

MARINE COATINGS

BRINGING NEW DIMENSIONS TO ANTICORROSIVES

JOECH CONTROLL RANGE



THE ADVANCED

Jotamastic

THE SOLUTIONS BROADEN



THE PROTECTION DEEPENS

BRINGING NEW DIMENSIONS TO ANTICORROSIVES

In an ideal world, steel substrates at maintenance would be prepared to Sa 2½. In reality, costly downtime, restricted budgets and complex structures with difficult to reach areas can mean blast cleaning is not an option.

The new generation of the Jotamastic range offers tailored solutions to meet any challenge.

THE TECHNOLOGY GAP WIDENS

The latest advances in Jotun's market leading mastics technology further improve the anticorrosive protective properties of the Jotamastic range.

With more than 25 years' experience and continuous growth, the Jotamastic range has established itself as the leading surface tolerant repair and maintenance primers. During this period the valuable insights provided by continuous customer feedback have contributed towards the development of the new Jotamastic range.

The expanded range combines modern technology to provide a step change in high-tech surface tolerant coating solutions.

THE SOLUTIONS BROADEN

Each product in the Jotamastic range offers specific benefits to cater for the client's exact needs. This expanded range allows anticorrosive systems to be tailor-made to meet your specific requirements for the most effective, durable and sustainable solution.

THE PROTECTION DEEPENS

This new generation of Jotamastic products embodies Jotun's technical knowledge and long experience in solving the special challenges presented in the protection of steel substrates for repair or maintenance. High surface tolerance and wetting properties give deep penetration and thus better adhesion and durability in harsh environments, combined with a wider choice of solutions.



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1.2 BILLION SQUARE METRES PROTECTED

25 YEARS' SUCCESS, DEVELOPMENT AND EXPERIENCE

The extensive range of Jotamastic coatings has been developed to provide a variety of solutions for repair and maintenance. Each product is designed to offer specific benefits. A Jotamastic anticorrosive system can be tailor-made to meet specific requirements for exposure and durability.

- Jotamastic requires no blast cleaning reducing time and cost with no compromise in protection
- Jotamastic can be applied on most clean and sound surfaces – reducing downtime
- Jotamastic, the optimal solution for difficult to reach areas, where good surface preparation is not possible or desirable
- Jotamastic can be used over most generic types of coatings

The expanded Jotamastic range further enhances the opportunities to achieve even better economy and standards of corrosion protection.

Ease of use and simplicity makes Jotamastic the applicators' preferred brand.











Key benefits of Jotamastic products: apply to hand tool, power tool or waterjetting prepared surfaces, even areas that appear dry but may be moist



MARKET LEADING FEATURES

LOWER SURFACE PREPARATION

- Apply on any clean and sound substrate prepared to minimum St 2
- · Apply on early flash rusting and waterjetting prepared surfaces

SIMPLY THE BEST SURFACE TOLERANCE

- Use of hydrocarbon resin gives excellent wetting properties ensuring good penetration into substrate
- Fast and easy application with less surface preparation

GOOD MOISTURE TOLERANCE

- Apply on surfaces that appear dry but where moisture remains and flash rusting has begun
- · Superior barrier effect minimises permeability
- · Application friendly and easy to use



 Jotamastic is applied to an aged coating in sound condition prepared to minimum St 2 (or even moist). Waterjetting prepared surfaces with early flash rust are acceptable.

Good flow properties mean a smooth, consistent protective film. Low surface tension gives excellent wetting properties.



Enlarged section through the coated substrate shows Jotamastic penetrating down into the aged sound surface.



 This section shows how Jotamastic, having penetrated deep into the substrate, converts from a liquid coating into a solid film.



THE SOLUTIONS BROADEN

THE CORE PRODUCTS

Jotamastic 90

Improved corrosion resistance

- Offers the longest lifetime in any environment
- Exceptional corrosion resistance
- Optimised rheology improves surface tolerance, flow levelling and application properties
- Excellent adhesion to most traditional and modern topcoats, including WaterFine and isocyanate free

Improved systems efficiency

- Fast drying, greatly improving efficiency
- Designed to be applied from 100 to 300 microns in a single coat
- Safe application over a wide temperature and humidity range

Increased colour flexibility

- Wide colour flexibility using Jotun's MCI system
- Colour match primer with topcoat improving coverage
- Colour availability on small orders

