Erosion, Corrosion, Cavitation, Wear and Chemical Attack Problems on:

pipes • pumps • impellers • valves • tanks • condensers • heat exchangers • tube sheets • water boxes • chillers • absorbers • shafts • hydraulic rams • FGD systems • scrubbers • centrifuges • cooling towers • containment dikes • troughs • spillways • propellers • kort nozzles • bow thrusters • rudders • struts • hull fairing

A recognized world leader in developing advanced polymer technologies, ENECON® Corporation has pioneered unique coating systems for industries including the U.S. Navy, the petrochemical industry and electrical utilities. These extraordinary polymer systems are the result of years of research and development work that began with the first epoxy skid-resistant deck coatings approved by the U.S. Navy and the first products approved to the Department of Defense Specification C-24176 for hull fairing / smoothing.

The senior management of ENECON® Corporation have many years of combined practical experience in troubleshooting industrial fluid flow problems. They have worked closely in the past with such diverse and prestigious organizations as the Panama Canal, Army Corps of Engineers, United States Navy, nuclear and fossil fuel power stations, pulp and paper mills, petrochemical plants, mining and quarrying operations, food processing facilities, etc.

ENECON® is strategically positioned to provide industry, utilities and institutions with the finest repair and protection products and services available. ENECON®, therefore, is the name to call when fluid flow problems are costing you time, money and aggravation.

International Testing & Approvals *
U.S. Military Specification DOD-C-24176 / QPL-24176
Nuclear Irradiation, Decontamination & DBA Testing
Canadian Electrical Association No. 511G530 -
Reduction of Cavitation Erosion Damage / 87 - Rated “Best”
Coating Services Group (CSG) Torus Liner Performance (Nuclear) Evaluation
CeramAlloy CL+ (No. 3168) - Highest Rating
Other Tests/Approvals / Commendations:
U.S. Coast Guard, U.S. Navy, ABS, U.S.D.A., NSF
* Specific details / product information available upon request.
Wherever erosion, corrosion, wear or chemical attack create problems in fluid flow systems, **METALCLAD®** polymer composites provide the ultimate solution.

ENECON® researchers have combined the latest and safest polymer technology with unrivaled fluid flow systems engineering know-how to produce the most advanced polymer systems available for rebuilding, resurfacing and protecting virtually all fluid flow components as well as plant structures.

**METALCLAD®** systems exhibit outstanding compressive and flexural strengths as well as phenomenal adhesion. Their ability to cure at low temperatures, their superb chemical resistance and their non-shrink properties make them the obvious choice for the maintenance engineering professional.

**METALCLAD®** repair and protection systems offer incredible savings over conventional repair or replacement procedures.

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**SpeedAlloy™ & SpeedAlloy™ QS**

The "leak stopper!"

Fast, easy, non-slump; can be used to repair just about any leak in minutes: pipes, tanks, sumps, casings, radiators, fuel tanks, etc. Bonds to virtually any rigid surface!

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**CeramAlloy™ CBX**

Repair & protect all types of equipment subject to very aggressive abrasion. Engineered to repair deeply damaged components.

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**CeramAlloy™ CP+AC**

Outstanding erosion resistance. Trowelable system for repairing and rebuilding metal damaged by erosion and corrosion: pumps, valves, heat exchangers, tube sheets, water boxes, etc.

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**CeramAlloy™ CL+AC**

The ultimate resurfacing system for protecting fluid flow equipment. Brushable, self-leveling, castable: for pumps, valves, water boxes, tube sheets, tanks, propellers, kort nozzles, bow thrusters, rudders, struts, etc.

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METALCLAD® DuraWrap™ polymer / carbon fiber reinforced composite makes repairing and rebuilding aging, often severely deteriorated piping, tanks and other fluid flow equipment possible.

The ENECON® DuraWrap™ composite, a unique marriage of ENECON®’s high performance polymers and cutting-edge carbon fiber technology, was specifically created to repair, rebuild, reinforce and even restore the integrity of such fluid flow systems - thereby greatly extending their service life and eliminating the need for expensive replacement.

DuraWrap™ can be applied to the interior and / or exterior of piping and equipment to both seal and strengthen these components. When applied to the interior walls of underground or otherwise inaccessible piping, DuraWrap™ can effectively repair and restore piping integrity without expensive excavation and replacement.

The outstanding performance of the ENECON METALCLAD® DuraWrap™ system allows today’s maintenance professional to extend the service life of yesterday’s equipment and structures.

