

**Press release**

## **voestalpine Grobblech optimises logistics in Linz with radio positioning system**

### **ABF Industrielle Automation GmbH and Symeo GmbH fit cargo cranes with Local Positioning Radar**

**Neubiberg, 21 September 2007: voestalpine Grobblech GmbH is equipping its plant in Linz/Austria with a new warehouse management and logistics system to optimise material throughput. To be able to determine the exact warehouse location of the steel sheets produced by voestalpine Grobblech at all times, project contractor ABF Industrielle Automation GmbH has decided to implement a radar location system from Symeo GmbH. The Munich company's patented Local Positioning Radar (LPR) precisely determines where the gigantic cargo cranes pick up and put down the steel products and immediately sends this information to the warehouse management's mainframe. This radar system is completely maintenance-free and is not affected by dirt or grease build-up. The first stage of the project is to ensure seamless integration of all the components of the new logistics system, and the first cargo crane with Local Positioning Radar will commence operation in September. In the next stage, seven further cranes with LPR technology will be integrated into the new system by the end of the year. The goal of the new warehouse management and logistics system is to reduce unnecessary transportation by organising storage as transparently as possible, and to ensure better adherence to production deadlines.**

In the warehouses of voestalpine Grobblech GmbH, cargo cranes are used for the transportation and storage of enormous steel sheets and heavy plates, which are produced in a variety of qualities for many different purposes. Thanks to its precise radar technology, the new warehouse management and logistics system will detect the storage position of each sheet with an accuracy threshold of just a few centimetres, enabling unhindered tracing of individual items throughout the plant.

“Exact and reliable tracking of the crane movements is vital if we are to achieve improved transparency in the warehouse area, optimised material flow and strict



adherence to production deadlines,” explains Andreas Fröschl from Production Control in the Plate Finishing unit at voestalpine Grobblech GmbH.

“For our planned IT-supported crane coordinates system in the heavy plate warehouse, we have been looking for robust components of protection classification IP 65 or higher that will provide crane position readings in all the production halls – with a maximum divergence of +/- 10 centimetres,” says Andreas Fröschl. “From the beginning of the project, special attention has been paid to the method of coordinate reading. The entire project is dependent on the correct and reliable determination of physical locations. After many talks and discussions, we finally decided on Symeo’s LPR, because we believe that with this technology we can achieve the precision and dependability that we need. Another advantage is the low cost factor for maintenance and service.”

The September project is focused on installing a Symeo LPR system on the first cargo crane in Linz. Position detection and uninterrupted connection to the new warehouse management and logistics system are to be guaranteed under all field conditions. In the following project stage, voestalpine Grobblech GmbH and its business partner ABF Industrielle Automation GmbH will equip the Plate Finishing unit with an integrated logistics solution across several production halls. This includes the integration of seven other cargo cranes fitted with LPR technology by the end of the year.

### **Reliable logistics chain using indirect material management**

Symeo’s sensor technology makes it possible to track the exact coordinates of each crane – and with them, the current warehouse locations of all the steel products. An LPR base station placed in the centre of the crane constantly receives individually coded radio signals from the LPR transponders, which are placed throughout the hall. By exact computation of the signal propagation time, the base station can determine the position down to the centimetre several times a second – even in the most challenging environmental conditions – and transfer the current coordinates to the material tracking system. The warehouse location of each and every steel product is exactly recorded, even when these are stored on top of each other or in a stack.

“Besides its reliable and precise tracking features, the maintenance-free design is an important factor that made us choose the Symeo LPR,” says Edgar Brunthaler, Project Manager at ABF Industrielle Automation GmbH, who is responsible for system integration. “Symeo’s LPR fulfils all of these criteria. Even in the most inhospitable environmental conditions, the LPR works reliably and without any deterioration over time. Systems with absolute encoders, for example, or optical measuring systems, just cannot achieve this.” Thanks to the new tracking system, optimised transport instructions can be generated for crane operators, and automatic position measurement allows the material throughput to be monitored independently of the operators.

### **Reliable position measurement with the highest precision**

“In terms of technical functionality, our LPR has some resemblance to GPS satellite navigation,” says Symeo’s Managing Director Christoph Rommel. “However, there is one major difference: GPS satellites orbit at a height of over 20,000 kilometres.” In the LPR system, transponders that are permanently installed in the production halls take over the task of the position encoders. The high number of transponders and their combined signal strength ensure an extremely high signal availability and a correspondingly quick determination of physical positions. Moreover, the patented technology of Symeo’s Local Positioning Radar solves the problem of determining exact distances by analyzing the time of flight of radio waves with a propagation speed of about 300,000 kilometres per second, even for the shortest distances between transponders and base station.

More information at [www.symeo.com](http://www.symeo.com).

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### **Available image material**

The following images are available online for downloading and printing:

<http://www.htcm.de/kk/symeo>



**Symeo LPR (Local Positioning Radar) enables measurement of crane positions with an accuracy threshold of +/- 10 centimetres.**

**voestalpine Grobblech GmbH**

voestalpine Grobblech stands for innovation and quality in heavy plates.



voestalpine Grobblech GmbH is a 100% subsidiary of voestalpine Stahl GmbH based in Linz/Austria. As a global supplier of high-quality niche products in the energy market, the company provides thermo-mechanically rolled construction steel for offshore platforms, acid gas-resistant line pipe steels, and high-strength deep sea plates for pipelines.

voestalpine Grobblech is Europe's largest producer of clad plates and heads.

As a full-range supplier, voestalpine Grobblech delivers clad shell plates, heads and cones for advanced pressure vessels.

Based on technological developments for the energy sector, the manufacturer delivers innovative solutions for steel construction and bridge building. voestalpine Grobblech also delivers high-strength plates for vehicle and crane production, as well as wear-resistant plates for the mining industry.

Website: [www.voestalpine.com](http://www.voestalpine.com)

#### **ABF Industrielle Automation GmbH**

ABF Industrielle Automation GmbH was formed as a privately held company in 1988 and has successfully implemented numerous industrial automation projects throughout Europe.

ABF has been operating in Munich since 1995.

The ABF motto is: Complete solutions for electronics and automation. ABF offers a wide range of services in engineering, control technology, processing and production control. The main focus is the automation of discrete as well as continuous manufacturing plants, material flow systems, assembly lines and warehouses. Furthermore, ABF advises customers in system design, automation and Internet technologies, database design and optimisation, as well as the integration of level 2 control systems with ERP and business management systems.

ABF's experience has been constantly applied to the development of flexible and configurable software products, which enables the company to develop projects in a fast and cost-efficient manner. Examples for such developments are OneBase (for the processing and manufacturing industry) and the ISO 8583 Server (for the telecommunications and finance sector).

Website: [www.abf.at](http://www.abf.at)



## **Symeo GmbH**

Symeo GmbH develops and markets systems for precise and contact-free distance and position measurement of moving objects in real-time. Symeo's products and their rugged component design are ideally suited to applications in harsh industrial environments, indoors as well as outdoors.

Local Positioning Radar (LPR), Symeo's core technology for industrial applications, is designed to measure and transmit absolute distances and positions in real-time. This patented technology and Symeo's extensive expertise in dealing with complex requirements mean that the company can deliver cost-effective and customer-specific solutions. Additionally, Symeo offers innovative combinations of LPR with other contact-free sensors (such as optical systems, inertia sensors, gyro sensors, GPS).

The company collaborates with ERP/warehouse management software solution providers as well as with control suppliers to satisfy comprehensive customer wishes. In OEM business and re-equipping existing systems, Symeo supplies components to equipment manufacturers all over the world.

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