Additional benefits

- Can be used as finished coat in areas with low UV exposure or where colour retention is not the primary focus
- NORSOK approved
- Easy application by spray or roller

Jotamastic 87

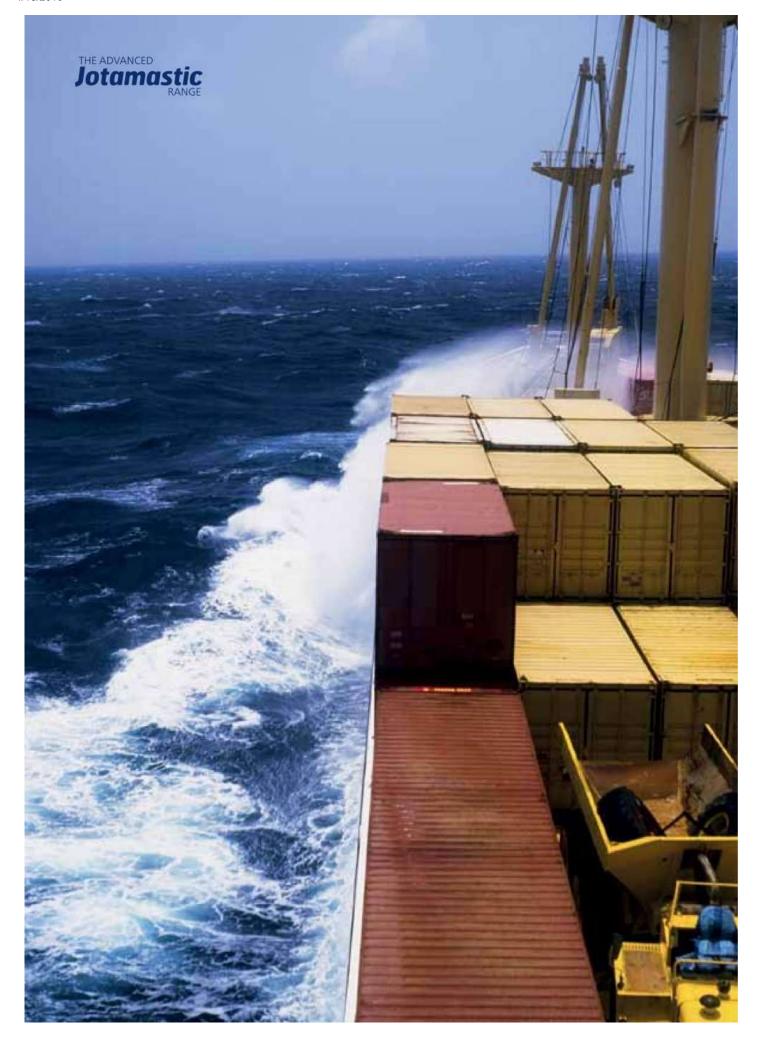
- For severe environments and long lifetime
- The original market leader in epoxy mastic technology
- Apply on sound surfaces prepared to St 2
- Designed to be applied from 150 to 300 microns in a single coat
- Applicator friendly and easy to use
- NORSOK approved

Jotamastic

- Excellent protection in less severe environments
- Low film thickness version
- Designed to be applied from 75 to 200 microns in a single coat
- Provides all the benefits of Jotamastic products and the same excellent protection but at lower dry film thicknesses
- Jotamastic 80 is built on the same technology platform as Jotamastic 87

Jotamastic SF

- Solvent free
- Same exceptional corrosion resistant properties for which the other Jotamastic products are well known
- Excellent edge covering properties
- Good early water resistance
- High solids content a good solution where hot works in confined spaces are performed and where danger of explosion can be an issue



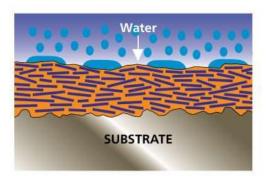
THE SOLUTIONS BROADEN

SPECIAL USAGE PRODUCTS

Jotamastic | 90 AL
Jotamastic | 87 AL
Jotamastic | 80 AL

EXTRA PROTECTION IN EXTREME ENVIRONMENTS

- The addition of aluminium flakes provides extreme corrosion protection and exceptional water retention
- Aluminium flakes within the coatings create an impenetrable barrier to water and increased coating flexibility. The epoxy binds the coating together to give it considerable strength, particularly when applied to vulnerable areas
- The aluminium range is particularly suited for submerged areas



