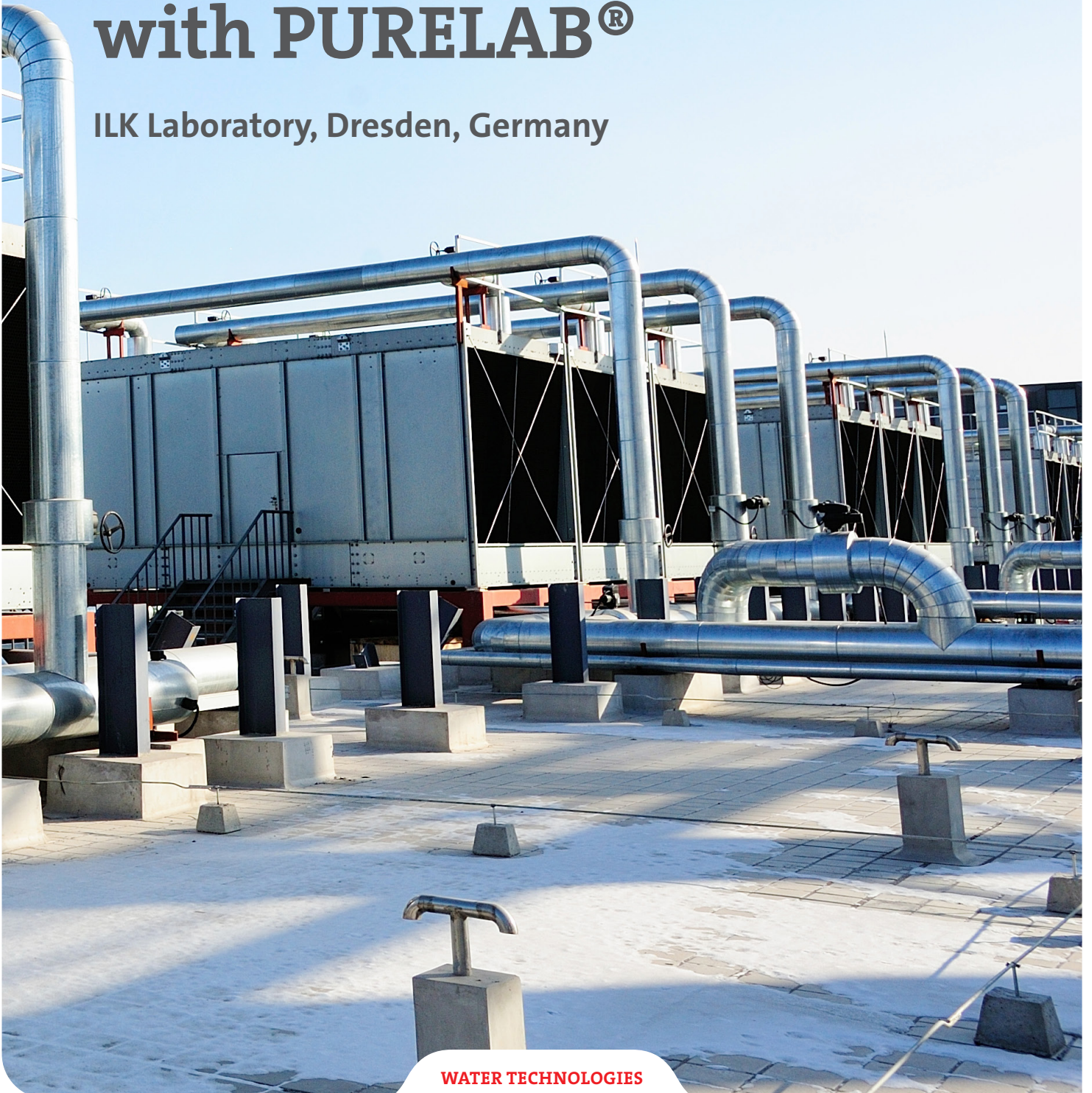


CASE STUDY

# Applied New Technologies department improves ICP, IC & HPLC sample turnaround times with PURELAB<sup>®</sup>

ILK Laboratory, Dresden, Germany



## CASE STUDY

# Applied New Technologies department improves ICP, IC & HPLC sample turnaround times with PURELAB®

**ILK Dresden is a research and development company specialising in air handling and refrigeration technologies. It is vital they have access to a supply of ultra-pure water in their work to find equipment applications for new environmentally friendly coolants.**

**Their Applied New Technologies department uses the PURELAB® Pulse to provide high quality de-mineralised water for ICP, IC and HPLC analysers, ensuring they can conduct analysis that meets their clients' needs.**

ILK Dresden conducts industry-related research, development and technology transfer in a wide range of air handling and refrigeration technologies. ILK focuses on global issues such as environmental protection, energy saving & efficiency and improved quality of living.

Originally formed in 1964, the company now employs 120 staff split between three major departments – Refrigeration & Cryogenics, Air Conditioning, and Energy Engineering & Applied New Technologies.



## CASE STUDY

# Challenge & Solution

### Ultra pure water is a must

**Beate Schmidt, from the Applied New Technologies department, is working to find equipment applications for new environmentally friendly coolants.**

The department's laboratory uses the PURELAB Pulse to provide 50-100 liters a week of high quality de-mineralised water for ICP, IC and HPLC analytical equipment, and also for wet chemical and physical analysis. "Ultra pure water is a must for ICP & IC analysis equipment – without it the tests can't be conducted."

The department services clients in the refrigeration industry and oil companies researching into new lubricants - processing between 100 & 500 samples per month. The high quality water produced by the PURELAB Pulse enables ILK to conduct analysis down to the very low impurity levels required by clients.

### Saves water, energy and time

**Compared to the old distillation equipment originally used to provide water for analysis, the PURELAB Pulse is "more economical and produces better quality. It saves water, energy and time and has improved sample turnaround and throughput". Beate also commented that there have been "no failures and no hassle" with the new unit.**

The PURELAB Pulse at ILK Dresden is fed with water at a conductivity of 269  $\mu\text{S}/\text{cm}$  and with a  $\text{CO}_2$  content of 4ppm. This is reduced to 3  $\mu\text{S}/\text{cm}$  by the Reverse Osmosis modules, representing a rejection of 98.9%. The Pulse module provides a further reduction to produce around 1.5 l/min of product water with  $>15\text{M}\Omega\text{-cm}$  quality, representing a rejection of ionic impurities of  $>99.98\%$  across the unit.

*"The PURELAB Pulse meets our requirements for both flow and quality and is likely to continue to do so for the foreseeable future."*

# Dedicated to Discovery

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