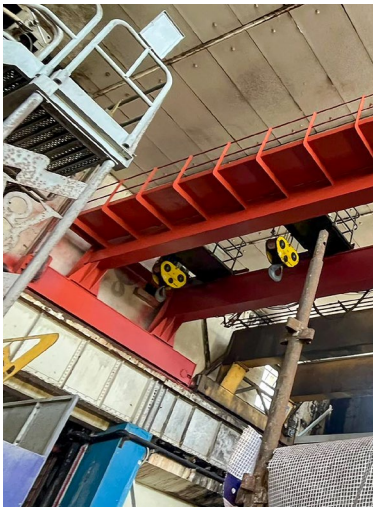
NanoPrep

Rust Primer & Anticorrosive Coating

- No VOC's
- Non-Flammable
- Eco-Friendly

THE PROVEN ALTERNATIVE TO GRIT BLASTING

CHEMICALLY REACTS FOR PERFECT ADHESION









REZitech

Rust Primer & Anticorrosive Coating

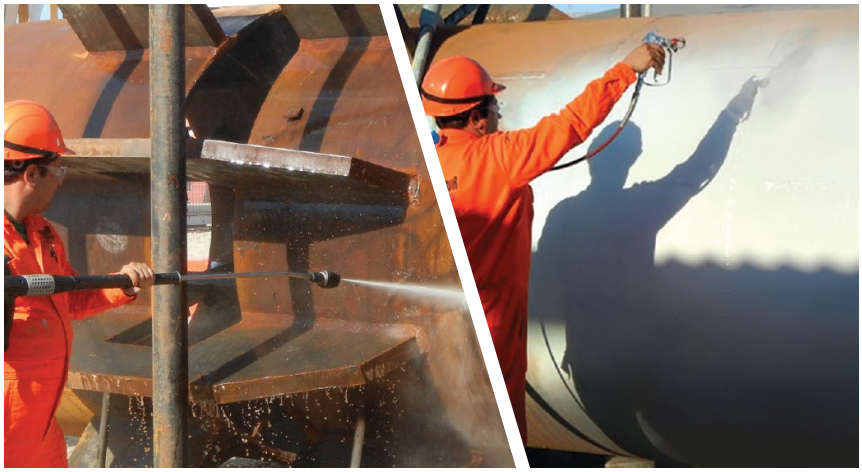
A new class of coating that is changing the industrial coatings industry.

Water-based NanoPrep, eliminates the necessity for expensive and time consuming surface preparation such as abrasive blasting with a simple, lower cost, low pressure power wash.

NanoPrep is designed to be applied on rusted damp or dry surfaces to cure and protect the substrate.

NanoPrep works by chemically reacting with iron and iron oxide (rust) to form an iron phosphate layer and creates a Nano bond with other metallic and painted surfaces. The chemically bonded layer is insoluble and extremely corrosion resistant. This “bonding” process also provides for extremely good adhesion and flexibility.

NanoPrep consists of a one component water based primer and topcoat.



JUST PRESSURE WASH (3500psi)

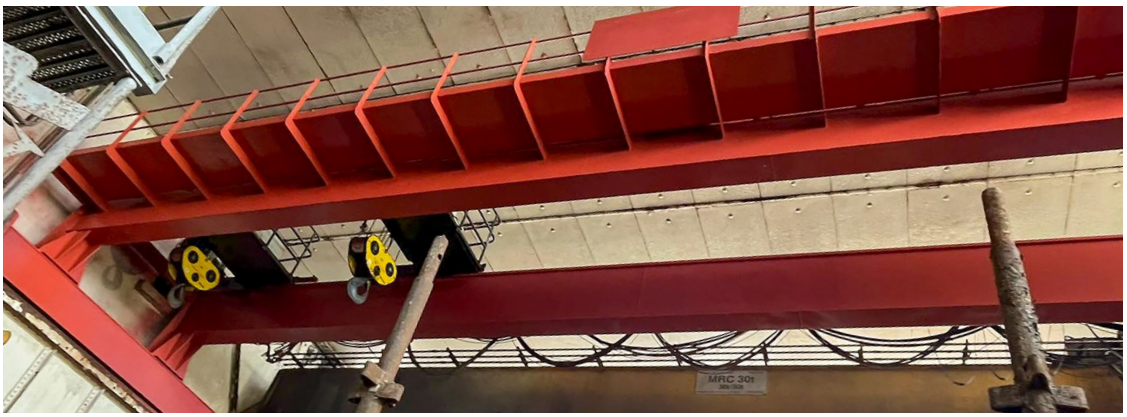
- No Blasting
- No heavy protective gear
- Chemically reacts for perfect adhesion & top performance
- Quick drying – saves time

