AUGUST 2013

CORTEC Vision

REVOLUTIONARY CORROLOGIC™ SYSTEM TOP OF THE LINE CORROSION PROTECTION OF PIPELINES

TOL

CORTEC CORPORATION
Environmentally Safe VpCI® MCI® Technologies

CorroLogic™ System:
Top of the Line (TOL) Corrosion Protection of Pipelines

VpCI®-637 TOL is one of the best performing inhibitors ever tested by Cortec® Laboratories and provides a cost effective solution for corrosion protection. As a part of Corrologic™ System – "solutions custom engineered to fit", developed by Cortec® Engineering & Field Service (CEFS), it combats corrosion in Top of the Line (TOL) Corrosion Protection of Pipelines application.

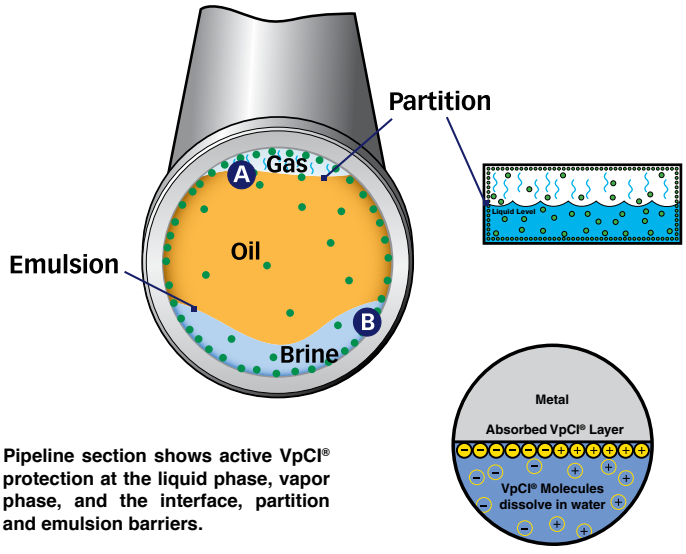
VpCI®-637 TOL provides internal corrosion protection for gas flow and gas transmission lines.The product has superior effectiveness against water, corrosive gasses and chloride contamination. It is a combination of vapor phase, neutralizing, and film-forming corrosion inhibitors to combat the broadest range of corrosive attack from moisture and condensation, oxygen, carbon dioxide, hydrogen sulfide, and other corrosive contaminants in natural gas.

These non-emulsifying formulations offer the benefits of filming inhibitors that form a tenacious protective film on metal surfaces, neutralizing inhibitors that combat corrosive fluid formation, and vapor phase inhibitors that reach areas inaccessible by direct contact to protect areas subject to varying flow ratios.

The unique chemistries of VpCI®-637 TOL allow it to provide excellent protection in "sweet/sour" saturated carbon dioxide/hydrogen sulfide environments. According to results obtained from the Wheel Test (NACE test method publication ID182), VpCI®-637 TOL provides excellent protection in both continuous and intermittent treatments, due to exceptional film persistency.

VpCI®-637 TOL provides maximum control over long distances for highly corrosive systems having a high ratio of water-to-hydrocarbons, including low areas in systems where water collects and extreme corrosive attack occurs. It will not cause foaming or upsets in gas sweetening or glycol dehydration processes and it does not contain heavy metals, chlorinated hydrocarbons, or volatile amines.

It is very effective in gathering systems containing a significant amount of water or as a corrosion inhibitor for secondary oil-recovery operations, where the water is a carrier. CorroLogic™ VpCI®-637 (TOL) conforms to MIL-I-22110C VIA Test (Vapor Inhibiting Ability), NACE RP 0487-2000, TM0208-2008, NACE test method ID 182, ASTM G-170-01 and is ROHS Compliant.



Pipeline section shows active VpCI® protection at the liquid phase, vapor phase, and the interface, partition and emulsion barriers.

VpCI®-398 Undercoat
Powered by Nano-VpCI®

The latest advance in Cortec's award winning corrosion protection solutions is VpCI®-398 Vehicle Undercoat. This durable, tack free, pliable, and self-healing undercoating displaces moisture while providing excellent protection to metal substrates exposed to harsh outdoor conditions. This product is suitable for industrial, agricultural, and construction vehicles, government or private sector fleets, as well as personal use trucks and automobiles.