### DuraWrap™ System Exhibits Extraordinary Properties*

<table>
<thead>
<tr>
<th>Property</th>
<th>Standard</th>
<th>Value</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tensile Strength</td>
<td>ASTM D-3039</td>
<td>123,600 psi</td>
<td>8,650 kg/cm²</td>
</tr>
<tr>
<td>Tensile Modulus</td>
<td>ASTM D-3039</td>
<td>8,450,000 psi</td>
<td>591,500 kg/cm²</td>
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<tr>
<td>Elongation</td>
<td>ASTM D-3039</td>
<td>1.38%</td>
<td>1.38%</td>
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<tr>
<td>Flexural Strength</td>
<td>ASTM D-790</td>
<td>97,400 psi</td>
<td>6,820 kg/cm²</td>
</tr>
<tr>
<td>Flexural Modulus</td>
<td>ASTM D-790</td>
<td>7,950,000 psi</td>
<td>556,550 kg/cm²</td>
</tr>
<tr>
<td>Adhesion to steel</td>
<td>ASTM D-1002</td>
<td>&gt; 3,500 psi</td>
<td>&gt;245 kg/cm²</td>
</tr>
<tr>
<td>Adhesion to concrete</td>
<td>ASTM D-4541</td>
<td>greater than the cohesive strength of the concrete</td>
<td></td>
</tr>
</tbody>
</table>

*Based on a two-ply composite using 12K x 3K Carbon Fiber.
**FLEXICLAD®...**
extraordinary, super resilient polymer systems specifically developed for cavitation problems

Whether it’s pump impellers or ships’ propellers, cavitation damage to metal is a never ending problem — and one that presented very few repair options to the maintenance engineer in the past. But now, FLEXICLAD® DuraTough™ systems from ENECON® provide exceptional protection to equipment prone to cavitation attack and subsequent damage. Super tough, super resilient and cost effective.

FLEXICLAD® DuraTough™ systems provide the sensible alternative to some of the most severe erosion / corrosion problems in industry today.

**Superior strength, durability and adhesion with flexibility, abrasion resistance and elongation.**

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**DuraTough™ DP**

FLEXICLAD® DuraTough™ DP is a two component, 100% solids elasto-ceramic polymer composite specifically formulated to rebuild equipment prone to cavitation attack and subsequent damage.

DuraTough™ DP combines the superior strength, durability and adhesion of an epoxy with the exceptional flexibility, abrasion resistance and shock-absorbency of an elastomeric urethane.

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**DuraTough™ DL**

FLEXICLAD® DuraTough™ DL is a two component, 100% solids, fluid consistency elasto-ceramic polymer composite specifically formulated to surface and protect equipment subject to cavitation accelerated erosion / corrosion.

DuraTough™ DL is ideal for coating, re-surfacing and protecting equipment prone to cavitation attack as well as creating and repairing flexible seals, gaskets, seats, etc.
Resistant to a wide variety of organic and inorganic acids, alcohols, alkalis, esters, ethers, hydrocarbons, halogenated hydrocarbons, ketones, oils, salts, etc., CHEMCLAD® systems from ENECON® are the finest chemical resistant claddings available.

They are revolutionary polymer composites that can be easily and safely applied by brush, roller, squeegee or airless spray - even in confined spaces.

For Metal...
pipes, tanks, pumps, valves, fume hoods, drains, heat exchangers, etc.

For Concrete...
containment dikes, troughs, spillways, process areas, etc.

CHEMCLAD® SC

CHEMCLAD® SC - a two component, 100% solids, polymer system that creates an outstanding corrosion and chemical resistant protective coating on all types of equipment and structures.

CHEMCLAD® XC

CHEMCLAD® XC is a two component, 100% solids, ultra high performance, chemical resistant coating that provides unrivaled protection in some of the toughest chemical environments.

CHEMCLAD® XC is resistant to a broad range of organic and inorganic acids, alkalis, solvents, salts, hydrocarbons, etc. It is easily applied by brush or roller and can be used to protect all types of metal and cementitious surfaces.

CHEMCLAD® XC is simple to use. It mixes easily and can be applied by brush, roller or airless spray. It is available in different colors to simplify overcoating. This self-leveling, high gloss coating yields a surface that's not only functional, but also aesthetically pleasing.
The ENCRETE® family of products covers a wide range of repair and protection products specifically designed to tackle some of the toughest concrete problems. These include wear, impact and abrasion problems as well as hydrostatic pressure situations.

ENCRETE® materials exhibit extraordinary adhesion to existing concrete as well as most other masonry substrates including brick, tile, stone, terrazzo, etc.

Whether the problem is on floors, walls, secondary containment areas, leaking basements, elevator pits or any other concrete structure, there is an ENCRETE® material that can help solve your toughest repair and protection issues.

**DuraQuartz®**

A three-component, 100% solids, concrete repair compound specifically formulated and precisely engineered to provide solutions to the most difficult concrete repair and protection problems.

**DuraFill™**

A two-component, 100% solids, polymer system specifically designed for broadcast flooring applications and for filling deeper holes and cavities in concrete when combined with locally sourced aggregates.

