



# Site Report

Liebertwolkwitz  
Sewage Treatment Plant



## The Site

The Liebertwolkwitz sewage treatment plant near Leipzig processes some 27,000 cubic metres of sewage each year. Although out of a total of 28 plants this particular facility is one of the smaller sewage treatment plants operated by Leipzig water treatment company "Kommunale Wasserwerke Leipzig GmbH" (KWL), the site nevertheless presents some unique challenges for the pumps in use there.

This plant treats municipal sewage, i.e. in addition to sewage produced by the 4,300 or so inhabitants of the surrounding areas, the plant also has to handle surface water and rain water. In Liebertwolkwitz, such water typically contains a high proportion of sand and sediment.

## The Problem

In a certain section of the treatment plant where the water is collected in a pit, the waste water contains so much sand that the pumps in use only last between 12 and 18 months.



## The Solution



Herborner Pumpenfabrik proposed a pilot project for the Liebertwolkwitz plant using a pump which has already proved itself more than capable of dealing with demanding chalk and sand pits. The UNIVERS T-SG series – which is better known under the name UNIGUM – features unique rubber coating on the pumps impeller, casing and cover.

This coating consists of a rubber compound specially developed for this type of application and is incredibly simple yet astonishingly effective. Sand and sediment particles in the water simply bounce off the components before they have a chance to damage the pump.

## The Result

As part of an initial inspection conducted after 6 months in operation, there were absolutely no signs of wear and tear; after 9 months, there still were no signs of abrasion.

According to Jörg Berbig, a member of the sewage treatment/operations technology team at KWL, "with the previous pumps, the pump blades were so badly damaged after a similar period of time that the pumps' performance was noticeably reduced. In contrast, the UNIGUM pumps look virtually brand new."



### Liebertwolkwitz Sewage Treatment Plant near Leipzig

Operator: Kommunale Wasserwerke Leipzig GmbH

Annual Sewage Volume: approx. 27,000 m<sup>3</sup> (mixed water)

#### Pumps

Manufacturer: Herborner Pumpenfabrik, 35745 Herborn, Germany

Type: UNIVERS TWRH / 81-6-220 SG, "UNIGUM"

Lift Height: 4 m

Flow: 30 m<sup>3</sup>/h

Motor Power: 1.5 kW

Speed: 960 rpm



**Herborner Pumpenfabrik  
J.H. Hoffmann GmbH & Co. KG**

Littau 3-5  
35745 Herborn, Germany  
Phone: +49(0)27 72/933-0  
Fax: +49(0)27 72/933-100

Petersdorfer Straße 5  
06188 Landsberg, Germany  
Phone: +49(0)34602/282-0  
Fax: +49(0)34602/282-22