



Paints

High Performance

COATING SYSTEMS



**A High Performance Package for
Commercial and Industrial Paint Specifiers**

ICI Paints Picks Up Ammonia Storage Sphere Challenge

A challenging project at Terra Nitrogen (UK) site at Billingham, presented ICI Paints with the perfect opportunity to demonstrate the capabilities of its ICI Epoxy Hi-Build Systems.

The Ammonia Ball is a spherical metal storage vessel for ammonia which is kept under pressure. This storage process means that the steel temperature changes from ambient to as low as -28°C . At this low temperature the vessel is completely covered with ice.

Under these severe conditions, the previous coating had completely broken down revealing an even older coating. The ICI Paints survey identified this coating as a lead based primer. The specification ICI Paints delivered to safely remove this hazardous primer and protect the substrate was to wet abrasive blast clean the surface and then apply the ICI Paints Hi-Build Epoxy System. This system consists of a surface tolerant two-pack winter cure primer; ICI Epoxy Hi-Build 710 Aluminium Primer, followed by two coats of a hi-build two pack winter cure intermediate/finish; ICI Epoxy Hi-Build 711 Micaceous Iron Oxide.

The work had to be done during shutdown and as such, within a tight time window. Careful planning, project management, system specification

and application were all crucial to the success of the contract.

The operating owner of the sphere is understandably pleased with the results;

"We have found that the ICI Paints system is more than adequately withstanding the extremes of temperature with no return of corrosion."





ICI Paints High Performance Coating Systems

Introduction

Anyone faced with meeting the paint specifying requirements of non-domestic or industrial environments - like factories, breweries, industrial buildings, even chemical plants - will know that conventional paint systems do not provide the total solution. Specialist coatings which offer high protection and specific application characteristics are needed. The very nature of the activities or processes which might take place in these sorts of environments also means the coatings may need to withstand the rigours of chemical attack, be resistant to abrasion, high humidity and condensation or mould growth.

Finally, the wide variety of substrates - such as structural steel, concrete or steel floors, iron or polished aluminium - demand specially formulated products to optimize durability and long term protection under demanding conditions.

ICI Paints High Performance Coating Systems An Unrivalled 'Service and Product Package'

No other manufacturer is as well placed as ICI Paints to understand the paint specification needs of industrial environments. For years the company has been channelling its resources - those of the world's largest paint company - to provide solutions to painting problems experienced in these severe environments.

Today ICI Paints offers a comprehensive range of high performance coating systems for industrial and commercial use. The long-term protection offered by these products means reduced maintenance cycles and even more value for money. Innovation and quality are the hallmarks of this product range. These, together with full technical support and on-site services from ICI Paints, offer specifiers and contractors everything they require for a successful, cost effective result.





Services and Support

ICI Paints Site Services

You don't need to be an expert on high performance coatings to be assured of getting the best results possible. ICI Paints offers all the services you need to see the project successfully through from start to finish.

Site Surveys

ICI Paints Trade Specifier Representatives will carry out a full site inspection. This will include assessment of current state of coatings, help with identifying any difficult substrates and advice on extending maintenance cycles.

Specification Writing

ICI Paints offers full specification support, tailored to your individual requirements. This will ensure that the correct preparation is identified and products are specified for each environment to achieve the desired results.

Attend Pre-Contract Meetings

ICI Paints will attend pre-contract meetings to allow any potential problems to be highlighted and dealt with before the start of the project.

Site Visits

ICI Paints will visit the site during the course of the work to make sure that everything is being carried out correctly and according to specification. This includes monitoring climatic conditions, application, as well as measuring wet and dry film thickness.

Report to Project Owners

Minimizing down time during painting is critical for any factory or business. Knowing the status of the work in progress and thus keeping control of events is equally important. ICI Paints will ensure that Plant Engineers are kept closely informed about the status of the work in progress.

Training

ICI Paints runs training courses specifically tailored to the needs of engineers and contractors. These courses are held at ICI's training facility in Slough, and will equip the attendees with all the information and training they need to competently oversee the application of ICI Paints High Performance Coating systems on their site. The course includes an overview of the range as well as the theory and 'hands on' practice of preparation and application.

Colour Service

ICI Paints Colour Consultants can provide help and advice on colour choice using Dulux Previews, our unique colour specification software.

Health & Safety

ICI Paints can provide help and advice on relevant Health and Safety issues.



For more information contact:

The ICI Technical Group 01753 691690

Product Range Benefits

ICI Paints High Performance Coating Systems

These systems have been specifically developed for the long-term protection of substrates in industrial and commercial environments. The following summarizes just some of the key systems available in the range.

Pre-Treatments

A range of products that cover all the pre-treatment requirements for a variety of substrates including sealing, etching and degreasing.

Epoxy Systems

A comprehensive range of primers, intermediates and finishes for enhanced protection and performance. The ICI Low Temperature Curing Epoxy System offers a significant number of features and benefits when applied to new steel in 'shop' or previously coated metal in maintenance situations.

- ▶ Faster low temperature curing (down to 0°C) for improved production, handling and stackability, particularly in cold weather.
- ▶ Allowing faster overcoating so more than one coat can be applied in the same shift, saving time and money, and less risk of intercoat contamination.
- ▶ Faster hardening with good abrasion and impact resistance which saves money by reducing handling damage and subsequent touch up.

