

# Protective Services

Your business, our expertise –  
a performance partnership



## Why use Hempel Services?

### Increase return on investment

- Reduce asset downtime
- Reduce maintenance costs and frequency
- Extend asset lifetime

### Ensure excellent coating application

- Reduce application time and costs
- Avoid delays and penalty payments
- Increase coating lifetime

### Save time and resources

- Ensure projects stay on time and within budget
- Increase application speed and efficiency
- Free up resources to focus on your core business

## Protecting your assets has never mattered more

In an increasingly competitive world, it's more important than ever to maximise the effectiveness and durability of every protective coating – while also reducing the costs associated with coating processes.

From wind turbines and oil rigs to bridges and heavy-duty equipment, our coatings protect your assets from corrosion, damage and wear. To ensure maximum performance, coatings need to be applied correctly. That's what you get with Hempel Services.

From initial planning and specification through to application and final curing, our expert coating advisors work with all trades to ensure coatings are applied according to specification. This ensures you enjoy extended asset uptime and optimised maintenance intervals – allowing your business operations to continue with minimum interruption.

We understand that downtime and costs during repair work impact your profits. That's why we work with the project team to ensure coating projects are done right – every time – with minimum costs, waste and downtime.

Whether you're working with newbuild or with maintenance projects, we use our knowledge and field expertise to diagnose problems and optimise process flows, to reduce your operational costs and increase your production speed.

# Efficiency, powered by Hempel Services

## Five reasons to choose Hempel Services

Our expert coating advisors ensure your maintenance and newbuild projects run efficiently and that your coatings are applied correctly – so you can realise the full benefits of our coating systems.



### An optimised application process

Whether you're working on a production line or maintaining an asset, we work with you to optimise every part of the application process. From advice and troubleshooting to continuous support, we help identify cost savings and efficiency gains to maximise speed and productivity, reduce waste and eliminate rework.

- Control preparation, application and curing costs
- Fewer bottlenecks
- Less waste and rework



### Reduce asset downtime

Whatever assets you operate, downtime can have a negative impact on revenues. We can help streamline your maintenance work to ensure your assets remain in operation for as long as possible. We carefully plan coating tasks and work with applicators to improve quality and efficiency – so you benefit from higher asset uptime.

- Reduced surface preparation time
- More efficient application
- No unexpected delays



### Lower operational costs

From labour and handling to potential rework and penalties for late delivery, coating

application can significantly increase your operational costs. By assessing all costs associated with coating application – from materials and equipment through to supply and storage – we help identify cost-saving opportunities to give you greater control over your working capital and keep your operational costs down.

- Increased efficiency and effectiveness
- Control working capital during fabrication
- Lower handling, application, curing, labour and equipment costs



### Increase your revenue

Productivity has a direct impact on profitability. We support you throughout your coatings

project to increase efficiency, eliminate bottlenecks and boost application speed. As a result, you benefit from additional in-service days – and can focus on running your business with minimum disruption.

- Increased productivity
- Fewer bottlenecks
- Greater production speed



### Reduce long-term maintenance costs

For industrial assets, the cost of through-life maintenance

often exceeds the purchase price. By ensuring correct coating application during newbuild and subsequent maintenance work, we help to reduce the risk of mechanical damage or premature coating failure – to minimise long-term maintenance requirements and improve your total cost of ownership.

- Longer coating lifetime
- Longer maintenance intervals
- Longer asset lifetime

# Hempel Protective Services

## Standard Coating Advisory

We provide support during the main project phases to help with correct application according to specification.

## Premium Coating Advisory

We advise on all aspects of your coating project to reduce application costs, improve application quality and lower operational costs.

## Coating Management

We manage the entire coating application side of your project for the ultimate in application savings, coating quality and asset downtime.

## Production Line Survey

We assess the application side of your production line to increase production speeds and reduce costs and waste.





## Condition Survey

We evaluate your asset's structure and coating system and help plan future maintenance work to extend asset lifetime and reduce maintenance requirements.



## Technical training services

We provide a number of training courses for applicators, supervisors, technical staff and quality assurance personnel to ensure improved efficiency and quality.

### Service value chart

 Lower operational costs			
 Reduce asset downtime			
 Optimise the application process			
 Reduce long term maintenance costs			
	<b>Standard Coating Advisory</b>	<b>Premium Coating Advisory</b>	<b>Coating Management</b>

### Service value chart

 Increase revenue			
 Lower operational costs			
 Reduce asset downtime			
 Optimise the application process			
 Reduce long term maintenance costs			
	<b>Production Line Survey</b>	<b>Condition Survey</b>	<b>Technical training services</b>



# Standard Coating Advisory

Ensure long-term coating performance

“Practical solution to our coatings problems.”

