CORROCOAT NEWS

CORROCOAT HOSTS INTERNATIONAL CONFERENCE

Our Leeds Headquarters and the Thackray Medical Museum were the host venues last September for our International Knowledge Conference. Over 50 delegates from our global network of partners attended where a range of presentations provided a perfect platform to introduce new product developments and share information on developing markets and application successes.

After two days at Corrocoat, delegates moved to the Conference Suite at the Thackray Medical Museum. Here delegates also had time to enjoy the grounds and see the museum's collection of over 50,000 objects from medical history which date from Roman times to the present day. There was also a full programme of social events including a conference dinner.

Over the course of the conference many presentations and practical demonstrations took place, from repair of compressors to pipe wrapping, sales management, concrete protection, the use of Fibrecoat and many more. This was a platform for our overseas operations to share their successes and experiences with the group. All the presentations given were very professional and extremely informative.

In this issue

Page 2
Long term protection of sour water tank
Rehabilitation for steel mill gas main
Product News – Fibrecoat

Page 3
Case Study – Gas knock-out vessel refurbishment.

Page 4
Polyglass VEF helps ship owners meet sulphur limits.
News from Kazakhstan

Page 5
Corroserve protects Energy from Waste plant
Florida pulp and paper mill caustic tank protected

Page 6
Polyglass VEF in waste water industry.
Corrothane XT used on flue stack.
Water pipes recoated with Polyglass 100 after 21 years

Page 7
Case Study – Concrete trenches and sumps corrosion protected

Page 8
Big savings at drainage plant
SIHI Vacuum pump Impeller Back to Full Efficiency

Corrocoat AKZ

LONG TERM PROTECTION OF SOUR WATER TANK

Our Belarus operation Corrocoat AKZ, has recently completed a contract to repair and corrosion protect leaking welds on a sour water tank for Mosenergo, the largest regional power generating company in Russia.

The customer was looking for a company who could: apply a coating system guaranteed to provide long-term protection and leakage protection; offer a turn-key solution and meet a tight time frame. As Corrocoat was the only company to meet these conditions, the contract was awarded to them.

The tank internal and manway were blast cleaned to ISO 8501-1 Sa 2½. All corrosion pits were filled with Corroglass 602, 610 g/m² multidirectional laminating cloth was applied to welds and corners, followed by a build coat of Polyglass VEF at dft of 600µm. Finally, a second coat of Polyglass VEF was applied at total dft of 600µm.


After first coat

The customer was impressed with the quality of the finished job, and even though this was the first contract carried out for Mosenergo, Corrocoat AKZ immediately received a follow-on project to apply a coating to the inside surfaces of a hydrochloric acid storage tank.

REHABILITATION FOR UK STEEL MILL GAS MAIN

In the Summer of 2017, Corroserve was successful in completing an internal pipe lining project on the gas main at a large industrial plant. The main gas pipeline runs through the site for approximately 3 km and has been in service on the plant for over 40 years.

The client wished to internally line the bottom section of the 2.7m diameter pipeline and accepted that due to the scale of the project, this had to be completed in stages. The challenge was to complete two sections of the main, a total length of approx. 575 m during a very short shutdown period.

Utilising its extensive project experience and skilled labour force, Corroserve successfully protected the pipeline with Polyglass VEF and are in an excellent position to work with the customer on the next phase of the main pipeline rehabilitation project.

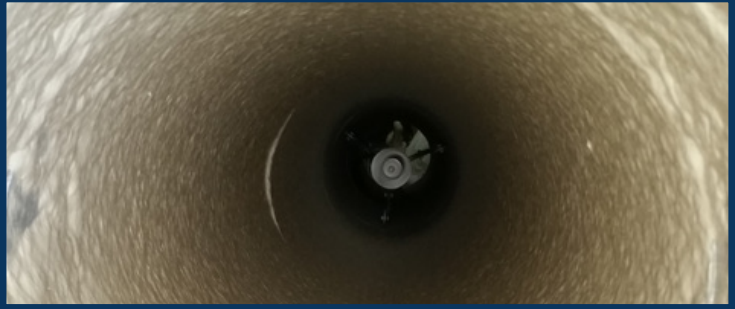

Corroserve Ltd

PRODUCT NEWS

Corrocoat is pleased to announce the launch of Fibrecoat– a vinyl ester lining containing both glassfibre and glassflake which will provide rehabilitation and an high-performance lining for thinned and corroded pipes and for where additional tensile properties are required.

