CORROCOAT news

March 2025

Global Reach, Local Pride:

Celebrating the success of our international partners.

"And here we are today after 50 years. It has been an amazing journey"

CELEBRATING 50 YEARS 1974 - 2024

Also in this issue...

Corrocoat Ltd THE BEGINNING

Expanding Corrocoat in to over 30 countries and employing in excess of 1000 people globally, Charles Watkinson, Founder and Corrocoat Chief Executive, shares how and why he set up the company 50 years ago and thanks everyone who has been part of the journey.

Charles Watkinson,
Founder and
Chief Executive

In 1974 I was working for a company south of the river in London. I travelled with the waking sparrows on Monday mornings, from my home near Leeds, to Peckham in London to start work at 08:30 and back again on a Friday evening, lodging during the week in Greenwich Village. It worked quite well for six months, but then one weekend in late October I was needed to advise on a project in the Middle East and I could not be contacted. No mobile phones in those days!

The following week, my boss told me I needed to move to London and made me a very generous offer to do that, but said if I refused, I would be fired. I thanked him and resigned on the spot. Driving back home I thought how was I going to survive with a large mortgage and two small children to feed. I determined to start my own company.

My wife was not impressed when I told her what had happened and said I should look for another job, but I was determined to go my own road. I contacted an associate I had worked with in a previous company called Glassflake UK Ltd and asked if he would be interested in joining me. He agreed and we looked for premises in which to start work. I chose the name Corrocoat and a week later agreed the rental of a building in Hunslet Mills, just some 400 metres from our current head office. Then on Friday the 22nd of November set to trying to find work.

I had some contacts with BP shipping and knew there were some of their pumps still in limbo from Glassflake UK going into liquidation. They agreed I could refurbish them and work commenced. The early months were fraught, but as each problem arose it was solved, sometimes whilst running around with buckets to catch the rain pouring through the leaking workshop roof. In early 1975, Noel, my partner who also dealt in antiques, decided he was no longer interested and he was paid out, whilst at the same time Hugh, another previous colleague from Glassflake, discussed joining hands and we became business partners. The company was incorporated a couple of months later and became Corrocoat Ltd. And so the long and winding, sometimes tortuous, sometimes stressful, sometimes hilarious road began.

The company grew and grew, so new premises were required along with employees. The company expanded into the overseas market by one customer: Cunard, insisting we service them in Holland and so the overseas arm began expanding rapidly into other territories; Singapore and South Africa.

And here we are today after 50 years. It has been an amazing journey and as more than one person has said, it would have made a good TV series. So, I would like to thank all those employees, some of whom have been with us almost from inception, along with our customers, for aiding me and the company to reach this impressive milestone. Thank you each and every one for your efforts and loyalty in helping reaching this goal.

I am also proud to say

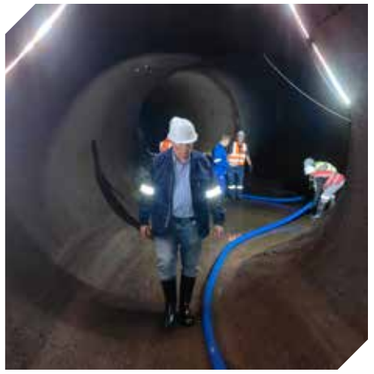
THIS IS NOT THE END

Corrosion Protection of Muela Hydropower Station

During inspections of the Transfer and Delivery Tunnels between September and November 2019, it was established that the internal corrosion protection lining in all sections of the tunnels (that are steel lined) was wearing off and if left for too long, there was a risk that steel tunnel sections would corrode. The specialists advised that the tunnel could safely be operated for a period of around 5 years (October 2019 to October 2024). Safe operation of the system significantly beyond the 5 years could not be guaranteed.

As a result of this, Lesotho Highlands Development Authority (LHDA). understood that the entire system would need to be taken out of service for an extended period, for major refurbishment of the steel tunnel sections, in order to protect one of Lesotho's major assets for future generations and hence why the 2024 – 2025 Tunnels Outage was actioned.

Corrocoat SA (Pty) Ltd, partnering with LHDA, undertook extensive corrosion protection refurbishment, maintenance and repair works in the steel tunnels, requiring a complete shut-down of the entire Water System as well as at Muela Power Station, to undertake the critical corrosion protection refurbishment work.