This non-toxic, non-hazardous, environmentally friendly rust preventative offers multi-metal protection in the most severe conditions. VpCI®-398 provides excellent high build properties and sag resistance and may be applied by brush, spray, or dip. The Nano-VpCI® molecules embed themselves in the pores of the metal and migrate to inaccessible areas creating a barrier that seals out moisture and air. Existing rust will be stopped on contact and new rust and corrosion cannot develop, providing a long-term trusted protection from corrosive effects.

Cortec® has been working with the Minnesota Department of Transportation (MNDOT) USA, the principal agency that coordinates state transportation policies, plans, and programs, on assessing the use of VpCI®-398 for preservation of equipment used in the deicing of Minnesota's roadways. Since the State of Minnesota is one of the most corrosive environments in the world due to extremely long winters and the highest usage of de-icing salt, Metro Transit - the transportation resource for the Minneapolis – Saint Paul area, offering an integrated network of buses, light rail, and commuter trains is currently undertaking a trial of VpCI®-398.

PERFORMANCE DATA	
Recommended film thickness (MILS)	Wet 7-9, Dry 4-5
Corrosion resistance, Salt fog - ASTM B-117, Scribed	2000 hours plus, pass
Salt water immersion	1000 hours, pass
Fresh water immersion	1000 hours, pass
Flow resistance, @ 77ºF-572ºF (25ºC-300ºC)	No flow
Minimum dry time to resist water wash off	@77ºF (25ºC) 4 hours
QUV, Cycle - 4 hours UV @ 140ºF (60ºC), 4 hours condensate @ 104ºF (40ºC)	500 hours, pass
Gravelometer, -20ºF (-29ºC), ASTM 3170	Pass, Excellent
Gravelometer, -20ºF (-29ºC), ASTM 3170, plus 336 hours Salt fog, ASTM B-117	Pass, Excellent
QUV, 500 hours - plus Gravelometer, -20ºF (-29ºC), ASTM 3170, plus 336 hours Salt fog, ASTM B-117	Pass, Excellent

Congratulations Dean Santos
for 30 Years of Service at Cortec®!

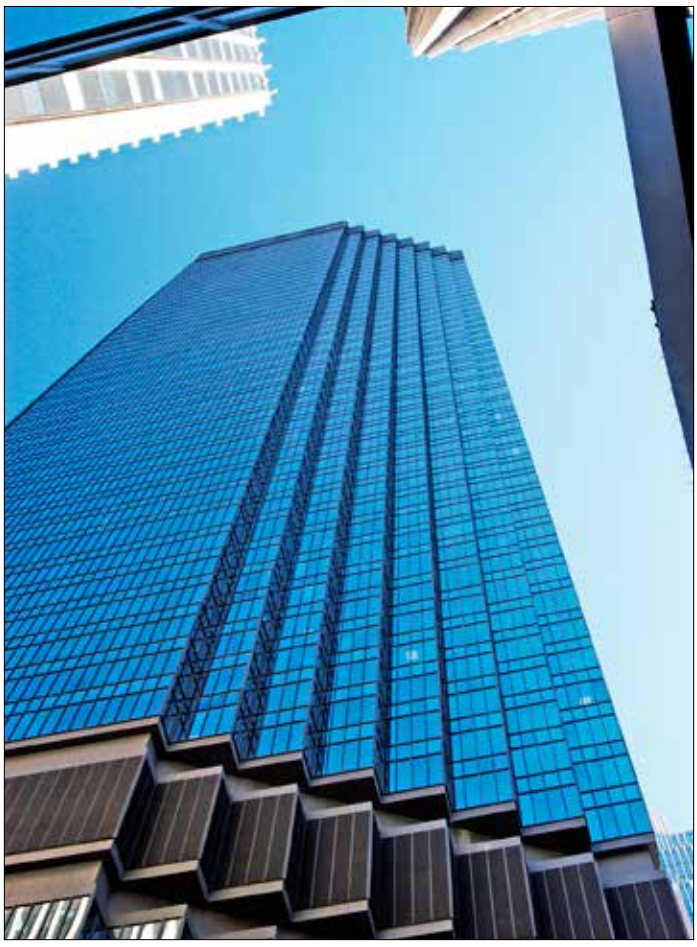
In July of 1983, Cortec® hired Dean Santos to work in the foam impregnation department—what was then a new concept for a new company in a new industry. Cortec® has come a long way from the time it was located on Chester Street in downtown Saint Paul, Minnesota, USA in 1983, and employed only six people. Dean was there for every step of the way and is still going strong today. Everybody at Cortec® would like to congratulate Dean for his service and looks forward to many more years!