Corrocoat Fibrecoat should be applied in single or multiple layers at up to 3000µm per coat, with an airless spray pump of 45:1 ratio or greater, or for pipe internals a pipe sprayer. Normally used in Off-White or Translucent Brown, Fibrecoat has a spreading rate of 0.25m²/litre at 3000µm.

Pipework and other equipment coated with Fibrecoat will be corrosion protected and have greater structural strength, even after long periods - at a fraction of the cost and inconvenience of replacement. It is the ideal solution for capital process equipment where corrosion has reduced wall thickness to below an acceptable minimum.



OFFSHORE GAS TERMINAL – FUEL GAS KNOCKOUT VESSEL

Corroserve Ltd

CORROCOAT PARTNER
Corroserve (UK)

THE INDUSTRY
Oil and Gas

THE CHALLENGE
At the request of the client – Centrica, Corroserve carried out an inspection report on the fuel gas knockout vessel at a UK onshore gas terminal. The vessel showed external corrosion to all nozzles and heavy damage and corrosion to the internal lining in several areas. Once received at Corroserve's Leeds works, it was determined that the failure of the coating was due to poor surface preparation as there was little or no surface profile. Corroserve was advised that the internal coating system would be subject to gas saturated with water containing CO_2, residual natural gas at a maximum operating pressure of 4.8Barg and a temperature of 45°C..

THE SOLUTION
Corroserve offered a solution comprising: surface preparation, application of a Polyglass VEF coating system and surface testing. The nozzles and plate were pre-machined/rebated to prepare the faces for coating application. The internal substrate was then abrasive blasted to remove the existing coating system and prepare the surface, carried out to ISO 8501-1 SA 2½ to achieve a minimum surface profile of 50µm.

Polyglass VEF was specified for all internal surfaces - applied by hand and airless spray to achieve a minimum DFT of 1250µm. Spark testing ensured the coating was free from holidays and pin holes. The external surfaces were also abrasive blasted and two coats of Plasmet ZF applied with a final cosmetic topcoat of Corrothane AP1.

RESULTS & BENEFITS
The Polyglass VEF coating system offers excellent corrosion protection in immersed and non-immersed environments, providing superior resistance to chemicals across the full pH range, solvents and gases.

POLYGLASS VEF HELPS SHIP OWNERS MEET NEW SULPHUR LIMITS

In a landmark decision IMO's Marine Environment Protection Committee has ruled that from 2020, the sulphur limit on marine fuels must be reduced from 3.50% to 0.50%. This will have a major impact on the marine industry. Ship owners have several options to achieve this but undoubtedly the most economical solution is to install an approved SOx reduction method, for example a marine exhaust gas scrubber.

One recommendation is that the scrubber exhaust gas outlet pipe be manufactured from highly corrosive materials such as super duplex, However, these materials are very expensive and incorrectly specified when chlorides are present. Our licenced partner - Corrocoat Korea has been approached by several shipyards for advice and recommended the use of Polyglass VEF.

In a bid to use the lowest cost option some Korean shipyards investigated the use of Phenolic Epoxy but this is not suitable where sulphuric acid is present and within two or three years the coating would be in danger of breaking down.

In order to demonstrate the beneficial properties of Polyglass VEF, Corrocoat Korea has used the material at 1,500um thickness on the internal surfaces of an exhaust gas outlet pipe at Hyundai Mipo Dockyard and is currently introducing the product to other shipyards.

Corrocoat Korea Co Ltd

NEWS FROM KAZAKHSTAN

Corrocoat Caspian in Kazakhstan has been certified to ISO 9001:2015 standard. This means that customers now have additional assurance that they are carrying out best practice in quality management and also demonstrates that the team is focused on continually improving its services to customers.

Corrocoat Caspian LLP

Kazakhstan is a fast emerging market because of its importance as a leading petroleum, natural gas and minerals provider. Corrocoat Caspian manufactures and applies glass flake coatings from its facility in Almaty and has full capabilities to carry out site work at industrial sites throughout Kazakhstan.

A typical recent example was a contract to coat the internal surfaces of four 12m diameter cyanide tanks used to store alkali slurry at the Akbakai Gold Mine.

CORROSERVE PROTECTS ENERGY FROM WASTE PLANT

Corroserve Ltd

The Energy from Waste (EfW) sector is booming with many countries working towards a 'zero waste' economy.