- Corrocoat Zip-E glassflake high solids epoxy to 1000 microns in a single coat.
- Circa 20,000m² of steel liners up to (3 and 4m in diameter) to be refurbished over 6 discrete project sites throughout the tunnel system (the furthest site being 2 hours' drive away over the mountains to Katse Dam).
- 3 months to complete/Critical Path.
- Water supplies 80% of Gauteng's water in South Africa – (largest economic hub in South Africa) – Critical and high-profile project for both Lesotho and South Africa, so that South Africa does not run out of water.
- System supplies 780 million cubic metres of water per annum to South Africa and generates hydro-electric power for the Kingdom of Lesotho.
- 100% 3rd Party QC Inspection required.
- Almost 300 people involved in the project with over 200 people being Lesotho people (Basotho).
- Much infrastructure to be left in Lesotho on completion of the project such as accommodation camps, electrical switch gear etc.

PRODUCT USED: Corrocoat Zip-E

Extending the Lifespan of a Cooling Tower Fan Blade

The Challenge: Lifespan extension of industrial fan blades.

With the front edges of a cooling tower fan showing signs of corrosion, as well as general wear and tear, the facility owners sought Corrocoat Japan's help to restore the fan blades, in order to extend their lifespan.

The fans consist of four variable pitch blades made of epoxy composites with glass fibre reinforcement (FRP) and are hollow in construction. The blades are designed to withstand the hot and humid conditions of a cooling tower. Maintaining the blades' durability, as well as the aerodynamics, is essential.

The team started with a grinder to remove the corroded blade edges, maintaining as close an alignment to the original shape as possible. The blades were then cleaned and degreased using solvents. Glass cloth and Corrocoat 600 Lamination Resin was applied to repair the severely corroded areas and profile adjustment made using sandpaper, to refine it to its original shape. A layer of Corrocoat 600 Series was then applied for additional endurance.

The ease and speed of applying Corrocoat products on-site to protect against erosion and extend the useful life of the fan blades, motivated the client to request the repair of an additional unit. It also persuaded them to introduce Corrocoat products to other types of equipment within their facilities.

PRODUCTS USED:
Corrocglass 600 Lamintation Resin
Corroglass 600 Series
Fibreglass Cloth

On-line leakage stop of CO_2 pipeline Elbow

Industry: Petrochemical

The Challenge: Stopping CO_2 leak on pipe elbow and avoiding shut-down.

A petrochemical plant in the Czech Republic experienced a CO_2 pipeline elbow leak that had the potential to take a section of the facility offline for several days. The leaking externals of a carbon steel pipeline elbow had previous unsuccessful coating repair attempts to stop the leak. Expensive downtime due to off-site repair or full replacement could be avoided with an online repair solution utilising Corrocoat products.

Following an inspection, surface preparation of the elbow was undertaken on-site whilst work got underway with fabrication of a 4 mm thick FRP enclosure, using Corroglass 600 Lamination Resin and Multiaxial Fibre Glass Cloth 600 g/m² in the workshop.

Once the elbow was prepared and primed with Corroglass 600 Series, the enclosure was installed around the elbow and filled with Corrofill VE on-site. Strength was further bolstered with an additional layer of 600g/ m² cloth before being coated with Polyglass VEHA.

PRODUCTS USED:
Corroglass 600 Lamination Resin + Multiaxial Fibreglass Cloth 600 g/m²
Corrofill VE
Polyglass VE HA

RenewableUK
Global
Offshore Wind

Global Reach

June saw Corrocoat exhibit at Global Offshore Wind 2024 in Manchester. The annual event was attended by over 5,000 professionals from over 50 countries, making it a brilliant way to support our international partners. With global offshore wind expected to hit $72bn by 2030, Corrocoat has allocated extra resources to develop a strong presence within the market.

Refurbishment of 8 Cooling Tower Fan Blades

PRODUCT USED:
Polyglass Zipcoat

Industry: Power

The Challenge: Extending the lifespan of cooling tower fan blades.

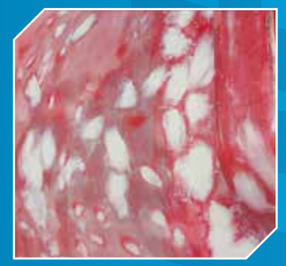
The Solution:

Corrroserve were commissioned by a UK gas-fired power plant to repair and protect multiple sets of cooling tower fan blades. These fiberglass reinforced polymer (FRP) blades had been in operation for over 25 years and showed visible signs of wear and damage.

The blades were abrasive blasted to expose and remove any weak material and to provide a surface profile, then a low viscosity primer was applied to consolidate the surface and aid adhesion. Polyglass Zipcoat, a Polyester glassflake coating system, was applied to repair and protect the substrate. Additionally, Rezorect brushable ceramic was applied to the leading edge for extra protection against surface abrasion and wear.