AND COAT

- No VOC’s
- Safe and simple to use
- Non-flammable
- Long shelf-life
- Primer for many topcoats

NanoPrep’s surface preparation technology allows industrial coating application in areas where it is difficult, cost prohibitive or impossible to perform surface preparation by abrasive grit blasting.

Upon application of the product to the substrate “Nanofusion” takes place enabling deep penetration into the rusted substrate creating a stable, high bond strength base to which non solvent based or low solvent content top coats can be applied.



The adhesion of top coats such as International, Jotun, PPG, etc., to NanoPrep is outstanding.

There is no doubt that the best form of surface preparation is abrasive grit blasting which is usually a requirement if the coating manufacturers’ minimum adhesion values are to be achieved.

However NanoPrep will typically achieve 70 to 80% of the coating manufacturers stated adhesion values for a fraction of the cost of conventional surface preparation techniques.

NanoPrep is a one component, waterborne, acrylic co-polymer composition that reacts and cross-links with rusted steel surfaces, clean steel, painted steel, aluminium, and/or galvanised steel surfaces creating superior anticorrosive properties.

NanoPrep is non-hazardous, environmentally friendly and non-flammable.

Can be applied to damp or dry surfaces as a primer or finish coat.

REZItech
Belzona® Protective Coatings | Vacuum Pump Supply and Repair, RezíSafe Environmentally Friendly Products

The Proven Alternative to Grit Blasting

Preparation

Before applying NanoPrep the substrate should be washed to remove residual oils, salts and contamination. In extreme cases, a hot detergent wash may be required.

NanoPrep works at its best when applied to “tight rust”. To achieve a suitable substrate prior to application of NanoPrep, surface preparation by water blasting at 3500psi or mechanical preparation by wire brush is appropriate.

NanoPrep can be applied to a “damp” substrate but the substrate should not be wet as this will thin the product and reduce its effectiveness.

Mixing

Thorough mixing of NanoPrep is essential. Mixing should be performed with a high torque drill at LOW SPEED.

High speed mixing will create air bubbles in the product which must be removed by passing the product through a fine paint filter.

Application

Either two or three coats of NanoPrep will be required before applying your selected top coat.

The first coat of NanoPrep is applied directly onto the substrate and you will see the product penetrate into “tight rust”. The Nano technology (particles less than one micron in size) work the product deep into the substrate, converting the iron oxide to iron phosphate and incorporating it into the high build primer. The initial coat of NanoPrep may appear somewhat “motley” and inconsistent in colour.

After approximately 2-3 hours (ambient temperature 20˚C), it is necessary to apply a second coat. The second coat is applied directly over the stabilised first coat. This coat should comprehensively cover the first coat and a very uniform, consistent in colour finish should be achieved.

If a high quality, uniform surface finish is not apparent a third coat may be required. The third coat is only required when heavy rust is present in the initial, untreated substrate.

Again, the NanoPrep is left to cure for two to three hours at 20˚C before apply your selected (non solvent based) steel protection coating.

A vast number of top coats can be applied over NanoPrep including acrylic, water based steel protection paints, two pack epoxies, polyuria coatings and coatings containing no more than 16% solvent.

NanoPrep is not suitable for use with solvent based or silicon based paints.