Jotamastic | SMARTPACK

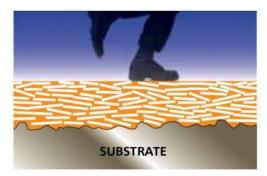
FOR BRUSH AND ROLLER APPLICATION

- The best corrosion protection when using brush and roller
- Improved flow properties means smoother, better protective film
- Easy to handle, less storage space, reduced inventory, less waste handling
- Fast recoating from 0°C to 40°C with one curing agent

Jotamastic | 90 GF
Jotamastic | 87 GF

FOR THE TOUGHEST WEAR & TEAR SURFACES

- Glass flakes within the coating overlap, blend and bind together to provide a tough, virtually impermeable film
- A unique surface tolerant, abrasion resistant coating, containing glass flakes providing hard wearing resistance
- Specially suitable for surfaces exposed to considerable wear and tear such as high traffic areas
- Suitable for high traffic areas where speed of maintenance is essential

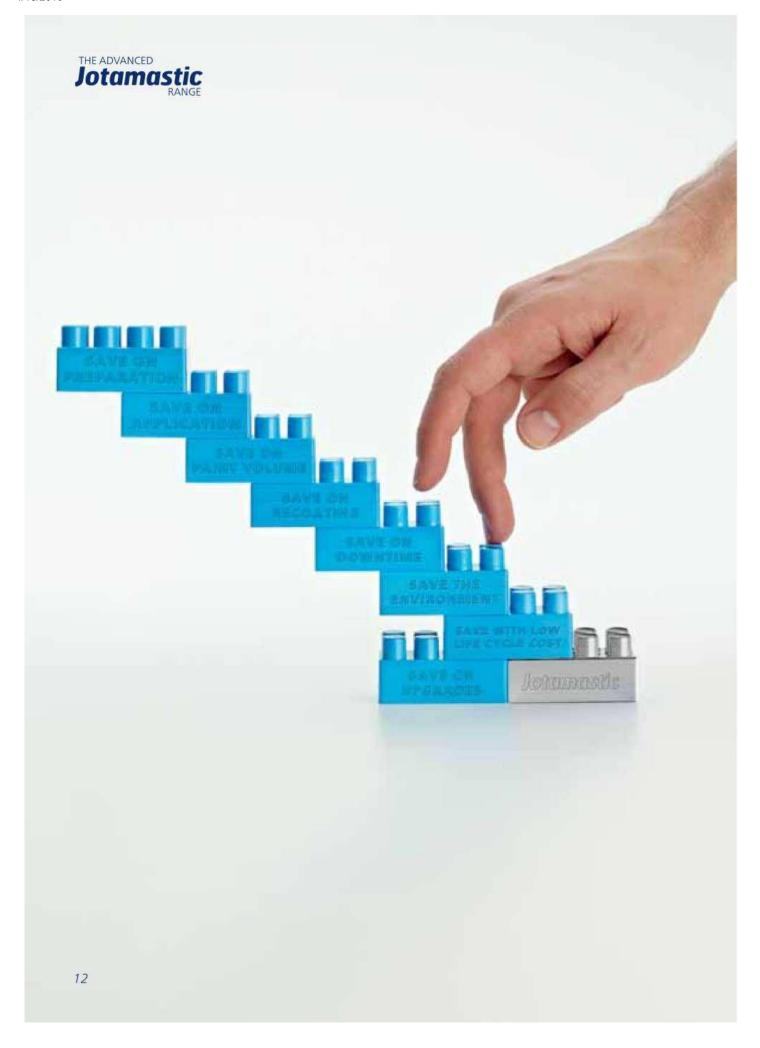




Two 5 litre tins, simply mix 1:1.

Reduce wastage by over 50% by mixing only what you need. Easy to follow visual mixing instructions are on the lids. Easy to handle.