After completing the final balancing of the blades, they were recommissioned in June 2024, with an extended life expectancy longer than that of the original blades.

Before



After

Protection of Water Treatment Plant Concrete Bunds & Floors Against 98% Sulphuric Acid.

Industry: Power

PRODUCTS USED:
Plasmet ECP
Corrofill E
Plasmet AR3

Corrocoat was nominated as the specialist Contractor for the rehabilitation of the concrete acid proofing to the Neutralisation Sumps and surrounding concrete areas in a Water Treatment Plant, to protect the concrete surfaces against highly acidic corrosion attack.

Condition of the concrete after abrasive blasting.

After application of 1st coat of Plasmet ECP Primer.

The project consisted of new build storage bunds and replacing the existing lining of the Neutralisation Sumps with the Corrocoat Concrete Acid Proofing System.

The process started with a complete strip and removal of existing failed concrete acid protection lining to 1950m² of concrete sumps & bunded areas, using mechanical means.

Following an abrasive blast clean & vacuum of the concrete surfaces, a 1st coat of Plasmet ECP (Epoxy Concrete Primer) as a concrete penetrant was applied. This was followed by application of Corrofill-E (putty-grade building compound), to concrete surface.

A 2nd coat of Plasmet ECP was then applied in conjunction with 25g C-Glass fibre tissue laminate for increased structural stability and to minimise the potential for shrinkage during polymerisation.

Finally, there was an application of ± 4100 litres of Plasmet AR3 solvent-free Epoxy, designed for immersion in 98% Sulphuric Acid. Total Dry Film Thickness: 1500µm average DFT.

Following application of Corrofill E.

Application of 2nd coat with C-Glass fibre laminate.

Application of Plasmet AR3 in progress.

After application of Plasmet AR3.

Relining 6 CIP Tanks

Industry:
Power

The Challenge:
Repair the lining of 6 Carbon in Pulp (CIP) tanks, following failure of existing coating system.

PRODUCTS USED:
Polyglass VE
Corroglass
Fibreglass Cloth

The Solution:

Due to prior experience lining tanks in the Pustynnoye field, Corrocoat Caspian LLP was approached to apply internal linings to 6 CIP tanks and a thickener, at the Akbakai gold processing plant after the previous coating system failed.

Maintaining production at Akbakai required the lining the tanks consecutively on a tight schedule, which added to the pressure on the Corrocoat team.

The tanks were prepared via abrasive blasting to near white metal, laminated with fiberglass using Corroglass 600 Lamination Resin before being lined with Polyglass VE. The Corrocoat Caspian LLP team was able to complete the work ahead of schedule whilst following all quality procedures and standards. This allowed for the launch of the CIP tanks and thickener at full capacity ahead of schedule.

Low Pressure Composite Repairs at Base of Coal Ash Silos

Industry:
Power

The Challenge:
An engineer from a power plant in Florida contacted Corrocoat USA to look at two of their coal ash silos that had two different types of failed external wrapping systems. These were located at the base of the silo (which was 90 foot (27.4m) off the ground, causing a cavity that could have allowed valuable coal ash to weep from the bottom of the silo and into the atmosphere.

Upon inspection, on Silo #1, the rubber liner was damaged in multiple locations and was leading to concrete deterioration and crevices

On Silo #2, there was a polymer liner that failed at the seam, thereby allowing an ingress of moisture and escape of coal ash.

Each silo was 50 feet (15.24m) diameter. The repair included coating and sealing 16 inches (40.64cm) up onto the steel silo and 12 inches (30.48cm) onto the concrete base.

The Solution:

Corrocoat's Sales Engineer arrived on site within a week of the call. One week after that, a plan was devised for the removal of each of the failed wraps, using pneumatic tools, working a portion of the surface from 125 foot (38.1m) using manlifts.The steel substrate was primed using Plasmet ZF, whilst Plasmet ECP was used for the concrete. A layer of multiaxial fibreglass followed and then finished off with an additional coat of Plasmet ZF and a polyurethane topcoat for UV protection.

An unexpected problem occurred whilst filling holes with the Corrofill E; there were hundreds of holes ranging from the size of a pinhead to the diameter of a walnut.

Although the silo was said to be depressurized during the operation, the shape and size of the silo created a natural draft and therefore pressure on the silo.

After filling about 80% of the holes, the pressure increased on the remaining cavities to the point that pinholes formed in the Corrofill E once placed. It took several passes and significant skill and patience to finally stop all of the air from escaping and fashion the filler to a shape that would allow for effective fiberglass application.