New Eco-Tech Inkjet Printer
for VpCI®-130 Series Foams and Bio-Pad®

Cortec® is soon to start imprinting VpCI®-130 Series foams and Bio-Pad® on our new eco-tech inkjet printer which will deliver consistent, superior quality, color print images utilizing less ink. This industrial high-end commercial printer prints on both rigid and roll-to-roll substrates allowing Cortec® to expand our application possibilities. It creates exceptional image quality by laying down the ink using an interweaving pattern which virtually eliminates horizontal banding; thus printing finer, smoother details with a higher fidelity appearance that stands out and looks sharp.

The eco-solvent ink Cortec® will be utilizing is composed of 80% plant derived substances and is recognized by the EPA Design for the Environment program. Formulated for exceptional durability, the ink sublimates into the fibers providing rich ink density to create an image with strong pigment and good durability, yielding brilliant results. This environmentally conscious ink produces quick drying graphics that adhere more aggressively to a wide variety of substrates.

Cortec® World Sales Meeting 2013
September 18-19, Minneapolis, MN



Cortec® Corporation's 23rd World Sales Meeting will be held September 18-20, 2013 at The Marquette Hotel in downtown Minneapolis, Minnesota USA. The Marquette Hotel is a Hilton hotel situated in the IDS Center within walking distance to top attractions, including Target Field, Target Center, Metrodome, Nicollet Mall, Minneapolis Convention Center, and Minneapolis's Art and Culture district.

Please fill out the registration form http://www.cortecvci.com/wsm2013.php completely and return to the attention of Roni Hovde. Cortec® is happy to make hotel reservations on your behalf. Hotel space is reserved on a first come, first served basis. Priority deadline for registration is August 16, 2013.

This year's meeting is full of new and exciting changes. We look forward to seeing all of our Cortec® friends and family at this exciting assembly. Keep your eyes on the Cortec® Corporation website for additional information and details about this event!

Restoration of Drilling Tools

Utilizing Environmentally Safe and Super Effective VpCI® Technology

Cortec® Corporation and its distributor in the Middle East - The Kanoo Group, were chosen to perform a cleaning project in the United Arab Emirates, for the Weatherford Company, one of the largest oilfield service companies in the world and a leader in the oil and gas industries.

The Kanoo Group was selected by Weatherford because of their technical expertise in utilizing the proven strength of Cortec's patented VpCI® technology that has grown to become a global standard in corrosion protection.

After surveying the drilling tools at Weatherford, engineers from the Kanoo Group found that both the external and internal surfaces were covered with heavy rust. Armed with this information, the engineers formulated a corrosion control solution utilizing Cortec's bio-based, non-toxic, VpCI®-422 rust remover.

By using VpCI®-422, any etching, profiling, or abrading effects on the metal surface were avoided. Unlike conventional rust removers that are dangerous to use, handle, and store; VpCI®- 422 is a completely organic, 100% biodegradable product that is harmless to people and the environment while effectively removing rust and tarnish from all metals. VpCI®-422 does not create waste disposal difficulties, making it ideal for outdoor and marine applications where chemical waste disposal is a large and costly problem.

Using VpCI®-422, Weatherford's drilling tools were successfully cleaned and restored. The tools then received a spray coating of a 5% solution of Cortec's VpCI®-414 to provide additional corrosion protection for up to 3-4 weeks. This process has nearly eliminated the part rejection rate, reduced the cleaning period, and enabled huge cost savings compared with machining-based rust removal. The client was very satisfied with the way Kanoo Group conducted the project using Cortec's corrosion control solutions.

Cortec's patented VpCI®-422 conforms to ASTM F-519-05 "Mechanical Hydrogen Embrittlement Evaluation of Plating/Coating Processes and Service Environments" and is RoHS Compliant.

