

CORROCOAT NEWS

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Welcome to the latest edition of our newsletter

This year, we are celebrating our 40th anniversary as a leading manufacturer of high quality coatings. From small beginnings, we have grown into an international company operating from offices in 36 countries across five continents.

The business was founded in 1975 by CEO – Charles J. Watkinson. Originally an engineering company refurbishing capital equipment, the business has now grown to what it is today – A world leader, providing turn-key corrosion engineering and long-term protection solutions comprising high quality coatings, advanced engineering and cutting edge expertise.

"During the past 40 years we have built a tradition of excellence in providing innovative coating materials," said Charles. "We continue to work closely with our customers to provide advice, products and technical support to meet their unique and demanding performance requirements. We hold many industry approvals and are ISO 9001 certified, assuring consistent quality and rigorous attention to maintaining high standards."

"We are grateful to all our customers. Our reputation has been built on their projects and we thank them for their on-going trust and confidence. We are determined to remain at the forefront of our field supplying market sectors old and new with unrivalled protection."

Also, February saw a Corrosioneering Group rebrand, where to strengthen how we represent ourselves in our UK target markets, we launched CorroServe, our stand-alone corrosion engineering and application technology company. Its early days but already we see evidence that this new brand structure is taking us forward with real momentum.

We hope you find this newsletter interesting and informative – remember we are here to help with all your anti-corrosion and coating needs.

From all the team at Corrocoat.

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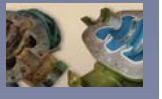
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Marine Pump Casings Refurbished at a Fraction of Replacement Cost

Proven Expertise Wins Major Power Station Contract

Corroserve has won a major contract to manufacture and commission new butterfly valves for Peterhead Power Station. Operated by SSE, Peterhead is one of the UK's largest gas-fired power stations and the recent recipient of a £15m contract from the National Grid.



The contract covers the manufacture, corrosion protection and installation of a total of 14 CW large bore butterfly valves ranging from 54" to 96" diameter. We also carried out coating work on other equipment both on-site and in our Leeds workshops.

SSE made the final decision to award the contract to Corroserve based on a number of considerations, including its ability to meet tight technical requirements, advanced corrosion engineering skills and previous success on similar projects.

Rob Cole, Corroserve's Sales Director commented: "Several companies were invited to tender and we were not the lowest price bidder but for a contract of this type, SSE had confidence that we would be able to deliver to a tight deadline and to specification. Our proven expertise, in house engineering skills and the fact that we would be using tried and tested Corrocoat coating products tipped the balance in our favour.

SUGAR INDUSTRY SEMINAR ATTRACTS 100 DECISIONMAKERS



Technology presentation by Mr. Jackie Dias, Chief Executive, Kirloskar Corrocoat Private Limited.

Kirloskar Corrocoat Private Ltd (KCPL) – our joint venture in India, recently hosted a seminar in Puna around the theme: Extending the life of capital equipment in the sugar industry with high performance coatings and the latest refurbishment technology.

Over 100 delegates from the Indian sugar industry attended the seminar and over several sessions, delegates were given the opportunity to learn how KCPL solutions could provide savings in plant maintenance costs, reduce energy costs and improve production efficiency and how best to use Corrocoat products within their organisations for maximum benefit.

The seminar was a huge success and KCPL are now planning more seminars aimed at other key markets.

POLYGLASS PPA AND VEF EXTEND WORKING LIFE OF ED COATING TANK



Corrocoat Benelux has recently completed a contract for a leading automotive manufacturing company to clean and protect the internal surfaces of an electro-deposition (ED) coating tank to extend its working life.

Using a combination of dip and spray, ED coating plants are used throughout the automotive industry. In these plants, electrically charged paint pigments reach every corner of even the most complex fabrication. Un-deposited material is then washed away and after stoving the final coating becomes hard and durable.

The tank must be kept in a very clean condition, free from anything that could affect the quality of the finished component. After submitting a highly competitive tender, Corrocoat Benelux was contracted to carry out the tank cleaning and coating using Corrocoat materials approved by leading ED coating suppliers.