- NO BLASTING
- NO HEAVY PROTECTIVE GEAR
- CHEMICALLY REACTS FOR PERFECT ADHESION
- QUICK DRYING SAVES TIME
- NO VOLATILE ORGANIC COMPOUNDS
- SAFE AND SIMPLE TO USE
- NON FLAMMABLE
- LONG SHELF LIFE
- PRIMER FOR MANY TOP COATS

R230 TopCoat

MID GLOSS WATERBASED INDUSTRIAL TOPCOAT
APPROVED TOPCOAT FOR NANOPREP

ReziSafe R230 Top Coat is a Mid Gloss, 'single pack' self cross linking industrial waterbased top coat that offers excellent surface protection.

ReziSafe R230 has been developed as an ideal topcoat for NanoPrep which can successfully prime damp rusty surfaces, galvanised steel, aluminium or stainless steel with minimum surface preparation.

R230 provides UV protection so it can be used to protect against external elements.



Preparation

Metals, bare rusty steel, galvanised steel, aluminium, stainless steel prepare and coat with NanoPrep as per its specification (Refer TDS and applications sheets). Prepainted Surfaces: Remove any grease, oil, dust or dirt.

Application

Thoroughly stir paint and contents before and during use with a wide flat stirrer. Avoid application/drying in excessive hot conditions or temperatures below 10˚C. For good results always apply two coats.

Brushing/Rolling small areas use R230 as is. For Larger areas thin with water approx. 10-15% (100 – 150mL/ Ltr).

Spray Conventional or Airless; Thin with water approx. 10-15% (100 – 150mL/ Ltr) with smaller tip guns further thinning could be required.

Use effective ground/drop sheets to protect area from overspray or spillage.

Drying Times

Under normal conditions, touch dry – 30 minutes; recoat – 2 hours.

Coverage

8-12 square metres per litre depending on porosity & roughness of surface. Allow extra when spraying as certain structures and shapes can cause significant loss due to overspray.

Clean Up

Wash with cool water, clean all application equipment and utensils immediately after use. R230 if allowed to dry is a tough resistant coating and will be difficult to remove.

NANOPREP PROVIDES UNIQUE SOLUTION FOR ECO-FRIENDLY SURFACE PREPARATION

Perfect solution for common corrosion issues on pylons

Industry:	Marine
Application:	Protective coating on corroded and submerged pier pylons
Products:	NanoPrep, Belzona 5831, Wattyl DTM985
Customer Location:	Far North Queensland, Australia
Application Date:	July 2023







Pier pylons before, during and after corrosion protection work

Problem

A common challenge in addressing corrosion on pier pylons or any structure near water is that you are unable to perform abrasive blasting. Most protective coatings rely on this type of surface preparation to ensure long-term performance in these harsh environments. This is particularly difficult in the tidal zone where the pylons will be submerged in water within hours.

Until now, there have been no products on the market that provide a good long-term solution to this problem. Introducing NanoPrep!

Application

NanoPrep provides the perfect **eco-friendly** surface preparation solution.

The product **converts rust** into an iron phosphate layer that adheres very strongly to the substrate through nanotechnology. The product also has **high tolerance to chlorides** due to its acidic base which neutralises the chlorides. This provides a high quality surface preparation for appropriate coatings to be used.

As the tide goes down, the pylons are **pressure washed to remove loose rust scale.**

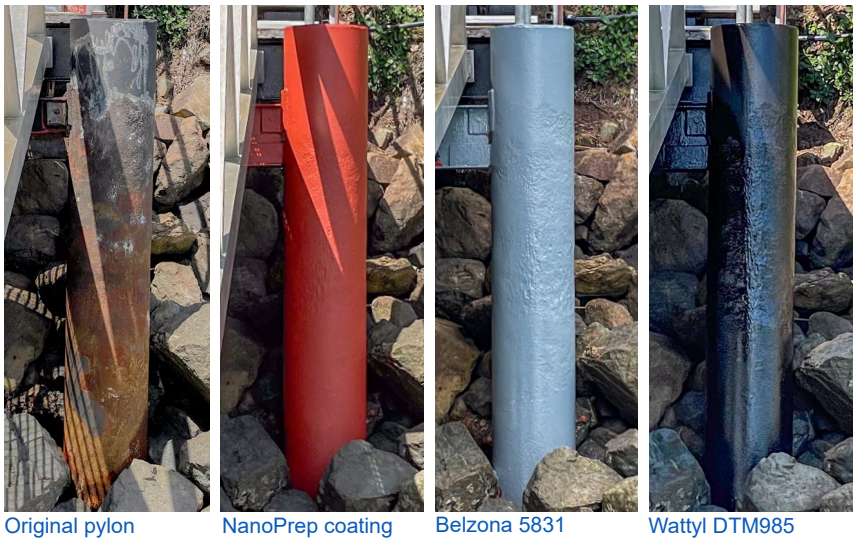
One coat of NanoPrep is applied and left for two hours to dry.

