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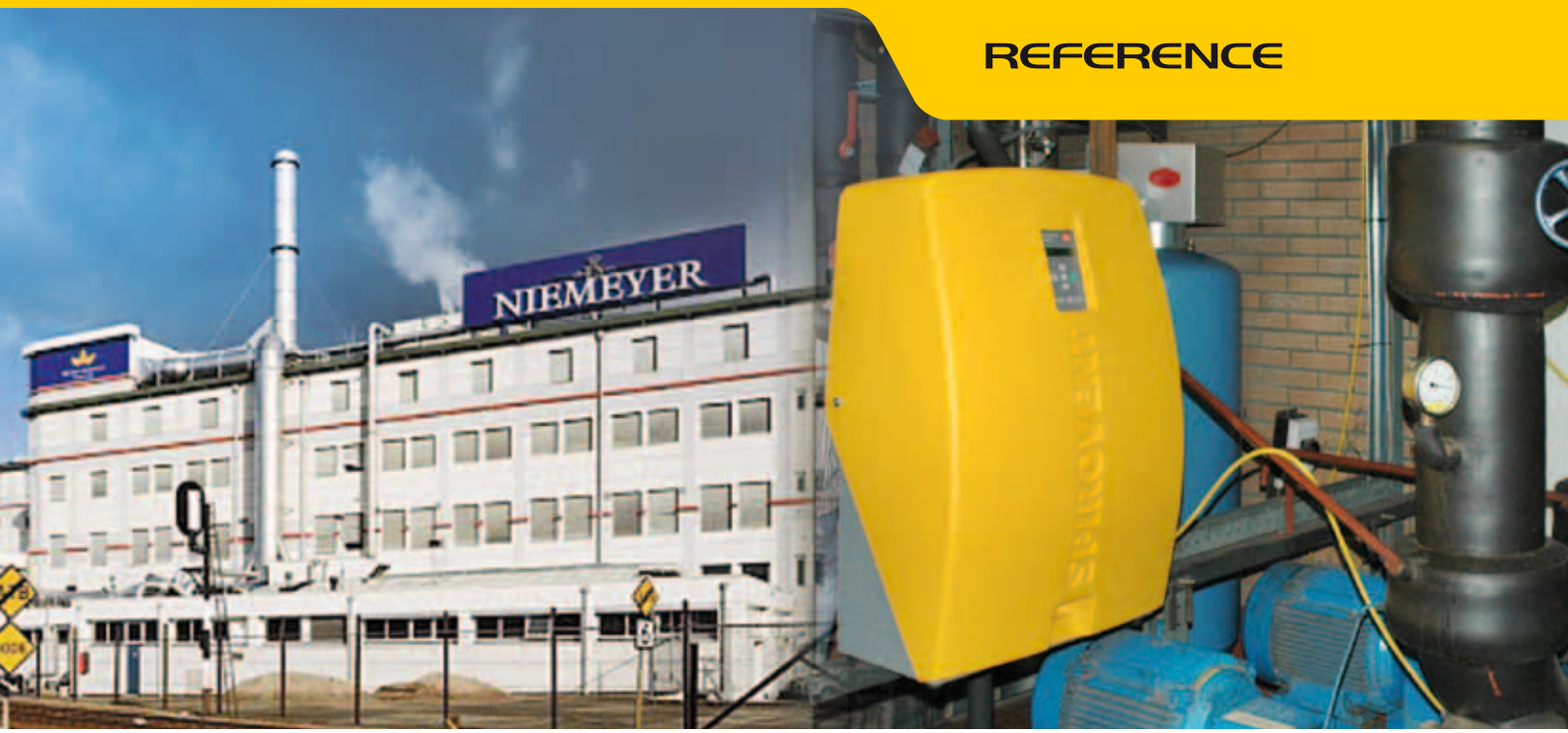


BAT Niemeyer recoups energy-saving investment within nine months

British American Tobacco is dedicated to sustainability and reducing its annual energy consumption, a vision the company expects all of its divisions across the globe to subscribe to. Highly positive experiences in the past prompted the Utilities Manager of BAT Niemeyer to engage Spirotech to seek further improvement in this area, and after a thorough analysis of fluid samples from the heating and cooling systems a detailed SpiroCare Step-by-Step Plan was compiled. The plan contained a number of recommendations, one of which was to install a vacuum degasser: an investment that earned itself back in less than nine months.

Jan de Vries, BAT Utilities Manager: "I knew from experience that Spirotech would be able to help us, but the actual results even exceeded my expectations."

Situation

BAT Niemeyer in Groningen, a division of BAT British American Tobacco, is a manufacturer of tobacco products. Various heating and cooling systems are used at the site to facilitate the production process and to heat and air-condition the production halls and other areas. The analysis of fluid samples taken from the various heating and cooling systems showed serious contamination and the presence of large quantities of free and dissolved gases. The polluted system water pointed to problems associated with heat and cold transfer. Moreover, pumps in conditions like this use excessive amounts of energy.

Approach

Spirotech's consultancy division, SpiroCare, provides advice about the optimum treatment of fluid transport systems. An essential component of this is the thorough analysis of system water, for which purpose Spirotech employs its own specialised laboratory with experienced experts. The procedure also takes into account the technical infrastructure and the envisioned performance level, with the aim of achieving an overall solution through the best possible combination of automatic air vents, dirt separators, additives and support services. In conclusion, SpiroCare presents its recommendations regarding the most suitable treatment of fluid in an extensive report. This will usually include a step-by-step plan to achieve **guaranteed efficiency improvements,** one phase at a time.