This involved blast cleaning all surfaces to standard SA 2 ½ before applying **Polyglass PPA primer**, followed by two coats of **Polyglass VEF**. Once cured the coating thickness was spark tested to ensure a pin-hole free minimum thickness of 1500 µm before a topcoat of **VE Veilcoat** applied.

As with many automotive production plants, disruption to production had to be kept to a minimum so the work was scheduled to be completed in a planned outage.

CORROCOAT ZIP-E WINS AVIATION APPROVAL

Following a series of independent tests, Corrocoat Zip-E has now been approved to UK Defence Standard 80-97 – Internal Coating of Aviation Fuel Tanks.

The installation of a coating system is an effective way of protecting steel fuel tanks from corrosion and product contamination, minimising the risk of corrosion products getting into aviation fuel. Any coating used must not degrade the performance of the fuel which it is in contact with, nor must the fuel degrade the coating.

Corrocoat Zip-E fulfils this brief providing durable protection. Achieving Standard 80-97 is a key milestone in our plan toincrease our aerospace customer base.

On-Site Surface Preparation

In many industries it is vital that blast cleaning of key components be carried out quickly and efficiently to ensure that they are re-installed swiftly to minimise costly downtime. Environmental regulations can exclude grit blasting in the open but Corroserve now has a solution by providing clients with an efficient on-site grit blast cleaning service, using a specially modified and equipped shipping container.



Based on 6m and 12m long shipping containers, these fully equipped grit blasting containers can be transported easily to site and in a very short time grit blasting can start in an efficient and controlled manner.



An efficient bucket elevator/air wash abrasive recovery system means that the facility can operate with many types of media so can to tackle most surface preparation processes

BUND PROTECTION IN HYDROFLUORIC ACID CONTAINMENT AREAS

Hydrofluoric acid is a highly toxic but essential component in the nuclear industry. In the event of a breach in a hydrofluoric acid storage tank, a vital element to contain spillage is a series of concrete bunds which also assist clean-up operations and prevent environmental pollution.

After a successful laboratory test program, the client selected the following Corrocoat solution with all application being carried out by Corroserve. The concrete was allowed to age and cure prior to surface preparation then the following coating system applied.

Polyglass WCP concrete primer – applied at 100 µm to seal and stabilise the substrate.
Graphite S – applied at 350-500 µm to allow spark testing after the work is completed.
Polyglass VEF – applied at 1500 µm to give superior resistance to chemical attack.
Veilcoat as a seal coat applied at 300-500 µm.

A small fillet of **Corrocoat VE** and a layer of multi-directional laminate was applied to all wall/floor joints to ensure the system would retain high tensile strength in these areas.

Several lining options were open to the facility operator but by being involved at the design stage, Corroserve was able to give careful thought to the specialised needs of the project and make use of the latest coating technologies.

The client now has a high performance system that will require minimum maintenance, thus delivering reduced lifetime costs.



KCPL completes repeat order for coating blast furnace stove dome

India's biggest private sector steel company – JSW Steel Ltd., operates several manufacturing plants in India and is a world leader in the supply of steel for the automotive, construction and energy markets.

The successful completion of a similar contract at JSW Steel's Vijayanagar works in Bellary, resulted in Kirloskar Corrocoat Private Ltd (KCPL) securing an order to clean and corrosion protect the internal steelwork of a blast furnace stove dome at the company's Dolvis steel manufacturing plant.



The stove dome, which holds the gases used to heat a blast furnace is 10m diameter by 45m long – in all a total of 1800m2 was airless sprayed using **Polyglass VEF** and for smaller areas where spraying was impractical, **VEHA** was used – applied by brush. **Polyglass VEF/VEHA** offer excellent corrosion, chemical and temperature resistance.

"Satisfied customers placing repeat orders are testament to the quality of Corrocoat products and the professionalism of our service" says KCPL's Chief Executive – Jackie Dias. "As an existing customer, JSW Steel is well aware of the advantages of using our services, and has chosen KCPL as a preferred provider of anti-corrosion services."

CORROTECH WINS CONTRACTS IN THE CZECH REPUBLIC

One of our latest licensed partners – CorroTech in the Czech Republic is winning contracts in a variety of markets – their expertise and proven Corrocoat products proving to be deciding factors in clinching orders. Here are two recent examples.

