



**Wasser Berlin 2011 –
Know-how weltweit**

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Air pigs clean water pipe

In a record time of ten days, the more than ten-kilometer-long groundwater pipeline that runs from Stolpe to just before Oranienburg has been cleaned. An innovative process was used: an impufc flushing method in which compressed air is gbtamn into the Waaeratrom.



formed with the Impuls-Spülverfahren (I.S.V.). Foto: Jörn Fiedler (I.S.V.-Meister im Wasserwerk Stolpe) Frank Fiebert (Nitarbeiter Wasserwerk Stolpe) und Carsten Utte (Leiter Wasserwerk Stolpe). The mobile Einsatzeinheit des Comyex-Verfahrens in Stolpe (below).

With vortices were large water jets. The water is bubbled through the pipe that feeds groundwater from distant wells into the Stolpe water well. The aim of the project: to pump the water, which is pumped with the help of three compressors at several points.

The "Lultmok he" produced in the pipe by doped pressure should remove deposits of iron and manganese oxide that had spread like a paste on the inner walls of the pipes. The deposited minerals increasingly impeded the flow in the pipe, which normally has a minimum diameter of 60 centimetres along its length and a maximum diameter of 120 metres shortly before the value.

"The water from the wells in Hohen Neuendorf, Birnherrweide and Borgsdorf is now in good condition," explains Wolfgang Tondeza, foreman of the Stolpe waterworks. This state of affairs is the background to a patented process that Hammann GmbH, based in the Palatinate, has developed and brought to market.

Positive experiences with "Air cleaning devils"

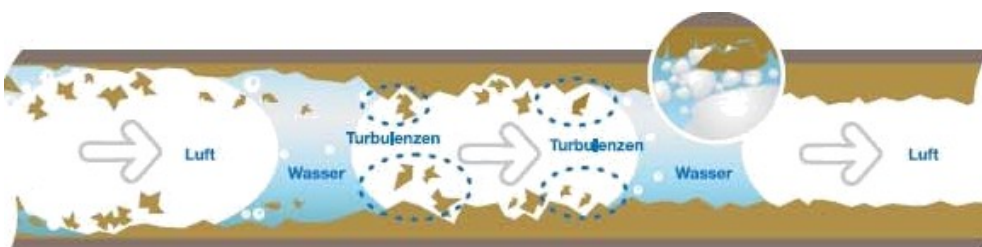
Its use is not new at Berliner Wasserbetriebe. "Zoo" was used for the first time in the raw drinking water network of the Lichterfelde pipe network operating station, and later also in the network of the Jungfermheide and Pantow operating stations.

Carsten Utte, who has been in charge of the Tegel heavy waterworks for four years, which includes the Stolpe waterworks, the Wert on Spandauer Plonierstrasse and the Wert in Kladow. In Tegel Wert, an 1.5 kilometer long and 1.0 meter thick raw water pipe was flushed using this method. In 2009, this Impuls-Spül process was used in the surface water treatment plant in Tegel over a distance of five kilometers. Carsten Utte emphasizes: "And it has been a great success." However, this is a particular problem when large quantities of sludge are detected: Where to put it? The options for disposing of the sludge using technical systems are limited in

Berlin, the discharge of which into watercourses cannot be genetically modified. However, old plants in Stolpe make it possible to treat the sludgy water.

Brandenburg's approval to discharge the unhealthy water into the Havel after separating it from the sludge meant a "great deal of light" for the premiere of the low-emission Comprez process at the Stolpe waterworks.

"A layer of sludge up to five centimetres thick has been traced out of the pipe," says Carsten Utte. Compared to conventional flushing, in which only water flows through the pipe



Wasser and Luft werden durch die Turbulenzen zusammengeführt. In der Grenzschicht bilden sich Vorwörter und Abwandlungen der Stelle, die durch diese Turbulenzen entstehen. Diese sorgen dafür, dass die Ablagerungen gelöst und ausgespült werden.



Fotos: Körmli-Bachmann | Infografik: Streik



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"shot" txt rd, the effectiveness of the
 ImpulvSpuJ driver is particularly
 convincing. Car sten Utke. "The effort is
 less. \What we have now achieved in ten
 days would have taken up to eight weeks
 with conventional processes such as
 pigging - where a cleaning device is
 pulled or pressed through the pipe." In
 addition, the hygienic safety is a positive
 aspect. The risk of contamination

**is low because only air is fed into the
 pipe.**

was conducted. The flushing required
 approximately 150 000 cubic meters of \
 water.

**Effective process saves
 enormous amounts of
 time and money**

Particularly with the enormous cross-
 section of the pipe, a healthy flushing
 system would **require** up to 12 times as
 much flushing **water. It would therefore be
 far** more cost-intensive, but less
 economical. However, the evaluation of the
 a cementative rinsing process is not yet
 complete.

shot down. "We are investigating *where*
 things need to be optimized and with
 what degree of sustainability this system
 of pipe cleaning can be used," announces
 Carsten Utke. By {uni he expects to have

Berlin-fankow has been welcoming hundreds of families and taking care of them even in the most difficult situation - when their own child dies. Far away from the atmosphere of a sick home

A pleasant atmosphere has been created - a petting zoo with donkeys, sheep and rabbits in the large garden, an exercise pool, a Snoezel room that stimulates the senses (where you can lie or sit comfortably, surrounded by soft sounds and melodies, watching light effects) or even a disco in the garden house contribute to this -€

The Sonnenhof children's hospital is one of the only places in Berlin and Brandenburg, where those affected can find relief as well as professional and loving **care in this life situation** **Since such services are not provided and financed by the state health system to an affordable extent,** the Björn Schulz Foundation assumes responsibility in this area.

For years, the employees of Berliner Wasserbetriebe have been contributing to this with their donations. **On April 4, Dr. Görg Grunwald,** Member of the Board of Management, and Xarsten MaJarecg, Chairman of the Board of Directors, presented the foundation with a cheque for **10000** euros: The result of the Christmas collection and the board's contribution.

The money comes at just the right time, as an extension is due to be built, creating space for a total of 16 seriously and terminally ill children, young people and their families. There are currently twelve guest rooms. Additional rooms are planned for art and music therapies, e Vermögensmerits, the children's grief center and the Björn Schulz Stiftung Academy. The heart of the Sonnenhof - the community wing and the living room is currently moving into the conservatory and the garden for the conversion. The foundation is named after elnem kleine{ungen, who died of leukemia shortly before his eighth birthday. His great social commitment has been honored several times regionally and in competitions, including the Grenander Award at the suggestion of Wasserbetriebe.

Giving joie de vivre

Employees donate 10,000 euros to the Björn Schulz Foundation's Sonnenhof. It helps families with terminally ill or incurably ill children, teenagers and young adults.

Srheckiihery abe in the Sonne nhof.- Pra uke Prohf Press spokeswoman of the Sr/turtp, karsten Main rec{ Chairman of the Sesatnt pers onnlrat, Mary it rutnprl Björn Schulz Sttffung and fr.- Iny. Geory Gru nwalrl, Yorstnnd Techriik (f.l.)

The place radiates peace and conveys a sense of security. Since December 200a, **the Björn schulz Foundation's 'Sonnenhof' children's hospice in**



Foto: Donath