Corroserve was approached by one of the UK's biggest EfW plants as they were starting to experience corrosion in different items of plant even though they had been in operation for just a few years. One problem was a ducting section and stack adjoining the economizer areas that had been seriously affected by acidic corrosion. This type of plant is very prone to attack by sulphur condensation on ducting lines. This is due to the nature of their emissions and operating conditions which can be up to 200°C.

The Corroserve technical team analysed the environment and available data and decided that the best solution to this problem would be to blast clean the sections to Sa2½ with a profile of 50-100µm and to apply Corrothane XT - a cold cured vinyl ester hybrid with a proven track record in similar operating environments.

Following completion of the work, the client was so delighted with Corroserve's high-quality work that they immediately asked them to protect other corroded structures. Word has got around and they are now in discussions with other operators of EfW plants about similar projects and others such as boiler to reactor lines and ID fans.

Corrocoat USA

Concrete refurbishment project opens the door for more contracts for Corrocoat USA at a Florida Pulp and Paper Mill

Corrocoat USA Inc. was approached by a pulp and paper mill operator in Florida as the chime and foundation of its Tall Oil Caustic Tank were severely degraded, causing voids beneath the concrete slab. Affected by exposure to sodium hydroxide, sulphuric acid and black liquor, the concrete slab had low areas with deep puddles, further exacerbating the problem.

Having used a core drill and borescope to determine the location of sub-surface voids, cementitious grout was pumped into the voids. Corrocoat USA then re-directed all water or chemicals that would otherwise run onto the area into a nearby U Drain.

The concrete was washed with a pressure washer and organic degreaser, a containment built and the area blast cleaned. After sealing with Plasmet ECP (Epoxy Concrete Primer) the concrete slab was regraded so that it would drain into the nearby sump. Finally, Polyglass VEF and Polyglass VE Veilcoat was applied to provide a surface that will protect the slab in this chemically corrosive service environment.

POLYGLASS VEF IN THE WASTE WATER INDUSTRY

Corrocoat CZ

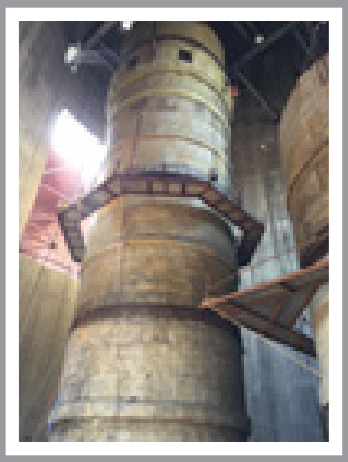
CorroTech in the Czech Republic has enjoyed great success on a contract to protect the internal surfaces of a lamella cleaner from corrosion and chemical attack within the waste water industry.

To prepare the substrate, internal surfaces were blast cleaned to provide a minimum surface profile of 50µm. Polyglass VEF was applied by airless spray to achieve a minimum DFT of 500µm. Polyglass VEF is ideal for this type of application as it provides superior corrosion, chemical protection and temperature resistance.

Kirloskar Corrocoat Private Limited

CORROTHANE XT USED ON FLUE STACK.

Larsen & Toubro Limited contracted KCPL to apply an internal lining to two new flue stacks at one of its power plants in Khandwa, Madhya Pradesh. Historically, all flue stacks in Indian power plants have been lined using borosilicate glass tiles or a titanium cladding. However, attracted by the significant economies of using a glass flake lining instead, the customer choose it, knowing both the track record of Corrocoat and the reliable service provided by KCPL.



The flues were 6m and 7m high and were coated on the ground. During erection, the joints were coated progressively in position. The contract involved: Preparing the surface by abrasive blasting to ISO 8501-1 SA 2½ to achieve a surface profile of 50 to 75µm followed by the application of 800µm of Corrothane XT in a single coat to ensure corrosion protection from the gases at around 240°C. Independent tests that included an exposure to 300°C for an hour, were conducted prior to selecting the coating.

Although this is the first time KCPL had used Corrothane XT to treat flue stacks, the team had no hesitation in recommending it, firm in the knowledge that it has an excellent track record of successful use in similar extremely aggressive environments, worldwide.