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INVEST TODAY FOR FUTURE RETURNS

REDUCED LIFE CYCLE COST

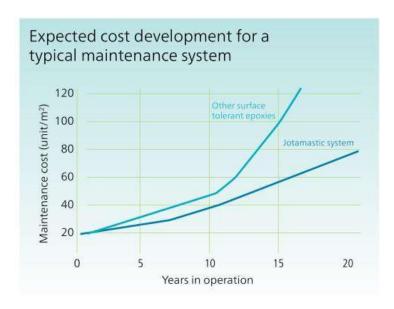
Achieve long term financial benefits

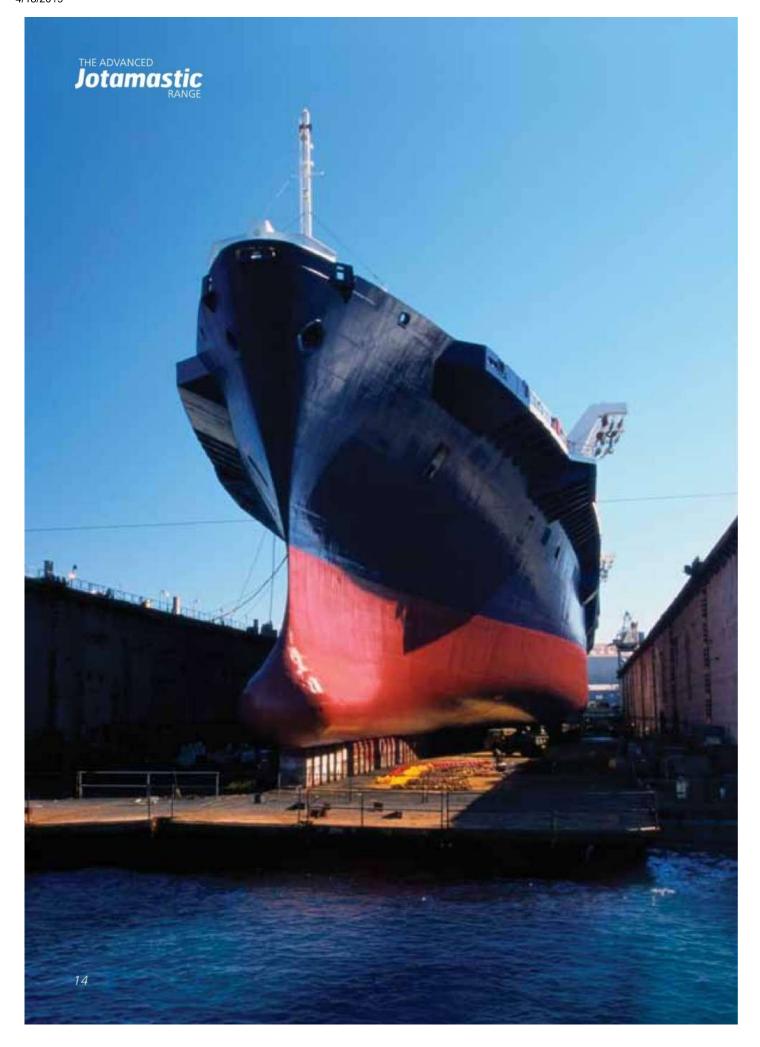
Investment in corrosion protection is about calculating the costs over the design life of the project – Life Cycle Cost analysis (LCC) – the investment in new construction today and maintenance in the future.

There are many different factors to be considered when choosing a protective paint system:

- The cost per square metre at maintenance is higher than at new construction
- · Different coatings have different durability
- · The longer the lifetime of a coating the greater potential for savings
- It is false economy to calculate only the cost per square metre of the paint. It is essential to
 take all other costs into account surface preparation, scaffolding, application, material and
 other costs for the lifetime of the structure.

LCC analysis proves that specifying a Jotamastic based system produces substantial financial benefits.





DRY DOCK

Most shipowners would prefer their vessels to spend as little time as possible in dry dock to keep costs and downtime to a minimum.

The level of surface preparation and the drying speed of the paint products chosen are two important factors that greatly affect the efficiency of a dry docking.