Belzona 5831 moisture tolerant epoxy is then applied, which can cure underwater as the tide rises.

The next day, a gentle pressure wash to remove surface chlorides and then a thin coat of Nanoprep is applied and left for two hours.

The final coat of Wattyl DTM985 is then applied for UV and immersion protection.

Job done!



Original pylon | NanoPrep coating | Belzona 5831 | Wattyl DTM985

EXTERNAL COATING ON ASH HOPPER

NanoPrep provides surface preparation without blasting

Industry:	Power
Application:	External Coating on Ash Hopper
Products:	NanoPrep, Jotun Top Coat
Customer Location:	NSW, Australia
Application Date:	Nov 2024

Problem

A coal-fired power station experienced an issue with the existing coating on an ash hopper degrading over years in service. This degradation has exposed the underlying steel, leading to accelerated external corrosion on the ash hopper's casing. To address this, the customer required a new external coating to protect the ash hopper from further corrosion. Abrasive blasting was not an option for surface preparation due to the close proximity of other workers and the customer requiring a fast turnaround in order to complete the work during a major shutdown period.

Application

NanoPrep was recommended as an alternative form of surface preparation since it **did not require abrasive blasting** or removal of the existing paint system that was still in good condition. The application was completed by the Rezitech Services onsite team.



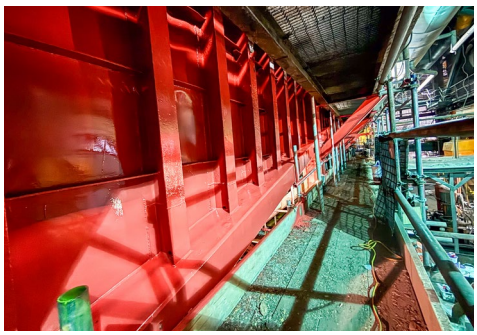
Ash hopper existing condition



Pressure washing the ash hopper



Spraying NanoPrep



Two coats of NanoPrep applied



Spraying of the top coat



Completed application - Externals of the ash hopper

Outcome

The use of **NanoPrep** for surface preparation proved to be an excellent solution, enabling a quick turnaround by eliminating the need for abrasive blasting. NanoPrep not only saved a significant amount of time but also allowed the work to proceed safely alongside other workers working on the externals of the casing, which would have been impossible if abrasive blasting was used.

FUEL TANK CORROSION PROTECTION

NanoPrep protects fuel tanks without abrasive blasting



Fuel tanks protected with NanoPrep

Industry:	Oil & Gas
Application:	Fuel Tank Corrosion Protection
Products:	NanoPrep
Customer Location:	Qld, Australia
Application Date:	Oct 2025

Problem

A 110,000-litre above-ground carbon-steel diesel tank in Queensland, required a high-performance anticorrosive coating system. Year-round rain and condensation creates a high risk of under-film and crevice corrosion, especially at saddle supports and tank-to-concrete interfaces. In addition, the coastal environment adds airborne chlorides which accelerates corrosion, while continuous sunlight and elevated surface temperatures demand a UV-stable, heat-tolerant topcoat to prevent premature coating degradation. Given the limited clearance beneath the tank and the presence of adjoining critical infrastructure, abrasive blasting for surface preparation was not feasible; therefore, an alternative method was required.

Application

NanoPrep was chosen as the preferred surface-preparation method since it offers an effective, long lasting, low-cost alternative to abrasive blasting using a simple low-pressure power wash (3,500 psi) combined with power-tool cleaning. NanoPrep's unique technology allows it to penetrate deep into existing painted surfaces for high adhesion and acts as a tie coat for many compatible topcoats.



