



CORROSIVE CHEMICALS

## ANTICORROSION EQUIPMENT

A large industrial facility, likely a refinery or chemical plant, is shown at night. The scene is illuminated by various lights, creating a mix of blue, green, and yellow tones. The facility consists of numerous tall distillation columns, complex piping networks, and several large storage tanks. Staircases and walkways are visible, and the overall atmosphere is one of a busy, active industrial site.

Heat exchangers  
Reactors, columns & vessels  
Piping  
Expansion joints / bellows  
Rupture discs  
After-sales service  
Process technologies



## WHY MERSEN?

- Materials expertise (Graphite, SiC, Tantalum, PTFE)
- Large portfolio of corrosion resistant engineered products
- Process Technologies know-how
- 5 major production sites
- 10 Local quick service centers, situated close to our customers
- 120 years experience

**Mersen Anticorrosion Equipment** is internationally recognized for its expertise in the design and manufacture of heat exchangers, vessels, reactors, columns, and piping. Its skills in materials resistant to corrosion such as graphite, silicon carbide, tantalum, zirconium, PTFE ensure to propose the best solution coping with the process conditions.

Mersen has also an in-depth expertise in the process technologies covering a flexible offer up to skid-mounted turn-key delivery.

## OUR KEY MARKETS

### CORROSIVE CHEMICALS

- + Chlor alkali
- + Fertilizers (phosphoric acid)
- + Bromine
- + Fine chemicals
- + Agrochemicals
- + Pigments
- + Performance plastics
- + Silicones
- + Water treatment

### ENERGY

- + Renewable : photovoltaic, biofuel, geothermal
- + Nuclear power
- + Conventional thermal power

### PROCESS INDUSTRIES

- + Metallurgy
- + Pulp & Paper
- + Hydrometallurgy

# GLOBAL EQUIPMENT AND TECHNOLOGIES PROVIDER FOR CORROSIVE ENVIRONMENTS

When process conditions combine both corrosion and temperature, material selection becomes a key criteria of the engineered product. For more than 120 years, Mersen has developed advanced materials and process equipment expertise, to provide customized solutions capable of handling your severe processes.

## ADVANCED MATERIALS



### GRAPHILOR®, THE SUPERIOR MECHANICAL AND CORROSION RESISTANT GRAPHITE

Graphilor®'s use of ultra-fine grain isostatic graphite, is unique in the Chemical markets.

- Highest mechanical resistance for graphite (up to 36 MPa)
- High temperature resistance (up to 400°C) with Mersen's exclusive carbon impregnation (XC)
- Impregnation know-how : 3 different impregnations types (Phenolic Resin XBS, Carbon XC and PTFE XTH) to comply with your process corrosion constraints



### SILICON CARBIDE HEAT EXCHANGERS, HAVING "UNIVERSAL CORROSION RESISTANCE" SPECIFICALLY SUITABLE FOR HIGHLY AGGRESSIVE CHEMICAL COMPOUNDS

- Mersen Boostec® has mastered internally the key steps from the SiC powder through to the final heat exchanger
- SiC solves your problems of very high temperature, abrasion and erosion
- Allows high pressure resistance up to 40 bar



### TANTALUM, THE MOST SUITABLE REACTIVE METAL FOR STRONG ACIDS

- Tantalum engineered products are the preferred corrosion resistant solution, to handle highly corrosive acids up to 250 Deg. C

### CL-CLAD® TECHNOLOGY IS MERSEN'S PATENTED ALTERNATIVE SOLUTION TO EXISTING CLADDING TECHNOLOGIES

- A cost-effective tantalum cladding technology



### ARMYLOR® PTFE LINED FITTINGS, PIPING AND COLUMNS, WITH SPECIAL EXPERTISE IN LARGE DIAMETERS

- Seamless construction : diameter up to DN1600
- Welded construction : any diameter
- Available materials : PTFE, TFM or PFA

# ANTICORROSION EQUIPMENT

HEAT EXCHANGERS

REACTOR, VESSELS AND COLUMNS

PIPING BELLOWS ACCESSORIES

GRAPHITE



BLOCKS, CUBIC AND TUBES

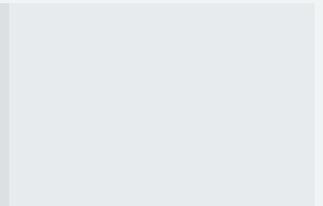
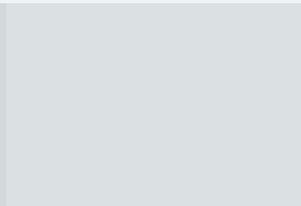


RUPTURE DISCS

SILICON CARBIDE



BLOCKS AND TUBES



TANTALUM



TUBES AND BAYONETS



TANTALUM SMALL PARTS

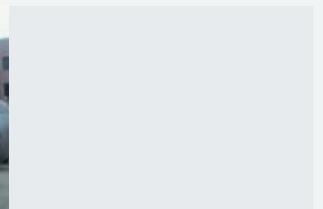
ZIRCONIUM



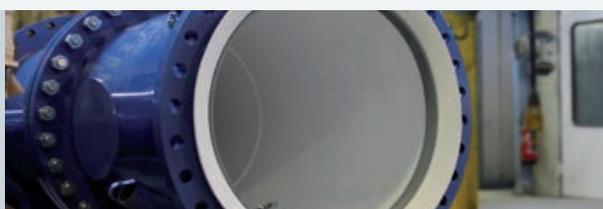
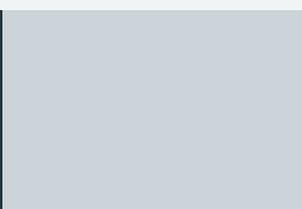
TITANIUM