KEY JOTAMASTIC PRODUCTS

Jotamastic 90

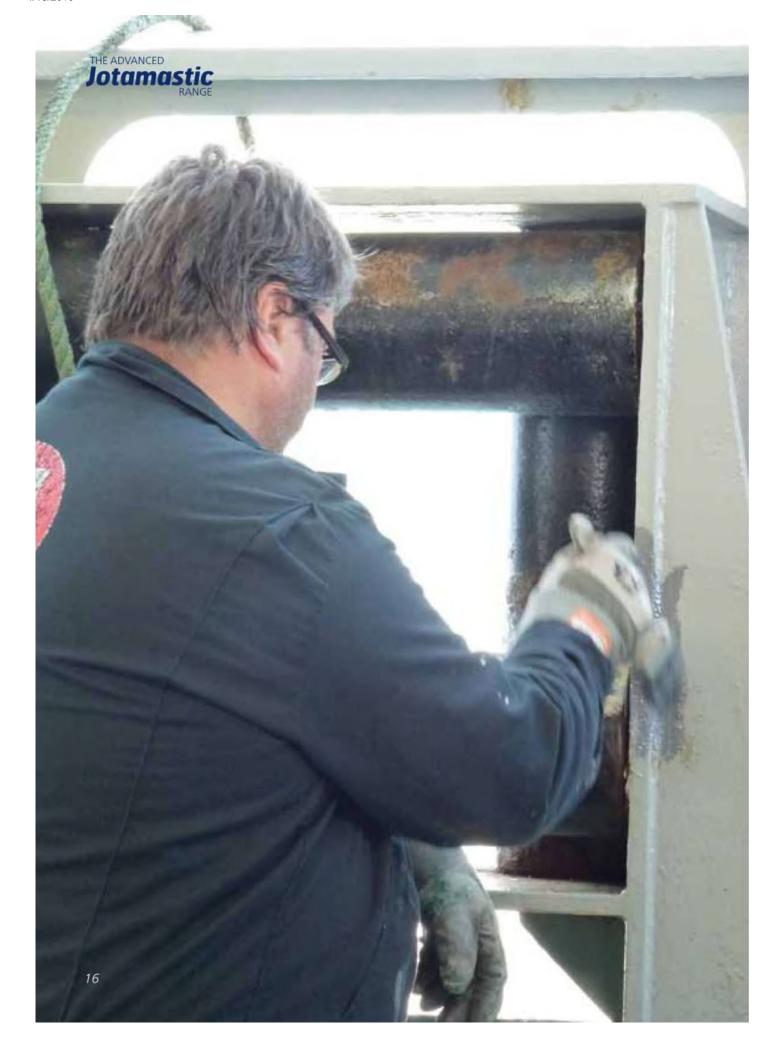
- Problem solver in all environments, offering the widest range of benefits
- Colour flexible
- · Fast drying, makes two coats a day possible
- · Safe overcoating on virtually any topcoat

Jotamastic 80

- Excellent protection for shorter lifetime expectancy
- · Relevant protection at the correct cost
- · Excellent flow levelling at lower film thickness

AREAS	TYPICAL SYSTEMS	
	No. DFT coats μm	
Underwater hull	1 x 150 1 x 100	Jotamastic 90 Aluminium Safeguard Universal ES Antifouling or FRC as specified
• Topside	2 x 150 2 x 50	Jotamastic 90 Hardtop XP
• Decks	2 x 100 1 x 60	Jotamastic 80 Hardtop XP
• Superstructure	2 x 100 1 x 60	Jotamastic 80 Hardtop XP
• Cargo holds	2 x 150	Jotamastic 80*

^{*} For cargo hold repair we recommend the use of Jotaguard 600 series, especially engineered for cargo hold protection



ON BOARD MAINTENANCE

On board maintenance is a continuous task on trading vessels in order to protect the asset. It is also necessary as class societies require the vessel to be in good shape in order for it to be allowed to trade. Today the market has become very competitive, as a result crew numbers available to undertake maintenance are reduced.

KEY JOTAMASTIC PRODUCTS

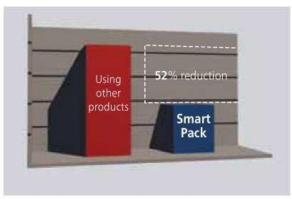
Jotamastic 80

- · Excellent protection for less severe environments
- · Relevant protection at the correct cost
- · Excellent flow levelling at lower film thickness

Jotamastic SMARTPACK

- · The best product for brush and roller application
- · Reduce paint consumption by up to 50%
- . 1:1 mixing ratio. Mix only what you need

AREAS	TYPICAL SYSTEMS	
	No. DFT coats μm	Product
• Topside	1 x 50	Jotamastic Smart Pack, number of coats required to build 200 μm Hardtop XP
	2 x 100 1 x 60	Jotamastic 80 Hardtop XP
Decks Superstructure exterior	1 x 60	Jotamastic Smart Pack, number of coats required to build 200 μm Hardtop XP
	2 x 100 1 x 60	Jotamastic 80 or Jotamastic Smart Pack Hardtop XP
Superstructure interior	1 x 100 1 x 60	Jotamastic 80 Hardtop XP
Cargo holds		Jotamastic Smart Pack, number of required to build 250 μm
	2 x 125	Jotamastic 80
Water ballast tanks		Jotamastic Smart Pack Aluminium, number of coats required to build 300 μm



