

## PROACTIVE CORROSION PROTECTION FOR A CARBON STEEL STORAGE TANK

Tata Steel is one of the world's most geographically-diversified steel producers, with operations and commercial presence across the world. It is among the top steel producing companies in the world with an annual crude steel capacity of 34 million tons per annum. In their Dutch plant, cooling water tanks showed degradation of the steel walls. Repair and proactive protection against corrosion was necessary. Due to previous successful collaborations, the company reached out to CTE BV to come up with a solution.

### CHALLENGE

Cooling water is an important part of the process of making steel. Without proper cooling a plant can come to a standstill. The costs involved in this are huge. Through-wall corrosion can have an impact on the integrity of a storage tank.

The carbon steel storage tank contains cooling water with hydrocarbons. Due to corrosion, the walls showed overall degradation. To prevent the need for an unplanned shutdown of the plant, a fast and comprehensive solution was needed. Due to the circumstances, however, there was no hot work permitted. The confined space to work in made the project particularly challenging.

Because it is a storage tank the pressure is low, but temperatures can go up to 70 degrees C. Cleaning and degreasing of the walls is a challenge, but is necessary.

### REPAIR

The repair was scheduled during a planned, regular shutdown, to prevent any disruption in the business process. The area was first prepared by degreasing and roughening the wall. Next, the **Steel Putty Stick** was applied to flatten the surface and to enable the wall to receive the steel plates over the corroded areas. These 2mm steel plates were held to the wall by strong magnets to keep them in place and had pressure on them for 10 hours straight. Standard Putty was used to create a smooth transition between plate and wall.

By applying the **DiamondWrap®HP™ Primer** and the carbon-fiber cloth impregnated with **WetOut**, the repair was neatly and effectively finished. The last step was testing the hardening of the composite according to the standard. An average shore D of 82 satisfied the installers and the client.

The repair was done by three trained technicians from HSOS Industrial Services company, a partner of CTE BV. It took them several days, in total 163 hours, covering 43 square meters. An extensive task, but for much lower costs in comparison to an unplanned shutdown.

**Thanks to the successful project, Tata Steel decided to offer CTE BV the project of repairing more tanks.**

### REASONS TO CHOOSE CTE BV:

- Offering a solution with crucial safety measures
- Keeping costs low
- Complete installation in a short time
- Existing relationship and confidence in expertise
- Full project support

### SOLUTIONS USED

- **DiamondWrap®HP™**  
*carbon fiber epoxy based system*
- **Steel Putty Stick**

**WANT TO KNOW MORE ABOUT OUR SOLUTIONS? PLEASE FEEL FREE TO CONTACT US.**

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