Acrylic Urethane Finish

This two pack finish is formulated for use in conjunction with epoxy primers and high build intermediate coats on structural steel work where good gloss retention and chemical resistance are required.

Acrylated Rubber Systems

A range of quick-drying primers and finishes for use on steel and masonry which are resistant to moisture, heavy condensation and certain chemicals for example alcohols and concentrated acids. The Acrylated Rubber System offers thick film technology that provides the benefit of protection with fewer coats.

Solvent Based Systems

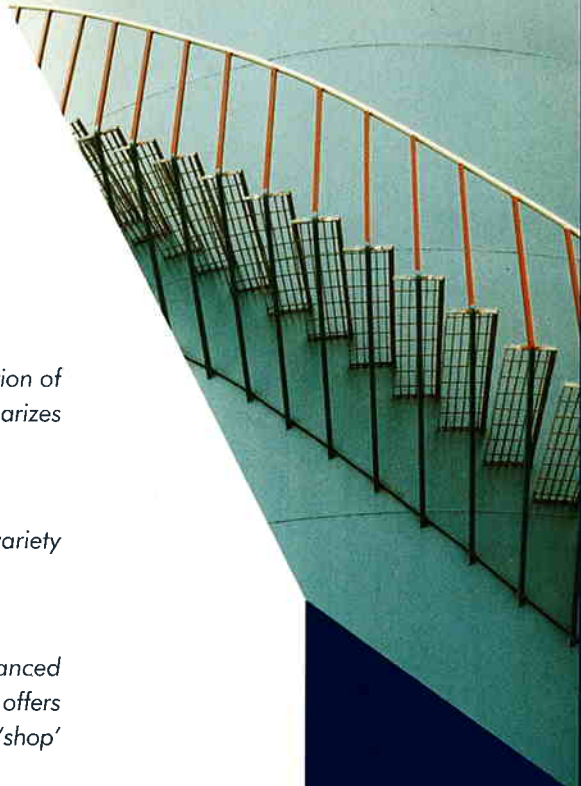
This range of finishes include ICI 701 Micaceous Iron Oxide which gives excellent resistance to moisture on structural steel work and iron railings etc. Also included in the range are ICI 702 Rust Preventive Coating for steel, where its location or design makes normal painting methods difficult or impractical; ICI 502 Protective Enamel and ICI 726 Fast Drying Enamel, tough knock resistant gloss finishes ideal for interior and exterior use on machinery or metal work; ICI 505 Aluminium Paint for use on metal where high temperature tolerance (up to 260°C) is required and ICI 504 Road Line Paint for internal and external line markings on roads, car parks and warehouse factory floors.

Dulux Trade Anti-Graffiti Paint System

A two-pack water based epoxy gloss finish for areas subject to high wear and tear, frequent washing or cleaning. It should be used with Dulux Trade Anti-Graffiti Primer, and if required, Sealer. Graffiti is easily removed using Prewash and Remover.

Dulux Trade Floor Coating Systems

This range includes Dulux Trade Epo-dur, a two-pack epoxy water based floor paint, which is ideal for high performance use on interior concrete and suitably primed steel floors, offering a highly decorative finish which is extremely tough and can be used with a slip resistant aggregate if required and the Dulux Trade Semi Gloss Floor Paint, a solvent based single pack floor paint, available in an exclusive range of colours, for use in light commercial and industrial environment.



ICI Paints Extends Life Cycles

A review of existing painting applications at the chloromethane plant at the ICI Chemicals and Polymers plant at Runcorn, Cheshire revealed unusually high life-cycle costings. ICI Paints undertook the mission to reduce costs and provide a tailor-made specification for the plant, including the pipe bridges; steel box structures which support pipelines throughout the plant.

Ian Tunnicliff, Area Engineer at the plant explains the problems;

"Standards of painting on the site pre 1995 were inadequate with some systems breaking down within 12 months of application. On investigation, it was discovered that the preparation was poor and the specified system was both adhoc and incorrectly applied."

Following a survey undertaken by ICI Paints, it was discovered that the corrosion problem occurred in a number of small areas of the steel work on the plant, built in the early 1980s. Maintenance contractors, 'pletac nsg of Runcorn', who are now responsible for manufacturing support disciplines on site, including painting, used a system recommended by ICI Paints that included three spot coats to be applied where there had been corrosion, followed by two finishing coats overall.

The spot coats consisted of one coat of ICI Epoxy Hi-Build 713 Zinc Phosphate Primer, followed by two coats of ICI 707 Acrylated Rubber Thickcoating. The finishing coats were a full coat of ICI 707 Acrylated Rubber Thickcoating and one coat of ICI 709 Acrylated Rubber Finish.

Whereas the existing application had used a number of thin coats of paint over the structure, the ICI Paints specification utilised five coats from bare metal and two over sound coatings. Proper treatment of the affected corrosive areas with this system ensures that lifecycle costings are consequently reduced.

Ian Tunnicliff is delighted with the results;

"Working in conjunction with ICI Paints in the areas of specification and adherence to standards upon specification, has resulted in a demonstrable increase in standards. This has come at a cost by doing it correctly but the life cycle costings have reduced significantly and the appearance of our plants has improved."





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