European steel construction company

Controlling maintenance costs is a constant challenge for asset owners.

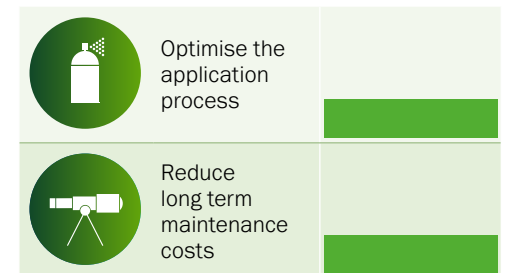
With our Standard Coating Advisory, we help you achieve a high quality coating process according to specification that can reduce long-term maintenance costs.

This service supports during the main project phases to help optimise the application process. Our coating advisors will issue reports only when visiting on-site and distribute a concluding report at the end of the project.

**What you get:**

- A coating advisor onsite during the project main phases to monitor all coating-related work
- A pre-project inspection to verify the specification and ensure everything is ready
- A final quality check
- Detailed progress reports after each visit
- A concluding report based on all performed visits

**Service value chart**





# Premium Coating Advisory

Lower application costs and reduced asset downtime

“Knowledge, experience and prompt response.”

Leading European rail freight operator

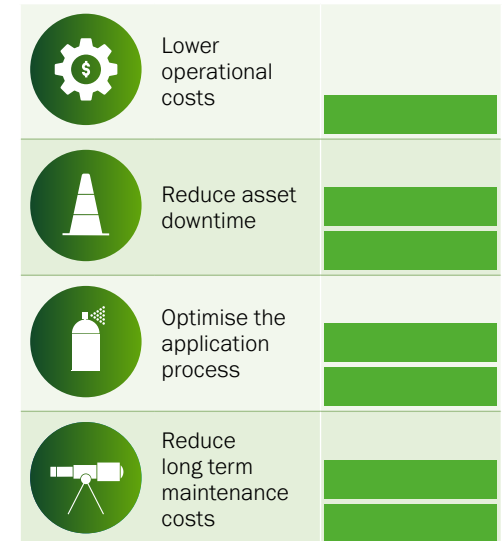
Ensure complete application oversight and expert advice so that coatings perform correctly for their entire lifetime.

With our Premium Coating Advisory service, we're onsite throughout the project to oversee surface preparation and coating application, and quickly solve any problems that may arise. This way we help you complete all aspects of your coating project efficiently and effectively.

### What you get:

- A coating advisor onsite throughout the entire project
- A pre-project inspection to verify the specification and ensure everything is ready
- Advice on how to optimise time and resources during the project, with fast problem-solving
- Ongoing quality checks
- Regular progress reports
- A full report at the end of the project

### Service value chart





# Coating Management

Future proofing your asset – to minimise downtime and maximise coating performance

With our Coating Management service, we manage the entire coating application side of your project, including scope check, preparation, coordination with sub-contractors, application and planning of future maintenance.

We assign a dedicated full-time Hempel project manager to your maintenance project to plan, optimise and streamline all coating related tasks. Together, our team ensures you benefit from a rapid return to service for your assets, lower project costs and reduced long-term maintenance requirements.

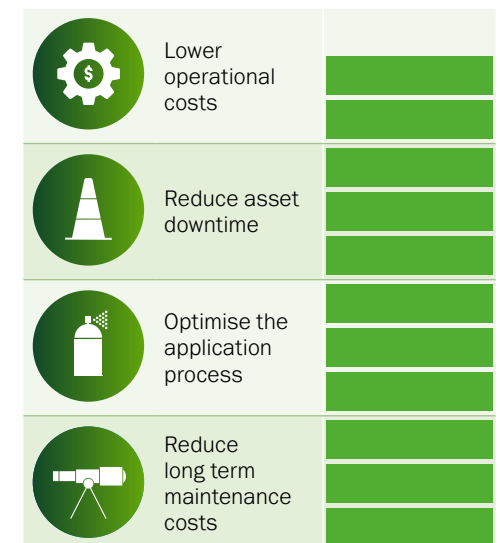
We can also help with the development of a plan and procedure framework for future maintenance work to ensure your asset continues to operate long-term, with minimum disruption.

This service entails a management solution for your entire coatings project and thus it is customised according to fit your needs and specific industry standards.

