

## Q3-2008

### IN THIS ISSUE:

- SI-COAT WINS INNOVATION OF THE YEAR AWARD
- THE 2008 SERAJ HUDA MEMORIAL GOLF TOURNAMENT
- SI-COAT HVIC TO BE EMPLOYED IN TRANS BAY PROJECT

## Si-COAT wins 2008 North American Protective Coatings Product Differentiation Innovation of the Year Award

The Frost & Sullivan Award for Product Differentiation Innovation of the Year is presented each year to the company that has best demonstrated the ability to develop and/or advance products with more innovative capabilities than competing vendors and products. This award recognizes the company's successful adoption of new or existing technology that has become a part of its well-designed product family. Such innovation is expected to significantly contribute to the industry in terms of product performance and degree/rate of technical change.



**Si-COAT**  
a CSL Innovation  
TECHNOLOGY THAT STICKS™

Before considering the recipient of this award, the analyst team tracks competing market participants' product differentiation strategies through ongoing research. This research consists of market participant interviews, end-user surveys and extensive secondary research. The data compiled through this research is analyzed based upon specific measurement criteria for this award. Participants are then ranked with respect to the measurement criteria. The award recipient is ranked number one in the industry.

In addition to the methodology described above, there are specific criteria used in determining the final ranking of industry competitors. The recipient of this award has excelled based on one or more of the following criteria:

- Degree of differentiation innovation compared to other market participants
- Positive impact on sales directly related to product differentiation
- Time to market improvement based upon product differentiation strategy
- Benefit to end users due to product differentiation
- Effect of product differentiation on ease of adaptability for new end-user applications
- Effect of product differentiation on market maturation

The Awards Banquet will be held in January 2009, with Faisal Huda, President of CSL Silicones Inc., in attendance to receive the award.

(continued on page 2)

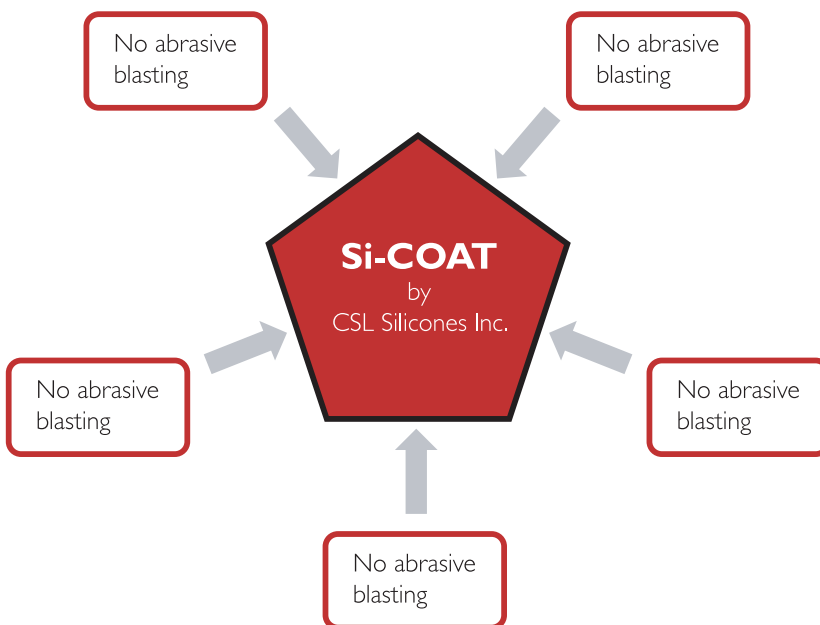


Chart 1.1: Protective Coatings Market – Factors contributing to the Frost & Sullivan Award for Product Differentiation Innovation of the year Award to CSL Silicones Inc. (North America) 2008. Source: Frost & Sullivan



## Si-COAT Wins Innovation of the Year Award (continued)...

The following is a reprint of the Frost & Sullivan award writeup:

*The 2008 Frost & Sullivan Product Differentiation Innovation of the Year Award in the North American protective coatings market is presented to CSL Silicones Inc. for conceptualizing and developing a new product line called Si-COAT Anti-Corrosion Coatings. Si-COAT is a line of one-part, room temperature vulcanizing (RTV) polysiloxane (silicone) coatings. This innovative coating exploits the inherent characteristics of quartz to offer reliable, long term and cost-effective solutions against the ravages of corrosion. The product line provides superior resistance to UV radiation, ozone and many other chemicals which lead to significant longevity of the product. In addition, Si-COAT Anti-Corrosion Coatings enable considerable cost savings for the user based on a number of key features including superior adhesion, a one-coat system and total UV radiation resistance which gives it an edge over other conventional protective coating alternatives in the market.*

### Revolutionary Science behind Si-COAT

Most metals when left to weather in the environment will tend toward an oxidized state. Because of the intolerance of conventional coatings to this oxidized surface and their poor adhesion characteristics, abrasive blasting becomes inevitable. Si-COAT is engineered specifically to take advantage of metals in their natural oxidized state thus eliminating the need for abrasive blasting and/or profiling.