NICKEL ALLOYS



PTFE



PIPING AND BELLOWS

AFTER-SALES SERVICE

# PROCESS TECHNOLOGIES

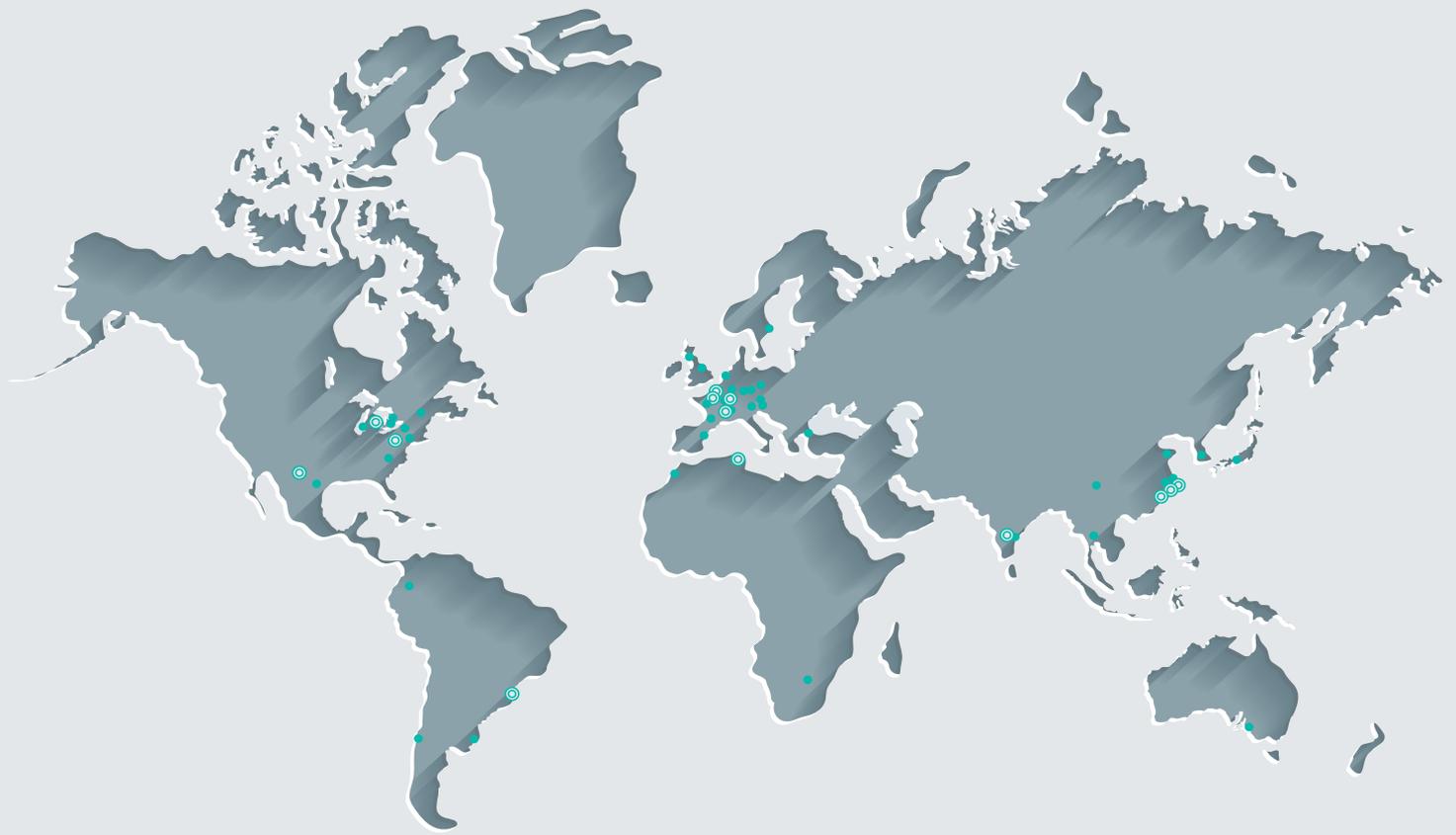
With our innovative range of Process Technologies combining with corrosion resistant materials, we can provide you an engineered solution to transform your corrosive feed stock.

- Worldwide leading position in HCl processes (concentration, distillation, absorption, synthesis)
- From process know-how to skid-mounted turn-key delivery



PROCESS FUNCTION	H <sub>2</sub> SO <sub>4</sub>	HCl	Cl <sub>2</sub>	HBr	Br <sub>2</sub>	P <sub>2</sub> O <sub>5</sub>	Brine	Flue Gas	FeCl <sub>3</sub>
Absorption		✓		✓				✓	
Burner		✓	✓	✓	✓				
Concentration	✓	✓		✓		✓			✓
Dilution	✓	✓		✓		✓			
Gas Drying		✓	✓	✓					
Distillation/ Desorption/Stripping		✓	✓	✓					
Gas cleaning / Vent treatment		✓	✓	✓	✓			✓	
Inorganic removal	✓	✓				✓	✓		✓
Organic removal	✓	✓		✓		✓	✓		✓
Production		✓		✓	✓				✓
Temp. Control	✓	✓		✓		✓		✓	
Vaporizer		✓	✓	✓	✓				
Vacuum system	✓	✓	✓	✓		✓	✓		✓

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