Bristle Blaster® Double** 



The Cleantech Prepper

WITH 23MM OR 11 MM BELTS



**Bristle Blaster® Accessories** 



Bristle Blaster® Subsea



The Prepper Q4 (quattro)



# **DUTCHWERK**

Total Care Integrity Management & Engineering Services

Netherlands - England - Mexico - UAE - India

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- info@dutchwerkme.com
- www.dutchwerkme.com





#### Time For Change

Allter's founders ore professionals from both the traditional and innovative coating industries. Allter is driven by ideals. It's time for a change, both in durability and sustainability. Together, the developers at Allter have over 160 years of collective experience in the sector. We are firmly convinced that change is possible, and that a new, different approach to future-proof total solutions is what is needed.

#### **Our Alternative Solutions**

Allter is an alternative coating brand offering unique solutions to under- and above ground steel assets. Allter sets a new standard for future-oriented thinking in the coating industry when it comes to product safety during the manufacturing, application and in service.

#### The Alternate For Steel Protection

Allter focuses on emission-free corrosion prevention for durable assets. Allter is an alternative coating brand comprising of 5 unique divisions offering unique solutions to under and above ground steel assets such as pipelines, risers, flanges, valves, storage tanks. Allter focuses on emission-free corrosion prevention for durable assets.

# WE COAT THE WORLD



## Biomimicry By Design

Allter's emission-free and chemical inertia reflects some of our company's main priorities. We consider it the duty of the inhabitants to take care of this planet. Allter® aims to contribute to better, safe protection of the environment where pipework, joints and installations ore concerned.

# **Engineered Coating Solutions**

#### Allter™ – Visco Elastic Products

#### Allter™ - Outer Wrap Tapes

**Viscorite Rolls** 

Viscorite Paste/Putty

PE

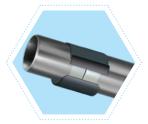
**PVC** 

**Fusion Tapes** 





**Heat Shrink Sleeves** 





Glass Shield

Pipe Repair Kit



**Repair Patches** 



Allter™ - Liquid Applied Coatings

Allter™ Seal



Allter™ Guard



Allter™ Therm



Allter™ Bond PU



Allter™ Prime



Allter™ **Epoxy Coating** 



Allter™ **Epoxy Grout** 



Allter™ High Temperature Coatings



Allter™ **Metal Repair Putty** 



\* • Complies to ISO 21809-3

• Easy and safe to apply • Non toxic and Eco friendly products\*

### **Industries**



Oil & Gas

Onshore



Marine



Offshore



**Power Plant** 

Renewable Energy



Industrial





Construction











We Coat the World The Alternate Way





# **BLUE IS NEW**

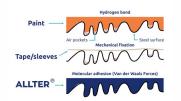


#### What Is Our Allter Visco-Rite

Allter®'s Visco-Elastic Coating Systems are BASF Oppanol Polyisobutylene-based for corrosion prevention. The blue compound, which can be applied from a roll, as a sheet, patch, by injection, or by spraying, is a unique, pure food-grade material enriched with natural ingredients as a filler. It is harmless and has no shelf life. The glass transition temperature is below -65 degrees Celsius. This means it can become hard and brittle, but when the temperature rises above -65 degrees Celsius, the properties become fluid-like again. The material adheres to any substrate based on Van Der Waals forces, except water, air, and silicone. Therefore, you will notice that the release foil is siliconized. In the case of compression by pipeline tape, shrink sleeve, or other compressive wraps, such as the Self-fusing High Temperature Tape, the material will ooze out in the event of small, minor damage to the system. It is self-repairing and won't allow any corrosion under creep or other forms of disbandment, such as cathodic disbandment.

#### **LET'S GET TECHNICAL**

## Facts and figures about visco-elastic coating systems



#### Surface Preparation

- St 2-3 Manual cleaning
- Manual cleaning
  Powertool cleaning
  Free from loose parts
  Free from biological growth
  Free from oil & Grease Above
  water line, degrease with Isopropa
  Free of foreign matter

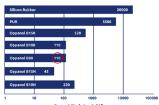


#### Chemical Properties & Appeareance

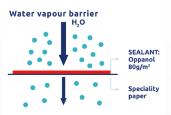
Appeareance
 n ≈ 18 – 72.000
 Covalent bonds only
 No sensitive chemical groups
 Just Carbon and Hydrogen
 No possibility to crosslink the polymer chain



#### Test Results







# Testing of Resistance to Cathodic Disbondment - Self-healing

#### Remains in a liquid-phase

A rusted bolt is pushed into the bottom of a container filled with Allter® material. Pressure forces Allter® to flow underneath the entrapped air and cover the metal surface. Once covered with Allter® it will not be replaced by air again.





