



# 10/17

## CHEMIE TECHNIK in October:

- Pumps
- Compressed air technology
- Metrology, automaton
- Dispensing technology
- Materials, linings, coatings
- Safety technology
- Explosion protection

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# CHEMIE TECHNIK

## PUMPS, COMPRESSED AIR TECHNOLOGY

### Keeping compressed air costs down

Drying compressed air is an important step that operators use to protect their machines and processes. However, this process also consumes energy, which can quickly lead to high costs, particularly for 24/7 operation. The right choice of dryer can quickly become a competitive advantage.

### Remote monitoring of compressed air applications

Compressed air is an important operating resource for many companies. If it breaks down, the entire process comes to a halt. To prevent this, the company offers a remote monitoring service that examines both the hardware and software. And if there is a malfunction at some time, the company guarantees a solution within 24 hours.

### New application areas in wastewater treatment

Everyone is sufficiently aware that pumps are important for wastewater treatment. Now, however, the manufacturer has developed a magnet-driven gear pump that allows completely new application areas in flocculation and flotation.

## Safe Roots pump operation in potentially explosive atmospheres

Many vacuum applications in the chemical industry take place in potentially explosive atmospheres. The EU Atex Directive was compiled in order to minimize the risks posed by these applications as far as possible. The article discusses the special case of Atex certification of Roots pumps.

## SAFETY TECHNOLOGY, EXPLOSION PROTECTION

### 1: Cybersecurity in the chemical industry

Security-related automation solutions must also guarantee protection from cyber attacks in addition to functional security. Only the combination of functional security and information security guarantees a system's overall security. This article describes how to achieve this objective.

### 2: Bursting discs with large nominal values

Possibly an unassuming spare part, bought along with the machine from a well-known plant constructor, the process bursting disc fulfills the most important function that there is: It supports employee safety and helps protect the equipment. The article presents the special case of large-

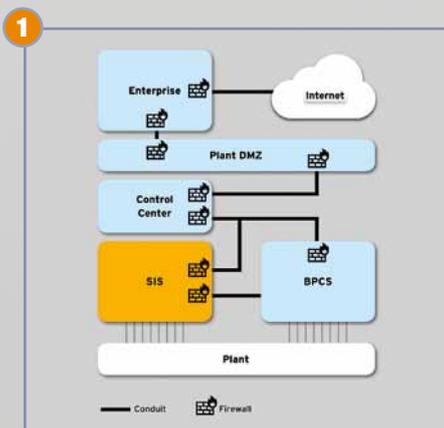


Image: Hima



Image: Fike

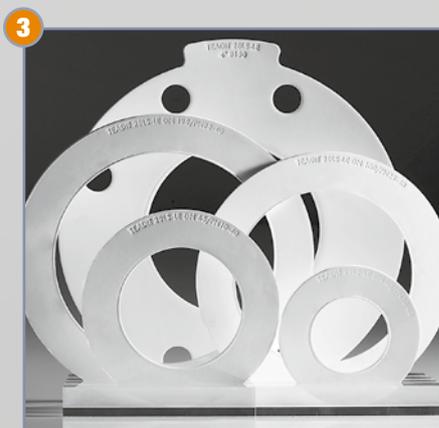


Image: Teadit



diameter bursting discs and the processes in which they can be used.

### **Emergency power in potentially explosive atmospheres**

Safety devices must also be reliably provided with electricity in extreme situations. High performance capacitors and battery-operated UPSs are the available options. Taking practical solutions as examples, this article illustrates how to make a good choice.

### **Lasting safety**

SIL-certified valves are important for a system's safety. Because such certification is good for only a limited time, this has been a complex and expensive undertaking until now. Effective immediately, the manufacturer's electrovalves are available with a new SIL certificate that does not restrict the operating time. Because they have been proven in use for decades, the maximum period of use is no longer limited. This is a tremendous advantage, both for customers who are planning new installations and for those who have been using these electrovalves for many years.

## **METROLOGY, AUTOMATON**

### **Fiber optic sensor measures temperature distribution in reactors**

As a rule, it is very laborious to measure temperatures in processes as a function of their locational distribution. A new fiber-optic sensor uses a Bragg grating for this purpose, and is comparatively easy to install.

### **Measuring instrument calibration – changes in traceability**

There has been a change in proving traceability. In the past, the 3.1 calibration certificate was also accepted as confirmation, similar to the DKD/DAkkS calibration certificate. Its issue requires a much greater effort, however, both in the measurement (more points and series) and in the documentation.

### **Open Process Automation (OPA): soon to be “plug and play”?**

Operating companies dream of automation components that understand one another, regardless of the manufacturer. In the USA, an operator consortium headed by oil giant Exxonmobil is now powerfully promoting this vision. Our article attempts to explain exactly what this is and how compatible it is with the NOA concept from Namur.

## **MATERIALS, COATINGS**

### **3: PTFE flat gaskets for industrial applications**

PTFE seals are valued for their stability, but because they are inert, they are also preferred for use in various processing technology fields.