REFURBISHMENT OF HYDROGEN COOLING SYSTEM

Operating an electric power generator produces large amounts of heat that must be removed to maintain efficiency. The use of hydrogen is an effective way to cool the generator and allow power plant operators to produce more megawatts out of a smaller generator.



The problem is, hydrogen can be dangerous so to ensure maximum safety and equipment efficiency regular maintenance of all components is vital. As part of a planned maintenance programme CorroTech were contracted to refurbish the hydrogen cooling coils.

Carrying out the work in its own workshops, the coils were first degreased, then high pressure water jetted, before being blast cleaned to standard Sa 2½ with a sharp-edged surface profile corresponding to Rugotest No. 3, BN9a. The external surfaces, some 1500^{2}m in all, were then coated with **Polyglass VE** to a dft of 1500 µm.

Polyglass VE – a two-pack, cold cured epoxy vinyl ester material is ideal for this application, offering high resistance to chemical attack at the elevated temperatures found in a cooling tank.

STERLISATION TANKS

CorroTech has also successfully completed the anti-corrosion coating of 10 sterilisation tanks. Following degreasing, high pressure water jetting, and blast cleaning to Sa 2½ standard, two coats of **Corrothane XT** were applied to produce a dft of 1200 µm. In all some 250m^2 was coated.

Pioneered by our expertise in glass flake manufacturing, **Corrothane XT** is a three-pack cold cured epoxy vinyl ester urethane material which can be used on a wide range of substrates in both immersed and non-immersed service.

2016 year planners available now

The 2016 version of our highly popular Year Planner is available now.

Giving a clear overview for project planning and order control, our 2016 Year Planner gives the user 13 months at a glance with plenty of writing space for every day of the year. A must for every site office wall, if you would like your own year planner(s) please e-mail us now and we will send one off to you.



Plasmet ZF and ZE Protect Materials Handling Equipment at Fertilizer Plant

As the name would suggest, Mangalore Chemicals and Fertilizers in the state of Karnataka, India manufactures fertilizers, potash and other products which are used by farmers across southern India.

Many of the products are highly corrosive and this, combined with a saline atmosphere encourages severe corrosive conditions and as a result key parts of the plant have to be fully protected to keep them operating at maximum efficiency and to prevent premature failure and product contamination.

As part of the plant's maintenance programme Kirloskar Corrocoat Private Ltd (KCPL) were selected to apply a protective coating system to the plant's conveyor steelwork. Selecting the best system is critical to ensure the extended life of the conveyor structure, so KCPL engineers recommended the application of a single coat of **Plasmet ZF** at 175 µm followed by a final coat of **Plasmet ZE** at 275 µm to achieve a final DFT of 450 µm. This combination would ensure that the finished coating would be durable, chemical and abrasion resistant and provide effective long-term protection.

The work was carried out during a planned maintenance shut down and was completed safely, on schedule and within budget.

Worldwide, Corrocoat has proven to be a reliable partner in the chemicals industry, having completed a wide range of projects – including materials handling equipment – in a professional manner and often to tight timescales.



LONG TERM PROTECTION FOR WASTE WATER PIPES

When a major utilities company was carrying out a massive extension to one of its waste water treatment plants, Corroserve was contracted to apply a protective coating system to the interior and exterior surfaces of the 2.4 m diameter pipework which takes treated wastewater out to sea.

With the potential of carrying up to 11,000 litres of water a second, an effective anti-corrosion lining with low maintenance and lifetime costs was required. The coating package applied comprised:

Grit blasting the pipes internally and externally to ISO 8501-1 SA 2 ½. Applying **Polyglass VEF** to the internal pipe surfaces at 1500 µm to provide superior resistance to chemical attack. To give extra protection at key erosion points such as bends, abrasion resistant **Corrocoat Armagel** was applied at 1000 µm. For the external surfaces **Zip E** was applied. This durable glass flake coating provides effective protection in the aggressive atmospheric conditions found at waste water treatment plants.