#### VISCO-RITE™ Products

VISCO-RITE™ 70

VISCO-RITE™ 95

VISCO-RITE™

**SUBSEA** 

VISCO-RITE™ 70 HB

VISCO-RITE™ 95 HB

-45°C

-45°C

-20°C +70°C VISCO-RITE™ OJS (OFFSHORE **JOINTS)** 

VISCO-RITE™ **TAPEQOTE** 

VISCO-RITE™ **GROUNDQOTE** 







# TAPE™ Products

TAPE™ PVC

TAPE™ PE

**EPDM SELF-AMALGAMATING TAPE**<sup>TM</sup>

SILICON **SELF-FUSING TAPE™** 



# **Key Features**

- No primer needed
- Easy and safe to apply
- Complies to ISO 21809-3
- Self healing in case of a minor damages.
- Provides excellent corrosion protection.

- Underground resistant against AC/DC current and stray currents.
- No cathodic disbondment for underground applications on pipelines.
- Can topcoat with a range of coating types, such as epoxies, polyurethanes and chlorinated rubbers.

#### **Industries**

Renewable Energy

Industrial





Oil & Gas



Construction







**Power Plant** 





**DUTCHWERK** 

**Total Integrity Management & Engineering Services** Netherlands - England - Mexico - UAE - India

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PROTECT C PROLONG > PRESERVE O ASSETS >

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# **STRONGPIPE**

VACUUM-CONTROLLED COMPOSITE PIPE REPAIR & REINFORCEMENT

PIPE REINFORCEMENT VACUUM CONTROL

THE WORLD'S FIRST VACUUM WET WRAP COMPOSITE SYSTEM

#### **Our Product and Services**

Strongpipe® Engineered Composite Repairs

Strongpipe ® Internal Weld Sleeves

Strongpipe ® Structural Repair Clamps

Strongpipe <sup>®</sup> Pipeline Emergency Repair Clamps



Our engineered composite repair technology provides complete structural repair and reinforcement solutions that are safe, flexible, practical, and cost-effective. This one-of-a-kind composite system consists of layers of reinforcing steel wire and fiber-reinforced polymer and is designed to provide full structural repairs and upgrades to pipe segments. Our system is applicable to all pipeline types.

#### **Epoxy Grouted Structural Repair Clamps**

Strongpipe® Vacuum Epoxy Reinforcement and Glass Shield Wrapping Systems use a more optimal reinforced clamp structure for onsite vacuum installation. Instead of using the traditional perfusion process, which injects the adhesive with positive pressure, the process uses the negative pressure created by vacuuming to perfuse the epoxy. This enhancement provides the system with much more consistent performance. The vacuum pump will be used in the field to suck the evenly mixed high strength epoxy. Composite material has good adhesion and compressive strength. Once cured, the pipeline and reinforcement will become a single one-piece structure and the stress on the pipelines will be effectively shared ensuring reliable reinforcement performance.



#### Strongpipe® S Glass Fiber

All our repairs are designed in line with ISO 24817 ASME PCC 2 standards and can be warranted for 20 years design life, thus extending the life of critical infrastructure.

S-glass fiberglass is a high performance alternative to standard fiberglass E-glass. It is stronger and stiffer with a comparable density. S-glass Fiberglass is more expensive than E-glass but is stll cheaper than Carbon Fiber. It is a good alternative for laminates requiring high strength.

#### Strongpipe® V-Wrap™ Carbon Fiber

#### System for Pipeline Strengthening

Strongpipe® V-Wrap™ Carbon Fiber structural а strengthening system for the restoration renewal of concreate, metallic and polymer-based pipelines. The system has been tested and meets or exceeds durability requirements (ICC-ES) necessary to provide the desired service life for pipeline structures.





#### Strongpipe® Glass Shield

Glass shield MC710-H is widely applied in industry and hos gained popularity because it combines ease of use and high productivity with good mechanical properties. Being one of the best consumables in this group, it reflects typical advantages of metal cored wires. Metal cored wire, such as Glass shield MC710-H, is a very good solution for thin sheet material, and is also one of the best solutions for semi automatic welding of multi poss welds and thicker plates. Metal cored wire, however, is typically not considered a low-fume generating welding process. The FER for the MCAW (M21) process is typically lower than the FER of the GMAW (CO<sub>a</sub>) process and higher than the FER of the GMAW (Pulse) process.