### What you get:

- A dedicated full-time Hempel project manager and a team of coating advisors
- A pre-project inspection to verify the specification and ensure everything is ready
- Advice, guidance and oversight to ensure a high-quality application and optimised use of resources, with fast problem-solving
- Ongoing quality checks
- Regular progress reports and a full report at the end of the project
- Advice on inventory optimisation, including coatings and equipment

### Service value chart





# Production Line Survey

Increased application efficiency for lower costs and higher throughput

“Expert knowledge of coating material and application equipment. Effective troubleshooting.”

North American railcar provider

Our Production Line Survey service is designed specifically for facilities that operate a production line.

It helps keep operational costs down and increase production speeds. An expert Hempel coating advisor will visit your site to conduct interviews, review procedures, documentation, specifications, quality control and process flow. After the visit, we issue a full report with recommendations on how to reduce coating application costs, increase production line speed and improve coating quality.

**What you get:**

- A full site visit and application line inspection
- Tailor-made recommendations for your production facility
- A full report with suggestions on how to solve problems, reduce costs, improve quality and increase efficiency

**Service value chart**

	Increase revenue	
	Lower operational costs	
	Optimise the application process	
	Reduce long term maintenance costs	





# Condition Survey

Reduced long-term maintenance costs and increased asset uptime

A well-planned maintenance schedule keeps long-term costs down by ensuring issues are repaired before they become a problem.

In our Condition Survey, an expert coating advisor evaluates the condition of your asset and existing coating system. We identify causes of possible coating failure, provide advice on urgent coating-related challenges and help plan future maintenance work - to reduce your long-term maintenance requirements and ensure your asset remains in good condition for longer.

**What you get:**

- A full inspection of your surfaces to assess their existing condition
- Advice on future maintenance requirements and planning
- A full evaluation report, including recommendations

**Service value chart**

	<p>Reduce asset downtime</p>	
	<p>Reduce long term maintenance costs</p>	

## Technical training services

Develop the in-house skills you need for future success





The continued long-term performance of your coating application team depends on the level of their skills.

Our technical training services are specially developed to give your staff the technical skills and insight they need to consistently produce high-quality work, whether they're applying the coatings themselves or overseeing final quality. All our courses are delivered face-to-face using a combination of theory and practice with real life examples. They can be tailored to your team and delivered at Hempel's facilities or your site.

### Training courses:

- Training for applicators to ensure excellent surface preparation and coating application
- Coating fundamentals training for supervisors, managers and technical staff, covering everything from corrosion theory to ISO guidelines and quality control
- Training for quality assurance and control for supervisors, managers and technical staff, delivered at the start of a project and covering everything required to ensure good quality assurance processes

### Service value chart

	Optimise the application process	
	Reduce long term maintenance costs	

# Service comparison

See how each Hempel service compares

Deliverables	
<b>Coating advisor (CA) availability</b>	
Coating advisor presence	CA typically present during start up of main phases
Coating advisor has the authority to stop project	
Expert coating advisors	
<b>Pre-project inspection</b>	
Pre-project briefing	
Pre-meeting to explain procedures, education / training, roles and responsibility	
Organisation and planning of the entire project related to coatings	
Survey of actual condition of existing coating system	✓
Verification of paint order and specification	✓
Distribution of specification and relevant PDS	✓
<b>Surface preparation inspection</b>	
Equipment Inspection	
Surface preparation fresh water cleaning, high pressure fresh water cleaning, mechanical tool cleaning, abrasive blasting	CA typically present during start up of main phases
Surface preparation inspection / final quality check / basic tests	✓
<b>Application inspection</b>	
Paint consumption control	
Managing paint stock / rotation / storage condition / shelf life	
Microclimate	CA typically present during start up of main phases
Application equipment	
Application	CA typically present during start up of main phases
Overcoating intervals	✓
Dry Film Thickness (DFT)	✓
<b>Final inspection</b>	
Check and report overall appearance of coating work	✓
Check and report total DFT	✓
Check time before check time before taking object into use	✓
<b>Additional services</b>	
Maintenance plan	
Maintenance procedure framework	
Paint inventory optimisation	
<b>Reporting</b>	
Progress reports	Only when onsite
Final report including the progress reports	✓

Premium Coating Advisory		Coating Management	
Dedicated full time for entire project		Dedicated full time for entire project	
			✓
			✓
✓			✓
			✓
			✓
✓			✓
✓			✓
✓			✓
✓			✓
CA present throughout the process		CA present throughout the process	
✓		✓	
CA present throughout the process		CA present throughout the process	
✓		✓	
CA present throughout the process		CA present throughout the process	
✓		✓	
✓		✓	
✓		✓	
✓		✓	
			✓
			✓
			✓
Daily		Daily	
✓		✓	



**Pre-project review**

Review and study of necessary documentation:

- customer specifications, product data sheets and safety data sheets
- process documentation
- quality control procedure / plan for corrosion protection
- relevant policies

Coordinate and obtain approval for relevant steps (interviews, study of documents like work place description, supply documents, etc)

Define the scope of the production line survey with customer and define customer expectations, if any

Check and report design considerations / substrates

All inspections and findings to be clearly documented with pictures

**Site visit**

Interview workforce onsite and document the findings

Map out the process flow including the process parameters

Pre-treatment and surface preparation

Application and drying – document observations and recommended possible areas for improvement(s) (AFIs):

- paint kitchen
- paint booth
- oven
- process equipment
- materials
- Personnel Protective Equipment (PPE) / Health, Safety and Environment (HSE)
- logistics
- competencies and work processes
- quality control tools

Post treatment and handling:

- logistics
- storage

Document the observations and recommended areas for improvement(s) (AFIs) if needed

**Reporting**

Distribute the Production Line Survey – feedback report containing:

- executive summary identifying the major strengths
- detailed observations
- possibility for a face to face debrief

**Uncoated structures**

Visual inspection on the actual surface condition

Check and report design considerations / substrates

All inspections and findings to be clearly documented with pictures

Document results and recommendations.

**Coated structures**

Visual inspection on the actual condition of the existing coating system including colour shade of the coating

Evaluating the type and percentage of defect (example in accordance to ISO 4628-1/5) per main area on the structure and determine the possible cause(s) of failure, if applicable

Evaluate and investigate which environment(s) the coating may have been exposed to and the duration

Check and report Dry Film Thickness (DFT) measurements

Check the adhesion / cohesion of the system and report according to ASTM D 3359 (cross-cut test), ISO 16276-2 or ASTM D6677 (x-cut test)

Discontinuity (pinhole) testing and report according to NACE SP 0188 / ISO 29601, if required

If the generic paint type is unknown, determine the paint type using the 'thinner method'

All inspections and findings to be clearly documented with pictures. The report may include what type of maintenance / repair is needed and when

Document results and recommendations

**Reporting**

A final report will be distributed when the coating advisor's inspections are completed

**Training for applicators**

Basic paint concepts

Paint preparation and paint application

Climatic conditions

Defects and rectification

Health and safety

**Coating fundamentals**

Corrosion theory

Surface preparation, paint preparation and

Coating types and comparisons

Check and report Dry Film Thickness (DFT) measurements

General paint compatibility

ISO 12944 (if relevant)

Datasheets and physical contacts

Specifications and calculations

Safety data sheets

Climatic conditions

Quality control and assurance

Coating defects and failures (causes and prevention)

**Onboard maintenance training**

Basics of corrosion and anti-corrosives

Surface preparation, paint preparation and paint application

Coating types and comparisons

General paint compatibility

Quality control and inspection equipment

Climatic conditions

Ventilation in confined spaces

Specifications and calculations

Datasheets and physical contacts

Health and safety

Coating defects and failures

**Training for quality assurance and quality control**

Surface preparation and paint application

Climatic conditions

Corrosion theory and protection methods

Generic coating types and comparisons

General paint compatibility

Datasheets and safety data sheets

Specifications and calculations

ISO 19840

Quality inspection

Equipment

Coating defects and failures (cause and prevention)

More than 600 highly qualified technicians at your service

● Hempel service locations    ● R&D centres



In a competitive environment, success requires more than just technology. You also need people with the right skills, knowledge, experience and attitude to turn that technology into a value-adding solution. This is where Hempel stands out.

Each day, our more than 600 highly qualified coating advisors and engineers work with customers around the globe to optimise their projects and ensure their coating systems meet or exceed expectations.

Hempel coating advisors are safety certified within:

- IRATA
- HUET
- BOSIET

More than 70 per cent of Hempel coating advisors are certified to the highest technical standard within:

- NACE
- FROSIO

More than 600 highly qualified coating advisors work within specialised areas such as:

- Marine
- Containers
- Wind
- Offshore
- Concrete Coatings
- Fire Protection

As a world-leading supplier of trusted coating solutions, Hempel is a global company with strong values, working with customers in the protective, marine, decorative, container and yacht industries. Hempel factories, R&D centres and stock points are established in every region.

Across the globe, Hempel's coatings protect surfaces, structures and equipment. They extend asset lifetimes, reduce maintenance costs and make homes and workplaces safer and more colourful. Hempel was founded in Copenhagen, Denmark in 1915. It is proudly owned by the Hempel Foundation, which ensures a solid economic base for the Hempel Group and supports cultural, social, humanitarian and scientific purposes around the world.

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