NanoPrep eliminates the need for abrasive blasting, enabling surface preparation via a simple low-pressure wash. It applies easily by roller, brush, or airless spray and is well suited to tight or difficult-to-access areas.



Upon application of NanoPrep to the substrate, Nanofusion takes place enabling deep penetration into the rusted substrate to create a stable, high-bond strength base suitable for non-solvent or low-solvent top coats.

Outcome

NanoPrep enabled effective surface preparation using low-pressure washing and power-tool cleaning, avoiding the excessive cost and downtime of abrasive blasting. The coating system delivered strong adhesion and robust corrosion resistance at saddle supports and tank-to-concrete interfaces, and a compatible UV-stable, heat-tolerant topcoat suited to Queensland conditions was successfully applied. The outcome is extended service life, protected fuel quality, and simpler future maintenance.

PIPEWORK CORROSION PROTECTION

NanoPrep protects pipework without blasting

Industry:	Oil & Gas
Application:	Offshore Pipework Corrosion Protection
Products:	NanoPrep, PPG PSX 700 Topcoat
Customer Location:	New Zealand
Application Date:	Jan 2019

Problem

An offshore Oil & Gas facility required coating remedial work carried out on pipework located in areas where it was not possible to perform surface preparation by abrasive blasting due to wet and icy surfaces, and the costs associated with shutting down operations.



Condition of pipework before coating remedial work

Application

NanoPrep was selected as the preferred surface preparation solution as it provided an effective, low cost alternative to abrasive blasting in the form of a simple low pressure power wash (3500 psi) combined with power tool cleaning. In addition, it is suitable for a variety of topcoats and can be applied to rusted, damp or dry surfaces. After application, a final layer of PPG PSX 700 was applied.



Two coats of NanoPrep applied by brush at 75µm



One coat of PPG PSX 700 Topcoat applied at 75µm

Outcome

Using **NanoPrep** for surface preparation proved to be a highly effective solution, delivering a rapid turnaround by eliminating the need for abrasive blasting. This allowed the customer to ensure long-term protection of the pipework without operational shutdowns whilst saving time and money. Six years on, the coating remains in very good condition.

OVERHEAD CRANE RESTORATION

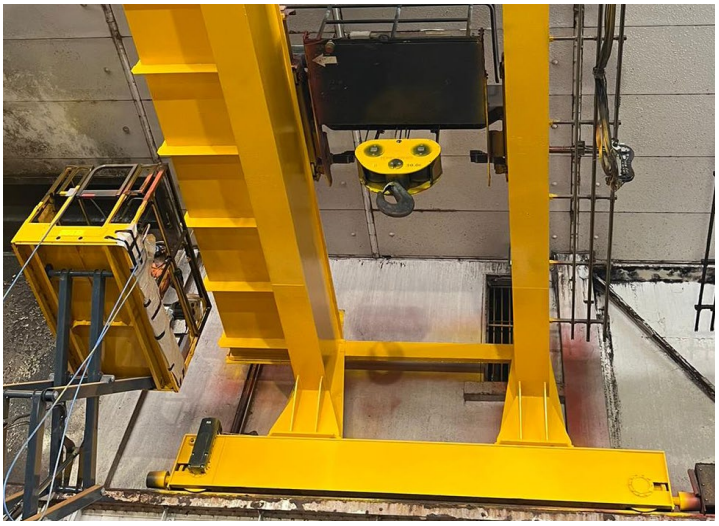
NanoPrep provides surface preparation and corrosion protection without blasting

Industry:	Pulp & Paper
Application:	Crane Restoration
Products:	NanoPrep, Jotun XP Hardtop
Customer Location:	QLD, Australia
Application Date:	Oct 2024

Problem

Pulp and Paper facilities are renowned for their corrosive environments which necessitates their steel structures, including this overhead crane, to be maintained and protected against these elements.

Due to being 20 metres overhead and surrounded by critical equipment, abrasive blasting was not an option so the client needed an alternative type of surface preparation for a protective coating to be applied.