Drilling Tools Before Rust Removal

Drilling Tools After Rust Removal using VpCI®

USDA CERTIFIED BIOBASED PRODUCT
PRODUCT 92%

VpCI®-422 is USDA Certified

Historic Zagreb Cathedral Restored with Cortec® water-based primer CorrVerter®

The famous Zagreb Cathedral is the tallest and one of the most beautiful buildings in Croatia that attracts thousands of tourists worldwide. As the most impressive gothic-style sacral building southeast of the Alps, it is characterized by great architectural and historical value. It's construction dates back to 1093 and enriching of the cathedral continued by famous architects during the following centuries. Recently Cortec® provided a solution for it restoration.

Since low-quality stone was used in the past due to economic reasons, it soon started to deteriorate, affected by weather and city pollution (smog and chemical factors). Even though during the communist era in Croatia, the reconstruction was not allowed, some reparations were made thanks to donations from Croatian Diaspora. The final reconstruction started in 1990 and has been going on ever since, by phases and priorities. Zagreb Archbishopric's Committee for Reconstruction of the Cathedral was founded as well as a task force of selected experts.

We are very proud that the Committee selected Cortec® for reconstruction of its famous towers due to the recommendation of the Faculty of Mechanical Engineering and Naval Architecture in Zagreb. This is confirmation of the premium quality of Cortec® products and services. During reconstruction work on the south tower, damaged steel bands were detected surrounding the tower approximately every 3m in height. The bands were covered with rust and in drainage areas, visual damage to the diameter of the bands were present.

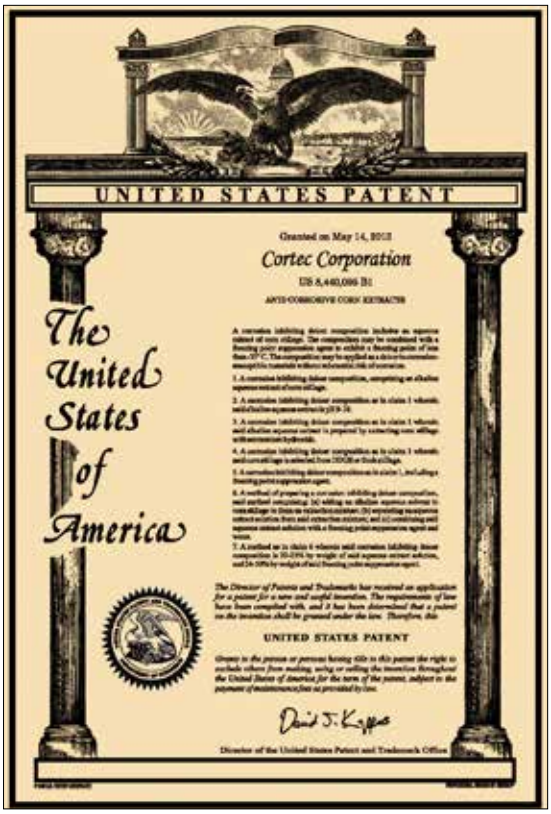
Economical approach with a minimum of intrusion to the structure was required to fix the condition of the bands. The mechanical resistance and structural stability of the tower needed to be maintained or improved. Faculty of Mechanical Engineering examined the bands and performed experiments on the steel bars. They recommended removal of loose corrosion from the bands surfaces, enhancing the bands in the areas of damage and application of Cortec's anticorrosion protection product CorrVerter®.

Damaged steel bands

CorrVerter® is a water-based primer that quickly converts rust into a protective layer and is capable of penetrating into the depths of corroded surfaces. It contains a novel chemical chelating agent that modifies surface rust into a hydrophobic passive layer. Two-layers of CorrVerter® coating were brushed onto smaller surfaces and sprayed in larger areas directly onto the metal bands. The bands were then reinforced with steel fishplates that were welded on the bands and also protected with CorrVerter®. The entire project was completed successfully with minimal cost or intrusion as specified. CorrVerter® coating penetrated to the non-corroded part of the metal and stopped further advancement of the corrosion process.

