

Q4-2007

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Taking Off in Turkey

CSL's initiative in tackling the Turkish market back in 2005 is now beginning to mushroom. TEIAS, the national electric utility company based in the capital, Ankara, has had great success using Si-COAT High Voltage Insulator Coating extensively on their substations and transmission lines all over Western Turkey.

This past month, Faisal and Seraj Huda made a regular visit to TEIAS to follow up and inspect the previous coating installations as part of CSL's routine warranty procedure. They visited the coastal (Mediterranean) area of Western Turkey, where installations were in an



atmosphere of severe conditions surpassing IEC Class 4 standards. The most severe of installations was in a substation at a scrap steel melting plant located adjacent to a carbon black plant and to the sea. Roads in the plant were unpaved and the unmitigated pollution in the plant included a cocktail of chemicals for the overhead plumes, carbon dust, dirt kicked up from the passing trucks, salt fog, etc.

Under these conditions, the two-year old Si-COAT coated insulators in the substations appeared almost black. The abundantly present low molecular weight silicone (LMWS) in Si-COAT is, however, keeping all the heavy contaminants perfectly encapsulated. This was verified through hydrophobicity testing on a de-energized insulator. Also observed was the achievement of ultra-hydrophobicity, a phenomenon achieved only by Si-COAT. This phenomenon was first reported in "The Brazil Phenomenon", Coverings, Q2-2006 (available for download at www.si-coat.com), and mimics the level of ultra-hydrophobicity observed in nature on lotus leaves and the backs of ducks. The water literally does not stay on the surface at all; the spherical water droplets simply roll off the surface of the insulators keeping them dry and free of leakage current.

Very much impressed with these results, TEIAS is now considering a nation-wide implementation of Si-COAT products, as initiated by the head office, who are in the beginning stages of organizing a conference on Si-COAT technology. The conference

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Si-Coat HVIC solved the frequent insulator failure issues from the cocktail of contaminants exhausted at this notoriously polluted steel recycling plant in Western Turkey.



Taking Off in Turkey (continued)...

will emphasize not only Si-COAT's ability to achieve and sustain ultra-hydrophobicity over an extended life, but also the lucrative economics of drastically

reduced leakage current and associated problems. Apart from CSL staff, various international end-users have been invited to present

data from their use of Si-COAT including an engineer from a nuclear station in the USA. Stay tuned for a follow-up report after the conference. 

Development of Product with Fouling Release Properties

The challenge to develop an enhanced silicone coating with marine fouling release properties was presented to the CSL Research and Development department around the middle of the year 2007.

One of the main characteristics required for the fouling release properties was that

the coating, once applied, had to produce a smooth surface that would remain so in service, thus providing a high-slip surface of low surface energy.

Beyond just a smooth surface of low surface energy, other physical and chemical properties had to be engineered into the coating to ensure both sustained release of

fouling and minimized dry dock times for the vessels to which the coating would be applied.

Previous versions of Si-COAT Fouling Release Coating had been found effective, but more so for smaller pleasure craft than for large commercial vessels. The new, enhanced I-part formulation (a signature of

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Development of Product (continued)...

Si-COAT technology) targets commercial vessels, but not high-speed vessels such as fast ferries and speed boats. On such high speed boats, the turbulence at the hull/water interface creates a layer of air that does not provide sufficient shear to dislodge the fouling.

Most of the products presently available on the market consist of two or three parts and require numerous layers of various primers, tie coats, link coats and top coats. The advantage Si-COAT will bring to the market is reduced system complexity; an elegant solution that translates directly into cost savings for the end-user.

Ever-increasing environmental regulations have also been taken into consideration. The new Si-COAT Fouling Release Coating will have low VOC (Volatile Organic Compounds) levels and high solids content. The coating has further been engineered to be applicator friendly with no additional additives required prior to spraying.

Some of the major hurdles that had to be overcome during the development stages were determining the correct level and combinations of binder/polymer and curing agents to provide the desired physical properties of the final cured coating. Also, maintaining the high solids

and low VOC levels while still achieving the sufficiently low viscosity of the final coating so that it could be easily spray applied proved challenging.

Very good progress has been made in the development of the final product. Minor adjustments in formulation and in-house spray trials will be followed by third party evaluations, planned for Spring 2008. This will then lead to the first pilot tests in the field.

Check back in future editions of *Coverings* for more news and updates in this latest Si-COAT development. 

Suggestion of the Year Award



Alvin Cox captures the Suggestion of the Year Award for 2007!

Since Nov 2004, there has been a program in place at CSL called the **Creative Suggestions League** (capitals in bold to remind you of who we are!)

From all the ideas submitted a select committee picks Suggestion of the Month and then Suggestion of the Year:

Note: The author has called this a select committee with the sole intention of mollifying committee member, Ms. Scantlebury, who regularly complains that she can't make suggestions because she is on the committee. This in itself is perhaps not entirely a bad thing!


Nevertheless, at the annual Christmas party in December it was the committee's pleasure to award the Suggestion of the Year for 2007.

The winning idea was chosen based on the impact the suggestion made on CSL whether it improved productivity, quality, safety or a combination of all of these. Here we considered the possible consequences if the suggestion had not been made and subsequently

implemented.

The winning idea came from an employee observing a practice that occurred regularly on a major piece of production equipment. Thinking to himself that the way we do this could be potentially dangerous, a simple solution sprung to mind that enhanced workplace safety and reduced the possibility of damage to a critical piece of process equipment.

Since its inception, the Creative Suggestions League has brought about numerous and sometimes ingenious improvements to CSL's equipment and work practices by CSL's operating staff, the people best qualified to make the observations and propose the realistic solution.

So once again, congratulations to Alvin Cox, and keep the suggestions rolling! 


CSL's Christmas Party

On December 22, 2007, CSL Silicones' Social Committee hosted the annual Christmas party in the Rose Room at Guelph's distinguished Cutten Club, opened in 1931.

The guests were welcomed by Chairperson, Ros Scantlebury and after the reception, CSL President Faisal Huda delivered his annual address in which he thanked the employees for their hard work and dedication and informed them that the company had realized a profit in which they would all share.

A sumptuous dinner was served; then came the fun and games where gifts were won for guessing the names of old TV sit-coms from themes songs played by the disc jockey. The charity raffle was won by Alvin Cox, Sr.

After dessert, the dance floor was lit as brightly as the roaring fireplace which adorned the room, as guests tripped the light fantastic until way past midnight.

From all reports, every one had quite an enjoyable evening; so to that end the same venue has been booked for Christmas 2008. See you there! 



From left to right: Cheryl Cox, Vesna Svenda, Rosalind Scantlebury, Bonnie Cummings and Mina Mistry



The bride and groom after the ceremony.

Winter Wedding Bells...

A winter wedding was in the works for Saira Huda, CSL's Coordinator, International Sales Division, who married Ramazan Inanli on December 29, 2007.

After much fast and furious planning in the fall, it turned out to be a beautiful ceremony and reception with close family, friends and neighbours, after which the happy couple celebrated their honeymoon and New Year's in Montréal.

Congratulations to the newlyweds! 



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SUGGESTIONS:

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