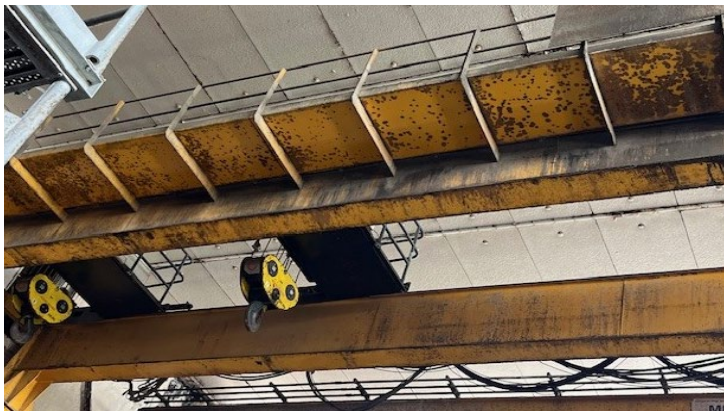
Overhead crane used in a pulp and paper facility, fully protected from corrosion following surface prepapration and coating with NanoPrep

Application

NanoPrep provided the perfect solution for this application. First, the crane was high pressure washed at 3,500psi to remove loose rust, coating and any contaminants off the surface.

Thereafter, two coats of **NanoPrep** were applied by airless spray. Finally, two coats of Jotun XP Hardtop in safety yellow were applied to provide added long term protection and a nice aesthetic finish.

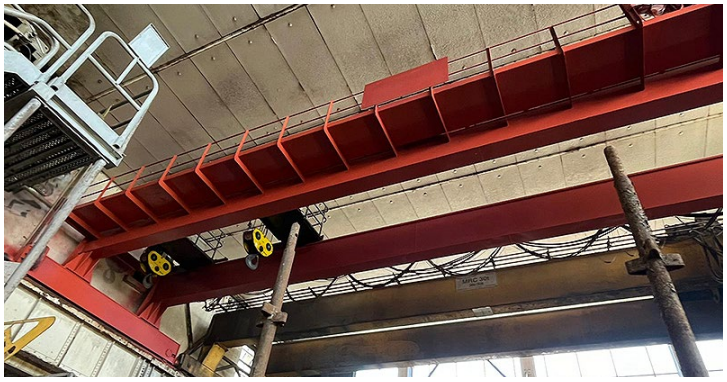
The job was done during regular operating hours without causing disruptions or requiring production to be stopped.



Original condition of crane

Outcome

Previously, during 2019, the client had the other crane's walkways and motor pans coated in NanoPrep as a trial. Five years later, they are is still in perfect condition and as a result the client decided to coat another crane that was showing signs of degradation. The client is very happy with the result and requested additional cranes and other equipment to be protected using **NanoPrep**.



NanoPrep applied to crane via airless spray gun after high pressure wash



Final result after two coats of Jotun XP Hardtop

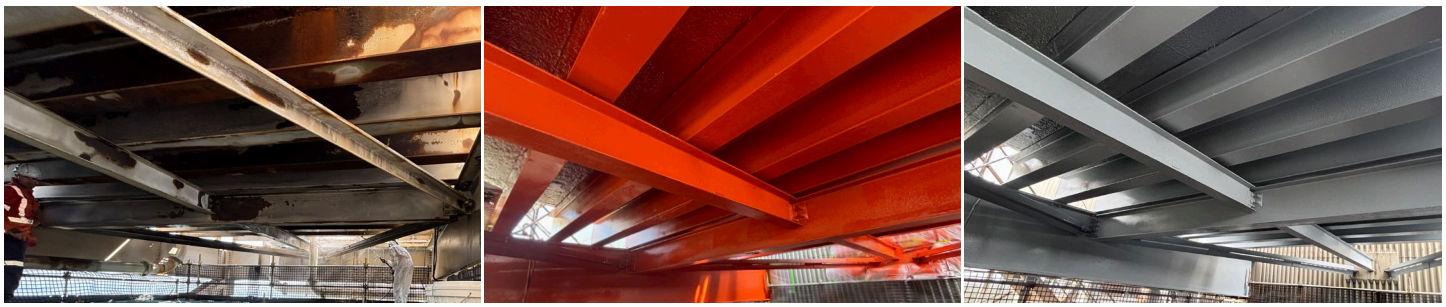
WATER TANK CORROSION PROTECTION

External Tank and Steel Support Repair and Coating

Industry:	Power
Application:	Water Tank Corrosion Repair & Protection
Products:	NanoPrep, R230 TopCoat, Belzona 1111
Customer Location:	NSW, Australia
Application Date:	Dec 2025

Problem

A power plant's domestic water tank exhibited severe external corrosion requiring structural repairs and a long-term protective coating system. Abrasive blasting was not a viable surface preparation method due to the high costs of containment, encapsulation, and removal of the existing lead-based coating.



