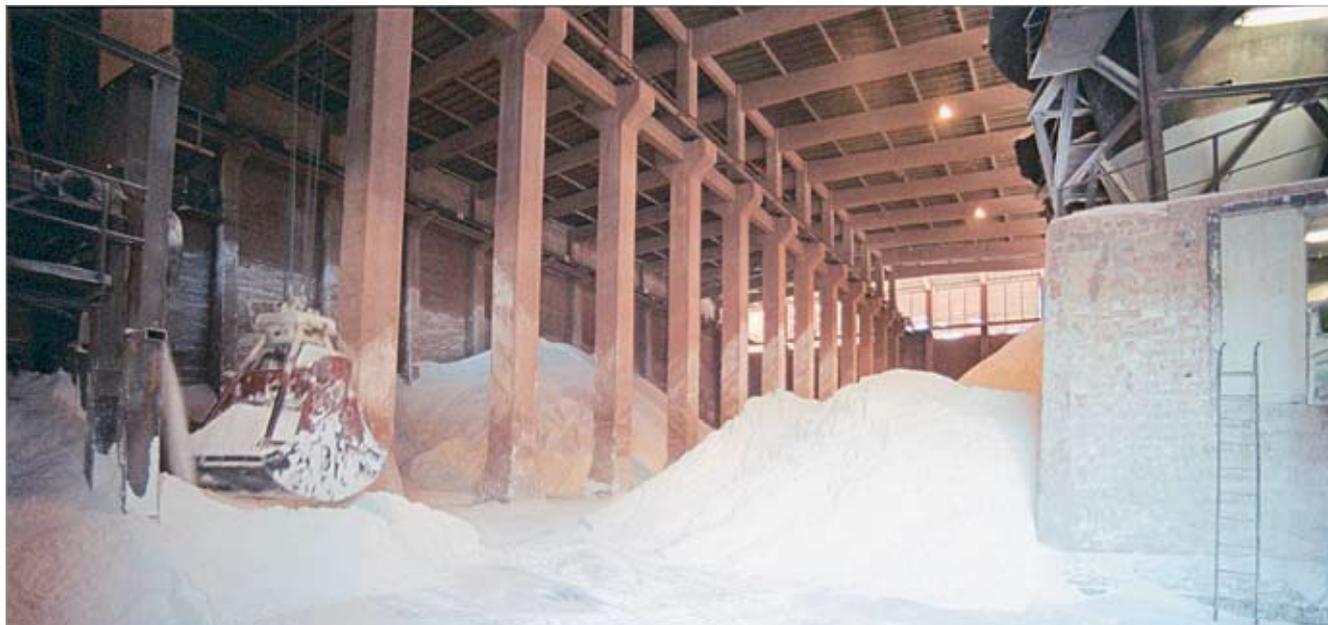


Installation facility and air system from a single source

## Energy Efficiency – Guaranteed

Located in the Bavarian town of Schwandorf, Germany, Nabaltec requires large volumes of compressed air to process and convey raw chemical materials and intermediate products. Therefore, the company recently invested in a new compressed air supply system to replace its existing installation, which had become outdated. The key to this modernisation process was to achieve optimised performance and guaranteed energy efficiency.



**The aluminium hydroxide storage area at the Nabaltec plant**

Summer in Schwandorf is usually hot, very hot. “And it’s about to get even hotter...” exclaims Christoph Lippert encouragingly, “...as we’re going into the roof space to take a look at one of our most important compressed air applications: cleaning of the filtration system for the aluminium hydroxide”. These words came after we’d already viewed the huge rotary calcination kilns, and things there weren’t exactly what you’d describe as cool. The 30 °C summer air had also significantly pushed the temperature up for the new compressed air installation.

Of course, these conditions pose no problem for the Kaeser compressors and treatment systems, which are even able to still use the ambient air for cooling. The air installation has been in operation for approximately two years

now and, as you might expect from a true compressed air systems provider, Kaeser was also responsible for management and construction of the new facility in which it is housed. This innovative aspect formed an integral part of the whole project.

### Works and Control Air

Nabaltec’s existing compressed air ‘system’, which comprised an outdated hotchpotch of old rotary compressors and an equally ancient screw compressor, was replaced by the Kaeser installation in 2004. Everything, including the installation facility, had to be designed from scratch, as the previous building stood in the way of the comprehensive restructuring program that was planned for the company’s premises. Two compressed air systems were consequently installed in Nabaltec’s new steel-frame building. Seven

Kaeser rotary screw compressors (two CSD 102, four DSD 201 and an ESD 301) and two TI 901 S-FE refrigeration dryers provide the works air for the new facility and are co-ordinated by a “Sigma Air Manager” (SAM) 8/4. The treated works air is dried to a pressure dew point of +3 °C before its use in loading and unloading of waggons that contain the powdered materials. The air is also

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### High ambient temperatures pose no problem for the Kaeser air-cooled compressors

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used in a wide range of conveying applications for various materials within the plant (for details, see the box entitled “About Nabaltec GmbH ...”). The control air is provided by two rotary



**Both of the compressed air systems, which are housed in facilities also supplied by Kaeser, are controlled via two "Sigma Air Managers"**

screw compressors (a CSD 82 and a CSD 102) and is dried to a pressure dew point of -40 °C by two desiccant dryers, whilst a SAM 4/4 ensures that the control air installation always operates at the peak of its performance. Both systems are connected to the

building's central control system via interfaces on the SAM controllers. Therefore, by using the "Sigma Air Control" software, Christoph Lippert has permanent access to all operational data and is able to instantly react to any deviations from set parameters.

**The steel construction installation facility formed an integral part of the whole project**



**About Nabaltec GmbH ...**

In 1995, Nabaltec GmbH acquired the long-established 'Nabwerk' plant in Schwandorf, a town located in the German state of Bavaria. Founded in 1936 by VAW aluminium AG as a production centre for aluminium oxide, Nabaltec GmbH – today an independent, medium-sized company – produces high-grade aluminium hydroxide based products.

Nabaltec's knowledge of raw materials, combined with its processing expertise, ensure quality products that are specifically tailored to meet its customers' needs.



Photo: Nabaltec

Aluminium oxide and aluminium hydroxide are used in a wide range of applications.

Numerous Nabaltec products play an integral part in our everyday lives. For example, glassware melted with aluminium oxide, flatware polished with alumina and porcelain containing aluminium oxides can be found on any well-laid table.

Nabaltec raw materials are also used for bio-ceramics by the construction-, refractory- and electronics-industries.

Flame-retardant treatment of synthetic materials with Nabaltec's halogen-free aluminium and magnesium hydroxide based products is becoming increasingly common for a wide range of advanced applications in various industrial sectors.



***The large aluminium hydroxide filters are cleaned with regular blasts of compressed air***

### **Assured Energy Consumption a “USP”**

Martina Schisslbauer, Manager for Material Procurement at Nabaltec, explained that the decision to invest in the

Kaeser system was not only due to product quality and reliability, but was in large part due to efficiency. The decisive factor however, was that Kaeser was the only compressed air system provider who would provide a written

guarantee, at the customer’s request, ensuring that stipulated maximum energy consumption limits would not be exceeded during the first five years of system operation. Two years later and

true to Kaeser’s maxim “More air, More savings...”, the system’s energy consumption figures are still far below the prescribed limits and there’s no doubt that they’ll continue to remain so for many years to come. The written guarantee assuring energy efficiency proved to be a winning formula for Kaeser, as this was the key reason for being awarded the contract by Nabaltec and represents just one of Kaeser’s many “Unique Selling Propositions” (USP).

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