

Coatings for Fresh Water Applications:

# Ceramic Polymer: Refurbishment of swimming pool filter achieves a reduction of fresh water consumption of nearly 50%

Ceramic Polymer GmbH  
Daimlerring 9  
DE-32289 Roedinghausen

[www.ceramic-polymer.de](http://www.ceramic-polymer.de)



Pictures: Norbert Reinken Company, Blasting and Coatings Techniques / Germany

**>>** District of Stade/Germany: The open air bath in Hollern-Twielenfleth is located beautifully at the riverbank of the Elbe. Every year, 45.000 visitors enjoy the heated water. To reduce the high operational costs, the heavily corroded filter tank was extensively refurbished. This project decreased the daily fresh water demand by nearly 50% reducing costs and environmental impact!



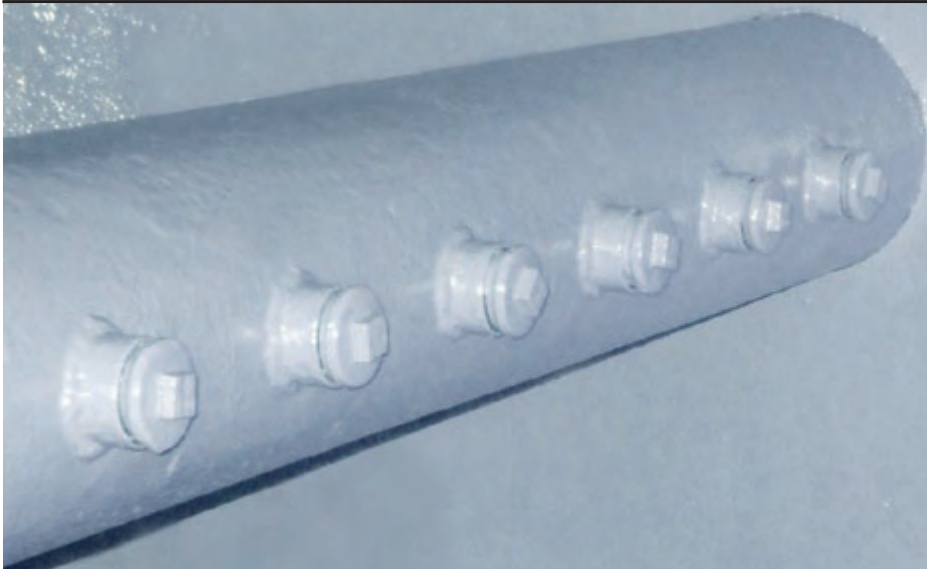
The old, corroded filter significantly caused an immensely high consumption of energy and water. The filtration performance was affected by agglomerated filter material, but also rust particles polluted the water. A big part of the filtered water had to be back-flushed and treated as waste water.

80 m<sup>3</sup> (80.000 liters!) fresh water were required each day for the swimming pools to meet the sanitation requirements.



### Technical Information

**Project:** Internal refurbishment of a swimming pool filter tank  
**Object:** Filter Vessel, made of steel, 38 years old, heavily corroded  
**Size:** approx. 5 m high, 3 m diameter with 3 filter units  
**Coating product:** PROGUARD CN 200  
**Application of the coating:**  
Norbert Reinken Company, 1.ste Strahl- und Beschichtungs-  
technik, Garrel/Germany



**Our partner for competent blasting and coating techniques:**

**Norbert Reinken**

1.te Strahl- und Beschichtungstechnik  
Hintern Forde 6  
DE-49681 Garrel/Germany  
Phone: +49 (0)800 145 814 50 55  
Email: info@reinken.net  
Web: www.reinken.net

**Contact Ceramic Polymer GmbH:**

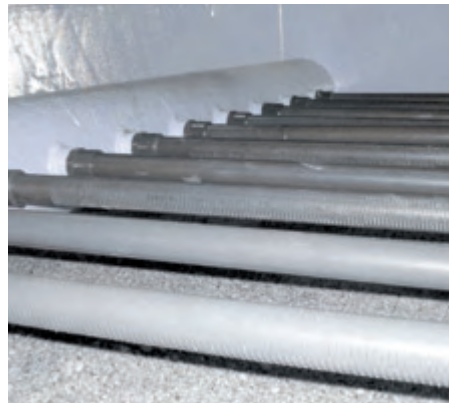
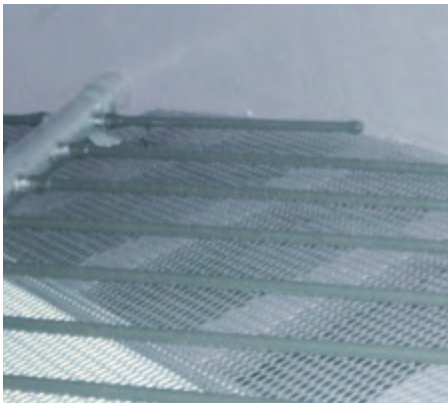
**David Garcia Simao** (Director)  
+49-5223-96276-15 | dgs@ceramic-polymer.de

**Jan Robert Schroeder** (Sales Manager)  
+49-5223-96276-16 | jrs@ceramic-polymer.de

**Woldemar Haak** (Sales Manager)  
+49-5223-96276-13 | wha@ceramic-polymer.de

**Our Product:**

- PROGUARD CN 200



The internal walls and structures of the tank were accurately blasted to remove the deep corrosion and to roughen the steel for coating application. Existing chlorides – determined through the Bresle method – were removed by high-pressure cleaning. Afterwards, the coating was applied by airless spraying and conventional hand tools. In view of the constricted room, that reflects the capability of the company Norbert Reinken.

For the completion Norbert Reinken Company installed new stainless steel tubes and specific basements of expanded stainless steel. The filter material, quartz sand and gravel, were filled in.

Through the renewal of the old filter vessel, the water demand and the resulting environmental impact was reduced significantly. Every day only 40-50 m<sup>3</sup> of fresh water are required now – **the consumption is substantially decreased by nearly 50%!**

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