Corroded tank underside and steel supports before repairs (left), after application of NanoPrep (middle) and R230 TopCoat (right)

Application

Surface preparation required only high-pressure water washing, eliminating the need for abrasive blasting. Structural repairs were completed using **Belzona 1111** prior to coating application. Weld seams, edges, and difficult-to-access areas were stripe coated by brush and roller before the steel supports, tank underside, tank sides, and roof were coated with two coats of **NanoPrep**, followed by two coats of **R230 TopCoat** applied by airless spray to provide long-term corrosion and UV protection. Both products proved highly user-friendly due to their single-pack formulation, enabling efficient and straightforward application throughout the project.



Tank sides (left) before coating, during application of NanoPrep (middle), and after completion with R230 Topcoat (right)



Tank roof before coating (left), after application of NanoPrep (centre), and completed with R230 TopCoat (right), restoring the corroded surface and providing long-term protection

Outcome

The project was completed in just five days, with severely corroded areas repaired using **Belzona** and protected with **NanoPrep** and **R230 TopCoat**. By eliminating abrasive blasting, the project avoided containment and lead paint removal costs while still delivering long-term corrosion and UV protection for the tank and supporting steelwork.

WATER TANK CORROSION PROTECTION

Surface preparation and coating for long term protection against corrosion using NanoPrep

Industry:	Water & Wastewater
Application:	Surface preparation and coating
Products:	NanoPrep, ReziSafe R230 TopCoat (White)
Customer Location:	SA, Australia
Application Date:	September 2021

Problem

Our client had a black steel water tank that had not previously been coated and was starting to rust.



Original condition of the black steel water tank



Tank after the application of ReziSafe R230 Top Coat

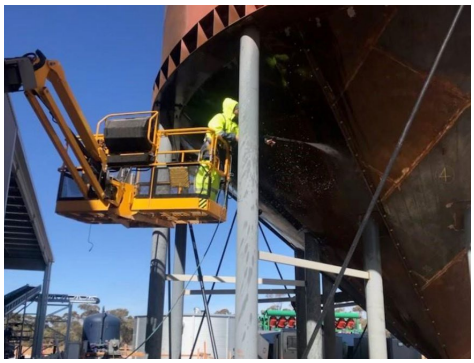
As a result, they required the rust on the surface to be removed or chemically transformed. In addition to the surface preparation, a coating was required for long term protection against corrosion and underfilm corrosion.

Due to being on a food production farm, they were concerned about the environmental impacts of grit blasting near crops and water, and wanted to avoid the substantial cost of scaffolding and encapsulation.

Application

NanoPrep was the preferred product for surface preparation to protect from underfilm corrosion and ReziSafe R230 Waterbased Top Coat (white) was applied as the final layer. First, a high pressure wash at 3,500psi was performed to remove any loose rust and chloride from the surface.

Then, two coats of **NanoPrep** was applied via airless spray to provide long-term protection. In order to provide UV protection, ReziSafe's R230 water-based TopCoat was applied by airless spray as the final layer.



Surface prepared by high pressure wash



Application of NanoPrep coating



Tank after the application of NanoPrep

Outcome

NanoPrep provided an easy to use, cost effective and environmentally friendly solution ensuring long term protection against corrosion and underfilm corrosion. Large cost savings were achieved due to the removal of scaffolding requirements (cherry picker used) and no requirement for abrasive blasting, just a high pressure water wash.

NanoPrep

REZitech

Belzona® Protective Coatings | Vacuum Pump Supply and Repair
ReziSafe Environmentally Friendly Products

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