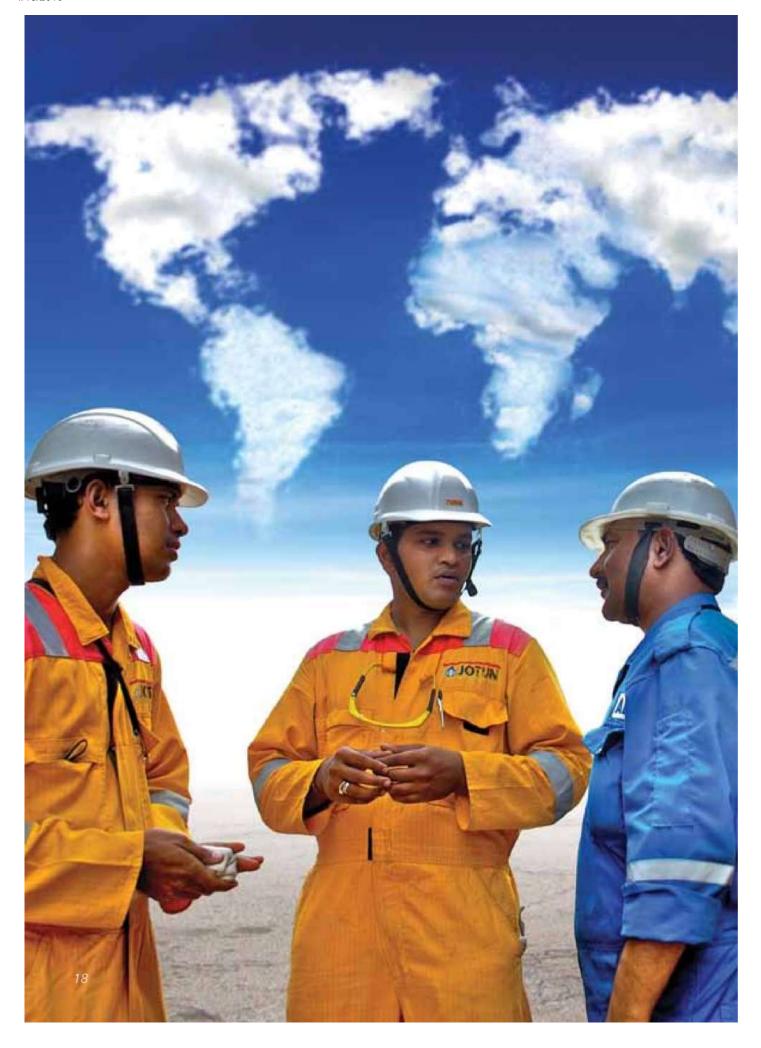
An analysis has been made of onboard maintenance paint consumption for the total fleet of Jotun painted vessels of comparable size and age. The data shows the heavy users* of Jotamastic Smart Pack consume 40–50% fewer litres and spend 20–30% less than those not using Jotamastic Smart Pack.



Typical brush application of traditional epoxy mastic coatings (left & centre) and Jotamastic Smart Pack (right) after continuous exposure in a salt water chamber.

Rust penetration is apparent due to uneven film thickness being achieved after brush application – unlike Jotamastic Smart Pack with its superior flow characteristics achieving a consistent and correct film thickness.

^{*} Vessels where 50% or more of the anticorrosive paint is Jotamastic Smart Pack



UNIFORM STANDARD OF GLOBAL SERVICE

GLOBAL SERVICE

- Highest number of technical personnel in the industry
- Same high standard of trained personnel globally
- Easy to exchange trained technical personnel across national borders and multi-national projects

STANDARDISED

- Same tools, reports, procedures and behaviour world-wide.
- Same competence in maintaining company standard procedures
- Recognised globally by our yellow and red boiler suits

COATING ADVISOR ACADEMY

- Compulsory training for all technical personnel worldwide
- Theoretical and practical training, testing and examination
- FROSIO and NACE certification
- First aid and fire-fighting



TRAINED TO DELIVER THE BEST RESULT

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