Trusted solutions
for the oil and gas industry
Superior corrosion protection for the oil and gas industry

One way we help our customers maximise return on their investment is with Avantguard®, our innovative, award winning technology that is proven to give superior corrosion protection.

This new generation of activated zinc primers significantly reduces the effects of corrosion, offering advanced protection and increased durability for all-round performance. Unlike standard zinc epoxies, Avantguard is effective using barrier, galvanic and inhibition protection.

Avantguard redefines productivity by being fast drying with best-in-class overcoating intervals. Easy to apply, even in high temperatures and humidity, there is less rework due to cracking, as the coating is more tolerant, even with high DFTs.

Avantguard is proven to deliver reliable durability, protecting your essential assets against the world’s rapidly changing weather, extreme temperatures and harsh salt water conditions for longer.

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1. Avantguard won the prestigious 2014 European Frost & Sullivan Award for New Product Innovation and NACE’s MP Corrosion Innovation of the Year Award 2015.
2. This superiority has been independently proven by third party laboratory neutral salt spray tests according to ISO 9227. In this test, steel protected with Avantguard produced a lower evolution of rust creep, assessed according to ISO 12944-6, when tested up to 3x the duration for C5-high environments.
3. Avantguard’s overcoating interval is a minimum of 33% faster than competitor zinc rich epoxies when comparing product data sheets.
The oil and gas industry faces many challenges to protect assets in some of the world’s harshest environments.

At Hempel we have over 100 years experience in Marine and Protective coatings and understand these complex needs. We offer tailored anti-corrosion solutions that provide reliable, long-term protection for every aspect of your business, whether upstream or downstream, offshore or onshore, new build or maintenance.

Our extensive product range offers advanced protection for all primary asset elements within the oil and gas industry. From structural steel in new build construction to internal operating and process equipment, and extending beyond that to ongoing maintenance solutions - we protect your assets for a lifetime.

Hempel delivers trusted solutions for the oil and gas industry.

**Proven performance**

Our coating systems use proven technology to give advanced protection for all your assets, and are extensively tested to current standards including ISO 12944 and NORSOK M-501.

**Global service**

We give you the right products on site, on time, every time, with the support of our 28 manufacturing plants and over 150 stock points worldwide.

**Professional support**

Our multinational coordination teams and over 600 FROSIO/NACE certified coating advisors are on hand to ensure that your coating project runs smoothly from start to finish and beyond.

**Innovative solutions**

With 15 global research and development facilities, we work locally with you to provide the right solution for your project, ensuring environmental responsibilities are met.
Offshore
From subsea equipment located on the ocean floor to FPSO's floating on the surface, we protect you from top to bottom.

Exploration
We have vast knowledge and experience in the drilling market, along with an extensive track record with some of the world's major drillers. So, whether it’s the simplest jackup or an ultra-deep water drill ship, we have the necessary systems to protect your asset.

Production
Increasingly our world-wide customers turn to us for our protective coatings. We not only offer systems for structural steel and topside equipment but also for water ballast, cargo oil tanks and process vessels.

Onshore
In a changing market, we are changing too, with our unconventional approach to our customer’s onshore challenges.

Oilfield equipment
Not only do our oilfield customer’s need to keep their equipment operational but appearance is everything. We offer a range of solutions to help our customers maintain both their equipment and their image.

Storage and transportation
Helping to keep our customers transportation infrastructure intact and in service is an essential part of our day to day business. We offer reliable, durable corrosion protection with our range of tank and pipeline coatings.

Our unique experience offshore

<table>
<thead>
<tr>
<th>Product</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avantguard activated zinc primers</td>
<td>Our offshore paint schemes cure to a resilient, high quality finish, assuring long service life and delivering a wide range of benefits:</td>
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<tr>
<td></td>
<td>• helps reduce total cost of painting over the life of an asset</td>
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<tr>
<td>Quattro XO range of ballast tank coatings</td>
<td>• helps reduce the need for expensive on station repainting</td>
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<tr>
<td>Hempadur Multi-strength splash zone coatings</td>
<td>• helps minimise dangerous overboard painting activities resulting from premature coating failure</td>
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<tr>
<td>Hempaguard and Hempasil ranges of fouling control solutions</td>
<td>Helps reduce hull cleaning costs and aid underwater inspections</td>
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Our unique experience onshore

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<th>Product</th>
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<tr>
<td>Avantguard activated zinc primers</td>
<td>Helps reduce application times, ensure longer asset life-cycles and reduce maintenance requirements</td>
</tr>
<tr>
<td>Hempaline Defend durable internal linings</td>
<td>Help customers manage the integrity of their process equipment and storage capacity more effectively</td>
</tr>
<tr>
<td>Hempaxane polysiloxane topcoats</td>
<td>Help reduce repainting by increased durability, gloss and colour retention</td>
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</table>
We know the downstream sector and understand the need for anti-corrosion coatings that are fast to apply, durable, cost effective and provide advanced protection to help keep operations running smoothly.

We recognise that the requirement to deliver projects on time and to budget has never been stronger. That’s why we continually develop higher productivity systems that can be applied quicker and across a wider range of application conditions.

With painting often occurring late in a project’s cycle, the potential to cause disruption and impact on schedule must be continually monitored. Our on site support teams co-ordinate global and local services to ensure the smooth running of your coatings project from start to finish and beyond.

**Our unique experience downstream**

<table>
<thead>
<tr>
<th>Product</th>
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<tbody>
<tr>
<td>Hempaprime Multi 500</td>
<td>Increased productivity without compromising on performance</td>
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<tr>
<td>fast-drying primer intermediate</td>
<td></td>
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<tr>
<td>Versilene CUI 56990</td>
<td>Resistance to CUI, heat and thermal cycling allows specifiers to simplify the number of systems required, reducing the likelihood of error</td>
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<tr>
<td>high temperature, thick film silicone</td>
<td></td>
</tr>
<tr>
<td>Hempaline Defend chemically resistant internal linings</td>
<td>Single supplier for all your protective coatings no matter how aggressive the contents</td>
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Since 1915 Hempel has been a world-leading coatings specialist, providing protection and inspiration to the world around us. Today we have over 5,500 people in 80 countries delivering trusted solutions in the protective, decorative, marine, container, industrial and yacht markets. This includes many recognised brands like Crown Paints, Schaepman and Jones-Blair.

Hempel is proudly owned by the Hempel Foundation, which supports cultural, humanitarian and scientific causes across the world.