#### **Epoxy Grouted Structural Repair Clamps**

The Epoxy Sleeve Repair System is comprised of two-half steel sleeves. The sleeves cover a calculated area of the pipe that contains damage and is oversized in relation to the pipeline's outer diameter, thus providing an annulus between the steel sleeve and the pipeline. The steel sleeve halves and segments are then bolted together.

Any pipe subjected to external metal loss internal or leak requires repair and maintenance. The Epoxy Sleeve Repair System was designed to repair and strengthen the risers or pipelines with:

- External damage due to metal loss
- Internal damage due to metal loss
- External damage due to dent/impact
- Leaking pipeline

#### **INDUSTRIES**

Renewable Energy Industrial



Oil & Gas



Construction

**Onshore** 



Offshore



**Power Plant** 















Marine







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contact@allter.com







#### **Description**

Strongpipe® - Spiral Shield is a unique protection, repair and permanent reinforcement system that effectively mitigates corrosion problems at the splash-zone area and can structurally reinforce/ repair risers, conductors, caissons and jetty piles to its original design strength. Developed by experts with proven experience in the industry, It addresses unique repair challenges presented the splash-zone area.

Our system of consists of a reinforced Polyethylene shell that is mechanically wound around the pipe, forming a solid structure into which specialized grout is injected.

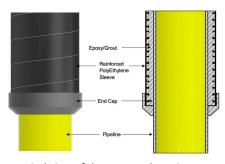
The system can be installed without divers, up to a depth of 10 metres below sea level. Typical installations are for vertical elements, however horizontal applications are possible. The finished installation strengthens the structure and isolates it from the external environment.

#### **Components**

- Polyethylene Strip (Profile 100 and 140).
- High Strength Epoxy Grout or Cementitious Grout (Subject to application).
- Hoop Reinforcement (Where strengthening is required).

#### **Key Features**

- Cost-effective, innovative surface preparation technology.
- Cleans to required standards prior to installation.
- Fast, efficient installation.
- Lightweight & highly portable.
- May be utilized against leaks or holes.



A typical view of the proposed repair system

#### **Technical Specification**

Repair Size	Dia. from 6 inch to 40 inch
Repair Length	up to 10 meters (subject to design calculation and location of defect)
Repair Thickness	25 - 40 mm
Tensile Strength (ASTM D3039)	980 Mpa
Hardness (ASTM D2240)	> 80 MPa
Glass Transition Temp (ISO 11357-2)	> 70 - 80 C
Lap Shear Strength to Steel (ASTM D3165-7)	9.3 MPA
Pull-Off Strength to Steel (ASTM D4541)	5.9 MPA



# **Diver-less Marine Growth Removal System (MGRS)**

For Marine and Offshore Structures

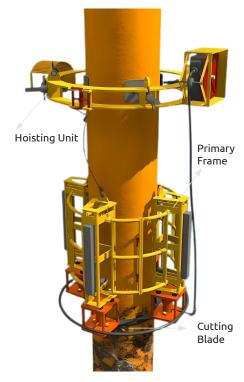
# What is Dutchwerk™ Marine Growth Removal System?

Dutchwerk<sup>™</sup> - Marine Growth Removal System is a solution for the removal of hard Fouling from Offshore and Marine Structure, Tubular Elements (pipelines and structures) using pulsation and throbbing techniques.

In marine environments, marine growth like barnacles, and fouling can harm tubular elements, posing maintenance challenges as it complicates visual inspections by increasing loads through roughening surfaces and enlarging tubular dimensions.

#### **Key Features**

- Diver-less and Minimal personnel required during installation and operation
- Cost effective and safe solution.
- Eliminate requirements for ROV or support vessels
- Minimal personnel required during installation and operation.
- Can be installed during on-line operations.
- Simple maneuvering and controlled from the top of respective structure.
- Circumferentially adjustable and applied onto various shapes and sizes of the tubular elements.
- Functional for an unlimited, un-obstructed length, above and below the sea level.



A typical view of the proposed repair system



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# FlexiGuide™

**Conductor Guide Stabilization System** 

#### Stabilize | Centralize | Protect

Flexiguide<sup>™</sup> is a conductor guide stabilization system, specifically engineered to stabilize, centralize and protect the conductor and the conductor guide form corrosion, fretting and other wave-induced damage. The system is designed to suit topside offshore application and fit for purpose.

The system consists of a special formulated elastomeric compound flexible polyurethene casting material (FPCM), top cap and may be installed with the optional reinforced panels (when allowance of vertical movement of the conductor is required).

The system, if installed with optional reinforced panels, will permit any vertical movement of the conductor without damaging the conductor.