Conventional coatings such as epoxies employ an exceptionally weak type of bond with the metal substrate, which can be classified as a secondary valence attraction. Si-COAT takes advantage of the oxidized metal and forms a vastly stronger bond with the substrate, which is classified as a primary valence attraction. Primary valence attractions are non-reversible, and bonds formed by Si-COAT are so strong that it

is unaffected by the ravages of ultraviolet (UV) radiation. The chemistry of Si-COAT was also developed so that the bonds formed between coating and substrates are far more numerous than those formed by conventional coatings.

The most damaging effect of natural weathering is imparted by UV radiation. UV radiation degrades most materials because of the energy it supplies to break the bonds between the atoms. In conventional coatings, it causes chalking, loss of gloss, discoloration, embrittlement, peeling and actual loss of film thickness. In conventional coatings, the energy required to break bonds in the resin/polymer can range from 300 to 360 kJ per mole, which is actually more than sufficient to break the coating apart over time. In the case of Si-COAT, however, the energy required to break apart the bonds in the polymer is 461 kJ per mole, well above the energy required, to break down Si-COAT. The result is a coating that far outlasts conventional coatings, even in severe environments.

This silicone-based product line is equally important in this environmentally conscious world, because of silicone's eco-friendliness. Silicones are derived from the most abundant element on earth – sand. Sand is inert and non-toxic. This VOC-free formulation resembles glass in its basic chemistry since silicones are a rubberized form of glass and is as inert and non-toxic as glass.

### Competitive Advantage over Conventional Coatings

Si-COAT Elastomeric Anti-Corrosion Coatings provide a long-lasting solution as compared to conventional coatings such as epoxies, polyurethanes, alkyds, vinyl ester, phenolic resins and zinc-rich coatings. These are merely short-term solutions to corrosion as the coatings tend to fade, chalk and peel after prolonged service.

Most of the coating products presently available in the market consist of two or three parts and require numerous layers of various primers, tie coats, link coats and top coats. Si-COAT reduces system complexity by providing an elegant solution that translates directly into cost savings for the end-user. Since Si-COAT is a primerless one-coat system, expensive priming is not required on almost all substrates and adhesion to metal surfaces is outstanding. Si-COAT's elasticity and outstanding adhesion eliminates corrosion undercutting thus reducing maintenance requirements on the coating and greatly extending its service life. Si-COAT's superior chemistry and adhesive properties minimize the surface preparation time and eliminate the need for abrasive blasting and profiling. The product's elasticity factor also offers excellent tolerance against thermal and vibrational expansion.

### Si-COAT – Cost effectiveness

The use of Si-COAT Anti-Corrosion Coating instead of other conventional coatings provides customers with increased economic benefits in addition to superior performance. The cost savings realized with use of Si-COAT stem from a number of factors.

- 1. Superior adhesion:** Because of the advanced chemistry of the Si-COAT technology, adhesion to metal, old coating and other substrates is far superior to that of conventional coatings such as epoxies, urethanes and alkyds, among others. Furthermore, this is achieved with minimal surface preparation and abrasive blasting is entirely eliminated. This alone represents a significant cost saving resulting from saved time, labour and materials.
- 2. One-coat system:** The fact that Si-COAT is a one-coat system also contributes to an economic benefit. Fewer coats quite simply mean less time, and hence, less money spent on the project.

(continued on page 3)

## Si-COAT Wins Innovation of the Year Award (continued)...

### 3. Total ultraviolet (UV) radiation

**resistance:** Compared to conventional coatings, Si-COAT coatings display outstanding resistance to UV radiation. With Si-COAT's total resistance to UV radiation, the coating has an exceptionally long life.

### Positive Impact on the Company's Sales

CSL Silicones entered the market five years ago with the Si-COAT products in the USA, and now it has sales well over \$1 million. The company has successfully penetrated the oil and gas industry because of the tangible benefits this product offers to the end users. Since the product's launch in the marketplace, the CSL Silicones' revenue

growth rate is increasing at a rapid rate of 150 to 200 percent per year. CSL Silicones has another business line for sealants and adhesives, which had been in the decline stage for the last 10-15 years, but the introduction of Si-COAT technology to its product line has reversed the trend. The Si-COAT business now represents 50 percent of its total business.

Chart 1.1 (page 1) illustrates the key factors contributing to Frost & Sullivan's Product Differentiation Innovation of the year Award to CSL Silicones Inc. in the North American Protective Coatings Market in 2008.