The contract was completed on budget and on schedule. A spokesperson for the client commented: "Corroserve were selected as they were able to show a large portfolio of similar successfully completed projects. Their work was to the highest standard."







Leaking pipe prior to refurbishment



Fibre Pipe Wrapping

PIPE WRAPPING & REPAIRS ON LEAKING PIPES AT SOUTH AFRICAN RESERVOIR

Corrocoat offers a comprehensive range of materials and corrosion engineering solutions to negate the effects of corrosion and abrasion damage in water pipes. Corrocoat linings reinforced with glass flake are regularly used in combination with GRP composite laminates to give structural strength to refurbished pipes and provide a longer corrosion-free life than replacement with new.

A recent example of this is in South Africa where the Department of Water Affairs contracted Corrocoat SA to repair a small bore pipe connected to an underground main pipe at Onverwacht Reservoir. The steel pipe was suffering from internal corrosion, which had resulted in pin holes, leading to leaks near a valve. During repair the pipe had to remain under pressure as it could not be taken out of service.



Polyglass Coating to waterproof composite

Corrocoat Engineers wrapped multiple layers of carbon fibre composite reinforcement around the pipe, interlayered with Polyglass water proofing compound. Finally, a layer of a synthetic cloth was applied to produce a smooth surface that also improves adhesion of a final layer of UV stable Polyglass.

CORROCOAT VIETNAM EXTEND LIFE OF PUMP

Licensed applicator, Vietnam GloCoating Engineering JSC (VGCE) was contacted by PetroVietnam Ca Mau Fertilizer JSC, as their engineers were concerned over the condition of one of their pumps. The pump is used in the production of nitrogenous fertilizers and was handling abrasive and corrosive chemicals.

VGCE engineers recommended a coating system that would protect the pump casing and impeller comprising:

All surfaces to be shot blasted to remove contaminants and achieve a surface profile of 75 µm. to allow the subsequent coatings to bond successfully and guarantee their longevity.

For the pump internals and impeller a coat of Corroglass 632, followed by Corrofil VE (to fill holes), Corroglass 602 and finally Corroglass 652 applied to achieve a total thickness of 1800 µm. This coating combination was recommended as it combined excellent abrasion and corrosion resistance and was therefore an effective and long term solution.

The pump casing external surfaces were coated with Plasmet ZF at 250 µm, the pump housing flange faces rebated and the impeller balanced.

The contract was awarded to VGCE and the work carried out in its own workshops. The customer was delighted with the end result, marking the Work Completion Report – Good for both Service and HSE performance.



MARINE PUMP CASINGS REFURBISHED AT A FRACTION OF REPLACEMENT COST



The operator of a number of polar explorer vessels, doubted they could save the two seawater ejector pump casings taken from one of the ships in their fleet. Such were their misgivings that in documentation they reported: 'Severe Erosion Damage – May Not Be Repairable.'

The client sent the pumps to CorroServe's factory for an evaluation report and when inspected it was found that they could in fact be fully restored, so a contract was issued.

The casing and impeller were stripped then blast cleaned which identified areas of serious internal pitting and erosion. Once pre-machined, the casing internals and the impeller were coated with Corroglass 600 Series system which combined with in-house developed engineering methods meant that the damaged areas could be re-built.

Following adequate cure of the coating, the refurbished impeller was balance checked in house to BS6861 – g2.5. The pump casing externals were coated with Plasmet ZF and Corrothane AP1 coating system. A new shaft, sleeves and casing rings were manufactured and machined. The pump was then reassembled using new fasteners, gaskets and packings.

The refurbishment to both pumps was completed at 20-25% of the cost of purchasing new and took just two weeks to complete. The life span of the pumps has been extended by in excess of 10 years.

Corrocoat – Leading the field

Established in 1975, Corrocoat is one of the world's leading names in extra-durable and corrosion-resistant paints and coatings with a proven track record in many market sectors including petrochemicals, oil & gas, power generation, mining, marine, structural steel, water & waste and renewable energies.

With service lives often measured in decades, Corrocoat materials offer excellent long-term and trouble-free service, not to mention great value for money. With a network of some 36 licensed partners around the world, all offering the same highly regarded technical support, you're bound to find a Corrocoat product nearby.

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