New US Patent:
Cortec® Anti-Corrosive Corn Extracts

US patent number 8,440,095 “Anti-Corrosive Corn Extracts” is the second of Cortec’s patents granted from the three that were filed on innovations from a 2010 Small Business Innovation Research (SBIR) Phase I Grant awarded to Cortec® by the National Science Foundation (NSF). With the advancements from this study, Cortec® will be producing ecological, costs competitive products that greatly reduce the environmental contamination associated with conventional corrosion control materials. This invention relates to corrosion inhibitors prepared as extracts from processed sustainable corn materials, a renewable resource, which will be developed into a biobased corrosion inhibiting deicer.


UNITED STATES PATENT

Granted on May 14, 2013

Cortec Corporation

US 8,440,095 B1

ANTI-CORROSIVE CORN EXTRACTS

The United States of America

UNITED STATES PATENT

Director of the United States Patent and Trademark Office

Environmentally harmful chloride salt deicing compounds are commonly used to melt snow and ice. However they are significantly increasing corrosion to metals in concrete structures, highways, bridges, and vehicles. Considering the above problem, there has been a continuing need for deicing compositions to effectively melt snow and ice yet reduce the corrosion and environmental contamination associated with conventional inhibitors. Cortec’s important discovery of this highly effective deicing formulation will help to protect the world’s aging infrastructures that are literally crumbling from government neglect and inattention to implementing corrosion control in their overall maintenance program.

Take the Minnesota 35W Bridge that failed on August 1, 2007 killing 13 and injuring 145. It had been built with an 80 year design life, but catastrophically failed after 40 years. In the years prior to the collapse, several federal government reports cited problems with the bridge structure and gave the I-35W Bridge a rating of “structurally deficient,” citing significant corrosion in its bearings. Corrosion damage is not always visible, but nevertheless can lead to devastating failure, loss of life, loss of capital investment, and environmental damage. Cortec® is proud of this significant contribution that will be protecting the world’s infrastructures and eco-systems.

Patents are legal articles and can be somewhat difficult, costly, and time consuming to obtain. Patent applications vary from country to country with the United States Patent and Trademark Office (USPTO) having the most stringent conventions and regulations. This patent is the 56th granted to Cortec® Corporation and the middle achievement of this hattrick of patents from these findings.

From Left to Right:
Pleasant evening at the terrace of Lagvic Restaurant overlooking Zagreb, Croatia with Ana Jurage, Ksenya Shemyakin, Ines Miksic, Karen Brasile, Ivana Radic Borsic, Vesna and Ivan Rogan, Boris Miksic, and Anton Shemyakin

Study Forecasts Increase in Demand for Corrosion Inhibitors

U.S. demand for corrosion inhibitors is forecasted to rise 4.1% annually to 2.5 billion in 2017, according to a study published by Freedonia Group (Cleveland, Ohio) that analyzes the $2 billion U.S. corrosion inhibitors industry. Growth will be driven by an expanding economy, increasing chemical production, and rising oil and natural gas output, as well as rising demand for corrosion inhibitors in cement, concrete, coatings, and metal applications. The study notes the industry will continue to respond to environmental concerns regarding nitrite and molybdate corrosion inhibitors and invest in new products with improved performance and better environmental profiles. To learn more, visit www.freedoniagroup.com.

Excerpted from Mater, November 2012

Corrosion 2013 in Orlando, Florida

Tim Whited, Director of Cortec Engineering and Field Services Division presents a paper entitled: “Mitigating Soil-Side Corrosion on Crude Oil Tank Bottoms Using Volatile Corrosion Inhibitors” at Corrosion 2013 in Orlando, Florida.

The Great Partnership of Cortec® and S.C. Cortrom B.G. SRL

Thank you very much! Many thanks for sustained Cortec® support and the great people we work with. We love Cortec® VpCI® solutions and we are glad to promote them.

We live with the hope that the economical situation in our country will be much better in the future and we will have the chance to increase significantly our purchases level.

Please send the best regards from Mr.George to Mr.Boris.

Have a nice day,

Luminita Alexandru
General Manager
S.C. CORTROM B.G. SRL

See you in September for the 2013 World Sales Meeting!

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ISO 14001 ENVIRONMENTAL SYSTEM REGISTERED

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