WATER PIPES RECOATED AFTER 21 YEARS

Corrocoat Asia Ltd

Black Point Power Station is located in the New Territories region of Hong Kong and is one of the world's largest gas-fired combined-cycle power stations. CorrocoatAsia, based in Hong Kong, were contracted to inspect, repair and recoat the internal surfaces of eight auxiliary cooling water pipes which are used to convey seawater from pumps to a heat exchanger. The pipes were coated with Polyglass 100 when they were first installed in 1996 and have been in constant use since then.

The pipe internals were sweep blast cleaned to highlight areas where the coating had been damaged and a single coat of Polyglass 100 applied directly to the prepared surface, at 850um DFT. It is testimony to the excellent properties of the coating that only after 21 years of application was it found necessary to carry out repairs.

WFGD CONCRETE TRENCHES AND SUMPS

Corrocoat SA (Pty) Ltd

THE INDUSTRY
Power Generation

THE CHALLENGE
Corrocoat SA (Pty) Ltd was contracted by the South Africa Electricity Supply Commission to corrosion protect 2,216 Square metres of concrete trenches & sumps in the coal fired Wet Flue Gas Desulphurisation plant at Kusile Power Station. The plant is the first of its kind in South Africa for coal-fired power stations and allows it to conform to the Paris Agreement for environmental emission restrictions.

THE SOLUTION
The scope of works included the supply of all linings, primers, glass cloth, abrasive blast equipment and materials, airless application equipment, temporary structures and all site management and labour necessary to professionally deliver, install, QC test & warrant all site linings. The substrate was new cast concrete with a minimum 30Mpa strength.

All concrete surfaces were abrasive blast cleaned to remove laitance and then thoroughly vacuumed to remove dust and spent abrasive. All the surfaces were primed with Corrocoat WCP to wet-out the surface and seal any concrete pores. Multi-directional woven-roving glass-fibre, saturated with L600 laminating resin was then applied to increase structural stability and limit any potential for shrinkage during curing. Finally, a coating of Polyglass VEF to a DFT of 1000 – 1500 µm. was applied.

RESULTS & BENEFITS
Thanks to the Corrocoat WCP/VE and Polyglass VEF coating system, which has a life expectancy well in excess of 20 years, the client now has a concrete floor that will require minimum maintenance.

Corrocoat Japan Ltd

ZIPCOAT AND BIOFOUL BRING BIG SAVINGS TO DRAINAGE PLANT

A mixture of fresh and salt water was causing rapid corrosion and marine growth build up on the discharge side of a flap valve at a Japanese estuary drainage plant. As a result, the valve could not be sealed and the plant was facing serious operating problems. The Client turned to Corrocoat Japan for long term solution that would provide optimum protection and solve the inconvenience and expense of continuous maintenance.

The solution provided was: desalinization washing of the stainless-steel plate followed by blast cleaning to SA 2 ½. A single coat of Zipcoat at 800µm was then applied and a final coat of Biofoul at 250µm.

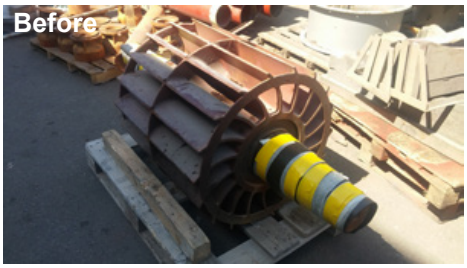
After several months the client is delighted with the result – There is no evidence of further marine growth and it is anticipated that regular maintenance will not be necessary. The efficiency of the pump has also increased due to the improvement in water suction.

SIHI VACUUM PUMP IMPELLER BACK TO FULL EFFICIENCY

Hamchadesh Industries Ltd

Corroglass 600 and the engineering skills of our partner in Israel – Hamchadesh Industries – have returned a heavily corroded sea water pump impeller to its original profile and efficiency. Won in a competitive tender, the contract for Israel's largest supplier of electrical power involved blast cleaning, welding to fill cavities caused by corrosion, and machining the impeller to bring it back to its original dimensions after being coated with Corroglass 600 at 1500µm DFT.

The client is delighted – the impeller has been reinstalled and is working at full efficiency again. A reduced need for maintenance in the future is also anticipated.



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 the 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

Corrocoat News is produced by:–

CORROCOAT

Forster Street, Leeds,
LS10 1PW, England
Telephone: +44 (0)113 2760 760
Fax: +44 (0)113 2760 700
E-mail: info@corrocoat.com

Visit our website
www.CORROCOAT.com