The first step at BAT Niemeyer was to deal with the cooling system fluids and install a SpiroVent Superior vacuum degasser.

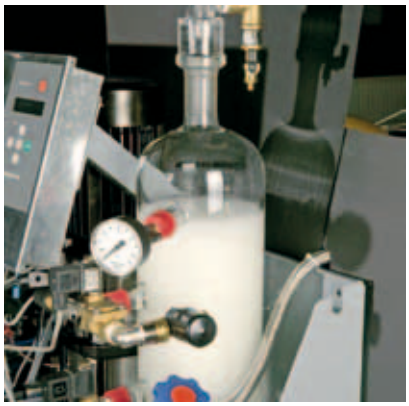
Result

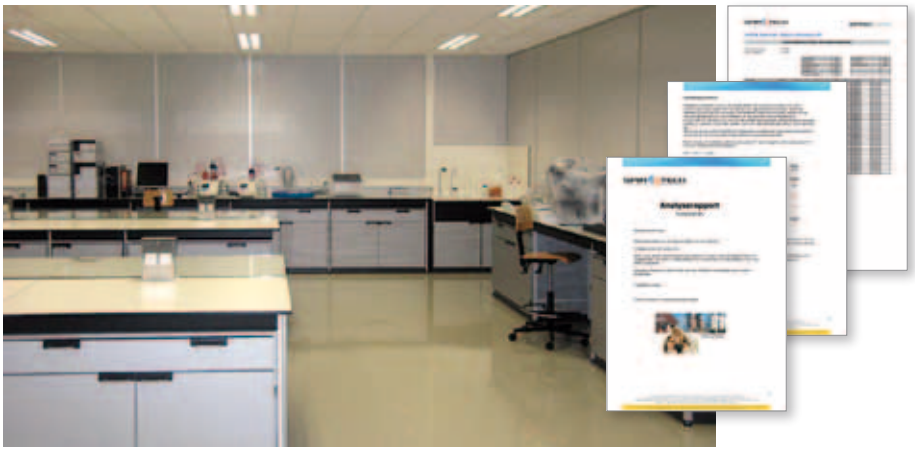
The first energy savings were achieved by considerably reducing the pump frequency,

while still attaining the desired flow of volume. In concrete terms, the five pumps in the circuit yielded a combined energy reduction of approximately 12%. Energy consumption further down the chain will also be lower as both the system's output and the cooler's input were improved. The installation of the vacuum degasser **earned itself back within nine months.** A vacuum degasser has since been installed in the heating systems and custom recommendations for a third installation are being prepared, with attention also being devoted to the benefits that can be achieved by conditioning the system water with the addition of SpiroPlus additives.

Vacuum degasser

The above energy savings were achieved by removing dissolved gases from the system water with a SpiroVent Superior vacuum degasser. A continuously working pump will always remove a given amount of system fluid from the circulation. Closing a solenoid valve creates a vacuum that enables the dissolved gas to be released. The gases subsequently accumulate at the top of the vessel and are released via the air vent; the **degassed and absorptive fluid** is then pumped back into the system where the cycle of gas absorption can be continued.





Spirotech laboratory and SpiroCare step-by-step plan

SpiroCare Step-by-step Plan

Spirotech is the leading specialist in creating efficiency improvement through fluid conditioning by providing high-quality products paired with thorough analysis and advice. Engaging Spirotech always brings with it numerous benefits: for new construction, maintenance and renovation projects alike. Thanks to our worldwide experience and in-depth knowledge you can be assured of superior customised solutions, which are always founded on a SpiroCare Step-by-Step Plan comprising the following elements:

- Analysis of systems and system requirements (system scan/baseline measurement).
- Site visit for the taking of samples.
- Laboratory analysis and interpretation.
- Compilation of technical recommendations based on the interpretation.
- Project design and supervision (if desired).
- Installation of Spirotech components.
- If desired, the application of SpiroPlus (additives).
- Commissioning support.
- Quality assurance of the work performed and final report.

This SpiroCare procedure has also been followed for the activities carried out at BAT to date.

Spirotech offers the following results:

- Fewer failures.
- Les wear and tear.
- Faster initial adjustments.
- Simplified maintenance.
- Improved efficiency, and therefore;
- Reduced energy consumption.

The above results are evidently of interest to all facilities managers, contractors, installation technicians and end users.

Total solutions

Spirotech offers a wide range of total solutions for HVAC and process systems: fittings, additives and advice on how to use and assure the quality of the system fluid as effectively as possible. These products and services will reduce faults, wear and maintenance and also improve the performance of the system while reducing energy consumption. These total solutions will also provide major benefits and save time when it comes to the design, installation, start-up and controlling of systems.

SPIROTECH FOR BETTER PERFORMANCE

Spirotech is part of Spiro Enterprises.

Spirotech bv
PO Box 207
5700 AE Helmond, NL
T +31 (0)492 578 989
F +31 (0)492 541 245
info@spirotech.nl
www.spirotech.com

Spirotech UK Ltd.
PO Box 818 Altrincham
Cheshire, WA15 5GZ
T +44 (0)208 451 3344
F +44 (0)208 451 3366
info@spirotech.co.uk
www.spirotech.co.uk

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