# **Marine fouling Removal Tool**

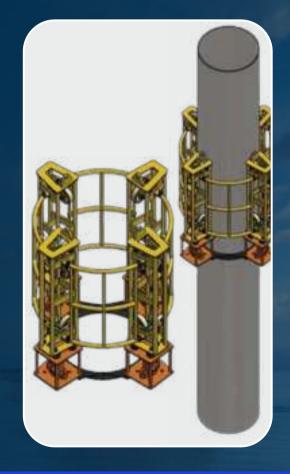
The Marine fouling Removal Tool is particularly designed for the removal of Marine Growth on Conductors and Risers.

Marine Growth on Offshore Structures has an effect on:

- The Hydrodynamics of the member in terms of diameter and roughness, Propagation of Corrosion, Inspect ability, Overall and increase of mass.
- With the tool we have designed a prupose built tool which can be used without the need for divers to remove marine growth in splash zones and upto 3 meters below mean sea level









WE OFFER ENGINEERED SOLUTIONS TO

PROTECT DEFEND & PRESERVE









# Corrosion Prevention. **Inspection and Monitoring Services**

Dutchwerk Middle East is a global leader in corrosion solutions for oil equipment. We offer tailored services for prevention, inspection, and monitoring. We assure to safeguard your assets with expertise and excellence to ensure long-lasting oil equipment integrity.

Our comprehensive range of services encompasses:

- Asset Integrity Management
- Cathodic Protection Services
- Internal Corrosion Monitoring services
- Oil Field Microbiology & Corrosion / Erosion Data Analysis
- Onshore & Offshore Diving, Inspection & Survey Services
- Onshore, Offshore, Subsea Oil & Gas Field Maintenance Services

#### **Cathodic Protection**

Cathodic protection systems (CP) are designed to prevent corrosion from damaging the assets. Cathodic Protection is an electrochemical method of corrosion prevention which can be applied to metals exposed to conductive environments. We provide a wide range of cathodic protection services and solutions that help prevent and control corrosion as a part of asset integrity management.

- Galvanic/Sacrificial Anode Cathodic Protection System
- Impressed Current Cathodic Protection System

#### **Our Services includes**

Auditing | Monitoring | Maintenance | Material

- Design and Engineering
- **CP Installation &Testing Procedures**
- Commissioning & Execution methodology
- Cathodic Protection System Audit
- Rehabilitation of existing CP system
- Existing CP System Survey and Investigation

#### **Application**

Pipelines | Tank Farms | Well Casing | Offshore Platforms | Steel Structures | Ship Hull | Jetty | Piles | Harbours etc.



#### **Corrosion Survey**



We have a team of Certified Corrosion Specialists who are well experienced in different types of Survey Techniques and Tests involved in Cathodic Protection Performance Analysis and Coating Evaluation Tests, such as:

Drop Cell Surveys Services

- AC/DC Interference Survey & Mitigations
- Soil Resistivity Survey and Analysis
- Close Interval Potential Survey (CIPL)
- Direct Current Voltage Gradient (DCVG)
- Internal Corrosion Direct Assessment (ICDA)
- External Corrosion Direct Assessment (ECDA)
- Offshore Pipelines Corrosion Surveys









#### **Internal Corrosion Monitoring**

Internal corrosion is a gradual process that causes the surface of a metal substrate to break down or degenerate. This eventually leads to material loss in the form of pinhole leakage, cracks, and splitting.

General corrosion, pitting corrosion, microbiological corrosion, and fluid corrosively are the four types of material deterioration that combine to cause internal corrosion. The energy released when a metal converts to corrosion products is the driving force for its corrosion. Corrosion cannot be stopped; it can only be slowed down.

We provide the following range of services and solutions that help prevent and control internal corrosion.

- Hot Tapping Services
- Corrosion Coupon Installation and Retrieval
- Laboratory Analysis of Coupons and Testing

#### **Corrosion Inhibitors**

Our VCI System is used in protecting tank bottoms against corrosion.

VCI For Chime Feed | VCI Mastic Sealant | VCI For Bottom Plate Injection | VCI For Underside Injection







## MICR On field QPCR Measurements

DIY – **Do it yourself** DNA Based testing for Microbial influenced Corrosion, biofouling, fuel quality.

- Detection of Bacteria/Archaea < 2 hours without a lab.
- No cooling required. Samples can be stored
   1 week at ambient temperature.
- Easy to operate.





#### Mobile qPCR The benefits:

- Fast results (less than 1,5 hr)
- Cheap & simple to operate.
- No difficult sample logistics needed.
- No Refrigeration of reagents needed

#### Targets Available:

Sulphate Reducing organism | Sulphur Oxidizing | Iron Reducing | Iron oxidizing | General bacteria | General archaea | Methanogens | MicH







