

## Ceramic Polymer coating after 5 years still effective and intact!

### A major project from 2008: Internal and external coating of 2 bioethanol storage tanks

In 2008, the formerly company “Prokon Nord Energiesysteme” GmbH in Stade/Germany (acquisition by “N.prior energy GmbH” in 2010) built 2 huge tanks for bioethanol. The tanks have a height of 16.5 m and a diameter of 16 m. Because of the close proximity of the city Stade to the rivers „Schwinge“ and „Elbe“ as well as the North Sea the air is moistly and saline. Thus, corrosion of steel is extremely accelerated.

For corrosion protection of the tanks, the internal and external coating was conducted with high quality coating systems from Ceramic Polymer GmbH. Recently, the exterior walls of the tanks were inspected, five years after application of the coating.

**Our partner** for this huge project was **company Reinken**. Since 1980 Reinken is experienced in the whole field of corrosion protection e.g. different blasting methods and coating techniques. The company is specialized in demanding coating applications for renewals and new built tanks. Approved coating systems for drinking water and food applications according to German Water Resources Law or chemically resistant internal coatings for aggressive liquids or gases are applied reliably and competently.

#### Our partner for professional surface treatment:

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### The application of the external coating: Extreme demands caused by an increased risk of corrosion



The installation of the big storage tanks took several weeks. Due to the salt-laden air the non-protected steel already corroded extremely. The blasting and external coating had to be carried out fast and accurately.



Left picture: The corroded roof area of the tanks after buildup.

The right photo shows the roof surface after professional preparation by sand blasting according to ISO 8501-1.

**Ceramic Polymer's premium protection systems for external applications**

**Primer:**

**Ceramic-Polymer STP** is a two pack ceramic composite coating with specific epoxy matrix and active corrosion inhibitive pigments, which increase the combined effects of the coating additives. This product can be applied as a primer or as a stand-alone system and provides:

- Excellent corrosion protection
- High impact and abrasion resistance
- Very good adhesion
- 1-coat system
- Completion of ISO standard 12944-2 / Class C4 & C5

**Top Coat:**

**Proguard 169** is a highly cross-linked 2-component polyurethane top layer with outstanding performance and durability characteristics. It provides excellent physical properties:

- Extreme UV-stability and weather resistance
- Excellent resistance against abrasion
- High chemical resistance
- 1-coat system, fast curing
- Completion of ISO standard 12944-2 / Class C4 & C5 (strong resistance for industrial sectors, onshore and offshore areas in aggressive and saline environments.)



**Exterior view of the tanks after 5 years!**

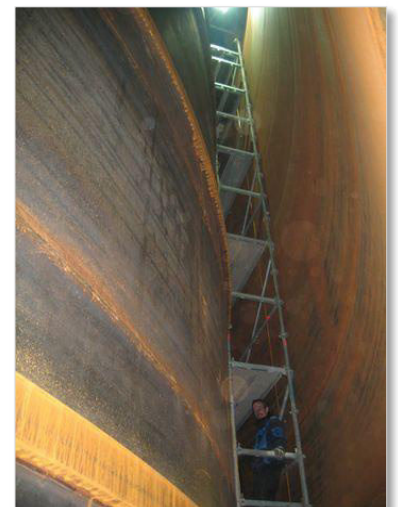
The coating is still intact. No weathering effects or corrosion damages occurred on the exterior walls of the tanks.

**The coating of the inner double shell:  
Secondary-Containment-Application under aggravated conditions**

The interior spaces of the double shell construction of both tanks were coated with our high-performance product **Proguard CN 200**. This high quality coating with ceramic micro-particles provides durable corrosion protection with only 1 layer. Due to its excellent chemical resistance, **Proguard CN 200** is the optimal choice for a safe secondary barrier.

The application of the coating was exceedingly demanding because the intermediate space had just a width of 1 m. The modulus scaffolding fitted in exactly and a huge extraction unit was necessary for accurate dust removal during the blasting procedure.

The picture shows the interior space of the double shell before sand blasting. Also these steel surfaces corroded heavily during installation of the tanks.



**Are you searching for high quality corrosion protection for durable value preservation?**

**Ceramic Polymer GmbH offers the ideal coating products.**