**ENCRETE® WP**

A cementitious, one component, extremely fast-setting product with the ability to stop running water through masonry structures. It is designed to be mixed with water and to set within one minute.

**ENCRETE® WS**

A protective and waterproofing product for masonry structures. It employs a multiple curing reaction process to impart its exceptional properties for waterproofing, chemical resistance and adhesion.

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ENESEAL® HR

ENESEAL® HR is a single component, water based, liquid ceramic-filled membrane which cures to a durable, seamless, flexible ‘skin’ that refracts and reflects heat while providing a moisture resistant barrier to virtually any type of surface.

ENESEAL® CR

ENESEAL® CR is a ‘surface tolerant’ coating system that does not require abrasive blasting. It exhibits excellent adhesion to all types of ferrous metal as well as galvanized surfaces. Mechanical wire brushing, grinding or high pressure water blasting is typically acceptable to achieve good adhesion.

ENESEAL® MP

ENESEAL® MP is a single component, water-based, ultra-low viscosity weather barrier which dries to a completely invisible, water repellant masonry sealer. It provides extraordinary weather protection to virtually all types of concrete, masonry and mineral surfaces.

ENESEAL® MP forms a hydrophobic barrier inside masonry pores that repels water and water-borne salts. This significantly reduces the damaging effects of moisture penetration into concrete and masonry, such as surface scaling, freeze-thaw cracking and corrosion of reinforcing steel.
Easy to apply ENECLAD® seals and strengthens concrete floors. These high performance polymer composites are extremely abrasion resistant, making them ideal for heavy traffic areas in warehouses, hangars, loading docks, etc. They jacket the surface in a rugged coating that resists forklift traffic, oil, gasoline and most industrial chemicals.

ENECLAD® systems are solvent-free, odor-free, 100% solids, multi-component products specifically developed to solve the toughest industrial floor protection problems. They are easily applied by brush, roller or squeegee to a super high-gloss finish. Non-skid aggregates can be incorporated into the ENECLAD® systems to provide a highly durable, slip-resistant surface.

ENECLAD® systems can also be used to repair and level damaged concrete surfaces, making them suitable for our extended line of ENECLAD® high-gloss topcoats.

**ENECLAD® FPS**

This extraordinary high performance polymer composite is extremely abrasion resistant, making it ideal for heavy traffic areas in warehouses, hangars, loading docks, etc.

**ENECLAD® CFS**

A two-component, 100% solids, clear concrete sealer that is virtually odor-free and has no V.O.C.’s. It has been specifically formulated to provide outstanding sealing and dust-proofing for all types of cement and mineral substrates.

**ENECLAD® SuperBond™**

A revolutionary structural adhesive that provides unrivaled performance when bonding a new concrete overlay to an existing, cured concrete surface or when bonding synthetic / plastic mortars to virtually any rigid surface.

**ENECLAD® SPS**

A three-component, 100% solids, concrete primer / sealer that is specifically formulated to also smooth-out rough concrete surfaces in order to improve the appearance of ENECON® topcoats such as ENECLAD® FPS or CHEMCLAD®.

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create the finest slip-resistant surfaces for the most critical environments

**DuraGrip**

SAFETYCLAD® DuraGrip® systems are designed to provide some of the finest slip-resistant surfaces for the most demanding applications.

Whether on metal, concrete, tile, marble, slate or terrazzo, our DuraGrip® systems can be tailor-made to provide the specific level of slip resistance required - from very fine to very coarse.

Our DuraGrip® systems utilize the finest polymer composite materials available from ENECON® to bond a variety of hard wearing aggregates to suit your specific requirements. You can create just about any pattern or shape that the situation demands.

So whether it’s steps, walkways, tank tops, ramps, shower areas, or entire floor areas, SAFETYCLAD® DuraGrip® systems can provide the best slip-resistant surface possible.

Steps & landings

Ramps & walkways

Shower areas & kitchens

Create the specific slip-resistant pattern you desire.

Attractive yet highly functional!
ENECON® Can Provide ‘Industrial Strength Solutions’ for All Your Repair & Maintenance Needs™

Let ENECON® show you how our high performance polymer composites and applications know-how can save you time, money and aggravation. We’re doing it for thousands of demanding clients in over 60 countries around the world. We can provide you with commercially proven and cost effective repair solutions for your machinery, equipment and plant structures damaged by erosion, corrosion, cavitation, wear, impact, abrasion, chemicals, hydrostatic pressure, etc.

- Pumps
- Valves
- Shafts
- Heat Exchangers
- Piping
- Tanks
- Cooling Towers
- Chemical Protection
- Concrete Repairs
- Floor Protection

Contact us today for a free technical seminar at your facility. We will be happy to share ideas and provide some practical insights into the latest advances in high-tech polymer repair and maintenance technology.

The advice is free...the results may be priceless!
Professional & responsive field engineering support in over sixty countries on six continents.