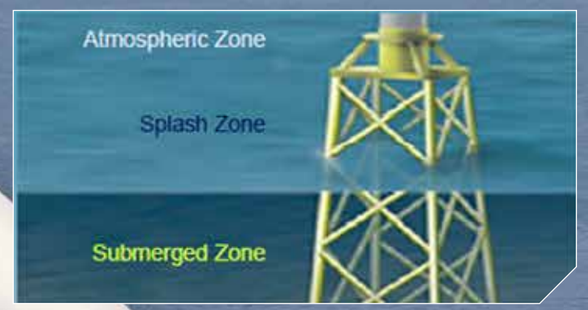
Ultimately, Corrocoat was up to the challenge and solved a difficult and potentially expensive problem. The work carried out by the team is predicted to protect the equipment for the foreseeable future - the life of the plant.

PRODUCTS USED:
Plasmet ZF
Plasmet ECP
Corrocoat Epoxy Laminating Resin (ELR)
Corrothane AP (PU topcoat)

Polyglass Zipcoat Zone Protection

Corroocoat Zipcoat brings decades of protection in a single coating system to the immersed, tidal and atmospheric zones of off-shore wind turbine jackets. Specifically formulated for marine environments, this rapid curing isophthalic polyester Glassflake coating has a proven track record of the highest levels of applied corrosion protection in aggressive marine conditions.

- **One product for all zones.**
- **Can be applied via airless spray, brush or roller application.**
- **Can be over-coated immediately once gelled.**
- **Fast cure time.**
- **Extra corrosion resistant, highly refined, patented, Glassflake.**
- **30 year projected service life.**
- **Norsok approved.**
- **M501 Systems 1 and 7.**



CELEBRATING 50 YEARS 1974 - 2024

"Helping to bring basic services to hundreds of people"

Working fast to get as much done before the heavy rains come later this month, Kilyan, the burly builder from Mtwara, southern Tanzania, is making good progress with the simple one-storey building which is to become the new Montessori Nursery for the villagers of Kilidu. This is the latest project of the small charity, Mtwaralinks, formed by volunteers Adrian and Caroline Strain of Whitkirk, Leeds.

The small hamlet of Kilidu lies on a gentle slope of cashew trees above Kitere, some forty miles west of Mtwara. Between March and November it is hot and dry but from November to March, at any time the dusty path can become a sprawling lake overnight. At such times even the Landcruiser cannot get through. All the more ironic, then, that for most of the year the villagers have to walk miles for water.

Kilidu comprises about forty houses for more than a hundred and fifty people but the surrounding land is home to many more families, all of whom are more than two hours walk from the nearest clinic and the nearest school.

Corrocoat has sponsored the construction of the nursery, toilet block and water tank, for which the villagers are extremely grateful. Sister Tadea, Regional Superior of the Sisters of the Holy Redeemer, which owns the land and will manage the nursery expressed her thanks.

"We cannot thank Mr Watkinson enough. This latest donation, coming on the heels of the solar panel and pump for the water supply, both generously donated by Corrocoat, are helping to bring basic services to hundreds of people."

The project is costing £20,000, but for the future there will remain the task of securing resources for the children – paper, colours and materials for teaching are still needed. It is hoped that young people from the village will graduate through school and college to return as kindergarten teachers, but the costs of their education is yet to be secured.

"The facility offers great hope for the future," said Adrian Strain of Mtwaralinks. It provides a focal point for community activities but also a centre for training as well as the first building blocks of an education for the children of the area."

The kindergarten will accommodate forty children but will also serve as a community hall for local residents. For the future, it is hoped that classes for adults in literacy, accounting and other basic skills will be held there.

Anyone wishing to help with this project should contact Adrian Strain on +447817388332 or by email af.strain@ntlworld.com
Anyone wanting to learn more about the work of Mtwaralinks can visit their website at www.mtwaralinks.com

New Appointment in the US

Following 15 years at Corrocoat USA, having joined as a Sales Engineer in 2010, we'd like to congratulate Josh Tankersley on his recent promotion to Director. Josh has played a key role in driving the significant growth of the company in the USA over the past decade.

WELCOME
Nick Jackson
Business Development Manager

We would like to welcome Nick Jackson to the Corrocoat network. Nick joins us as the UK Business Development Manager and will be responsible for driving business growth within the company. Nick joins the team with a wealth of contacts and is also looking forward to research new market opportunities and overseeing growth projects.

Don't forget to follow us on social media for regular updates including on-site photos, case studies, videos, brochures and more.

/Corrocoat-limited **@Corrocoat**

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