### Conclusion

The new Si-COAT Anti-Corrosion Coatings

offer an edge over the conventional protective coatings as they provide long service and protection for a wide range of surfaces in severe environments. This innovative niche application of elastomeric coatings technology has maximized the unparalleled resistance of polysiloxane against most chemicals, ultraviolet light, ozone, salt and degradation due to weathering and abrasion. The product line has received a very positive response from end users thus making CSL Silicones' efforts a commendable success. CSL Silicones Inc. is the laudable recipient of 2008 Frost & Sullivan Product Differentiation Innovation of the year Award in the North American protective coatings market. 

## The 2008 Seraj Huda Memorial Golf Tournament

Attendees at the Seraj Huda Memorial Golf Tournament have stopped guessing how Bill McLaren manages every year to conjure up such a glorious day for the golf tournament. However, they believe he had help this year. This was the first tournament that Seraj Huda missed due to his untimely passing last March, and all agreed that he helped keep the bad weather away in what was a rainy summer. Faisal noted that each golf cart was equipped with a portrait of Seraj, and said that he was sure his dad enjoyed riding around the course since he was never allowed to walk it as he would have liked to do.

"We're here on a mission" was the quote from the eventual winning team of Troy Churchill, Candy, Jeff and Jason Shackell, who arrived at the golf course wearing matching uniforms. "We have our game faces on and expect to win. Nothing else will be



Jeff Shackell, Candy Shackell, Jason Shackell and Troy Churchill, winners at -3


acceptable." Their prediction came true; the team shot a very respectable three under par:

Dinner was served when the golf activities were finished. M.C. Rosalind Scantlebury officially welcomed the golfers and guests

(continued on page 4)

## Seraj Huda Memorial Golf Tournament (continued)...

and thanked the coordinators, suppliers and sponsors for their continued support. Faisal Huda, President, addressed the gathering and paid tribute to his father Seraj, for whom

the tournament is now named. Charitable donations raised at the event exceeded \$350,000. Special thanks to all for making the event a continued success. 



President Faisal Huda tees off on the first hole

## Si-COAT HVIC to be Employed in Trans Bay Project

Overwhelming success of Si-COAT HVIC on the Siemens AG Basslink project (see *Coverings*, Q1-2007) in Tasmania, Australia has led to the specification of Si-COAT HVIC on future Siemens HVDC projects.

The arcing and partial discharges experienced on the HVDC Converter Station in George Town, Tasmania were put to rest by Si-COAT HVIC in early 2007. Based on this convincing performance and extensive research on the part of Siemens AG HVDC Group in Erlangen, Germany, Si-COAT has been deemed the best RTV silicone coating and a necessary component for the future Trans Bay HVDC Project in San Francisco, USA.

Trans Bay Cable, LLC awarded Siemens Power Transmission & Distribution, Inc. a contract to build an undersea high voltage direct current (HVDC) link between the city centre of San Francisco and a Pacific Gas & Electric substation near Pittsburg, California, USA. The contract to construct the 53-mile undersea link is worth more than US \$150 million. Siemens is employing its HVDC PLUS technology in the project,

which allows for smaller infrastructure, a necessary feature in cramped urban spaces. Apart from minimizing space requirements, other advantages of the HVDC PLUS link are the increased network security and reliability due to network upgrades and reduced system losses.

Si-COAT HVIC will contribute directly to the improved reliability and reduced losses. The product's feature of nearly totally eliminating leakage current across insulators has the two-fold benefit of recovering otherwise lost power and greatly reducing the risk of unplanned outages due to insulator contamination.

The primary contamination source of concern in the Trans Bay Project is salt fog from the surrounding saline waters of the San Francisco area. Si-COAT HVIC has had over 20 years of flawless track record under such conditions and those even more severe. This pedigree is the root source of the confidence afforded to Si-COAT HVIC by Siemens Power Transmission & Distribution, Inc.

Construction of the HVDC converter

stations begins in 2009. To carry out the responsibilities that fall to CSL Silicones Inc. and its Si-COAT HVIC product, CSL has been working with Siemens, various insulator suppliers and Siemens subcontractors. As is well known in the coatings industry, a lion's share of coating performance depends on actual product application. Since Trans Bay is a new construction project, product application quality will be maximized through off-site application of the coatings onto the insulators. Under controlled temperature and humidity environments, CSL will prepare the insulator surfaces and apply the Si-COAT HVIC to ensure the highest quality of application, and therefore, product longevity. Coating work will begin in late 2008.

Discussions have already been taking place with Siemens for HVDC projects beyond Trans Bay. CSL's commitment to its Si-COAT technology, its development of additional and complementary technologies, plus its project execution expertise have given Siemens the confidence to consider specification of Si-COAT on other HVDC projects around the globe. 



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### SUGGESTIONS:

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