



# PSImetals Newsletter



**Production Management for Metals – 03/2007**

Dear all.

Just in time for Christmas, we are pleased to send you the last edition of the *PSImetals* Newsletter for this year. We would also like to take this opportunity to thank you for the good co-operation and to say that we are looking forward to a successful 2008 for all of us.

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We would be very pleased to receive questions or helpful suggestions from you. Please don't hesitate to give me a call (+49-30-2801-1817) or send me an e-mail [a.poehl@psi-bt.de](mailto:a.poehl@psi-bt.de). Please have a look at our homepage [www.PSImetals.com](http://www.PSImetals.com) as well!

Yours sincerely

Annett Pöhl

Solution & Product Management

PSI Business Technology

for Industries GmbH



## On top with PSImetals

### Secured Material Traceability with *PSImetals*

Quality begins with detail – and it is here that poor quality can be detected. Many customers who buy metal products expect producers to warrant consistent traceability of the products supplied and their quality as a precondition for defining responsibilities in cases of insurance claims or complaints. For steel producers, this means that it must be possible to prove for each product delivered the heat from which the product was produced and how such heat was produced. This means that all the information concerning the entire treatment process must be reproducible in detail (production routine, treatment steps and times, feedstock materials, alloys, analyses, measured values, etc.).

*PSImetals* supports these requirements by enabling seamless tracing of the life cycle of each heat:

- the setpoints set for every single work and process step
- the process version for determining the setpoints (set of rules for determining the values for each specification)
- the implementation of the setpoints during production (reporting back of actual values)
- the result of target-to-actual comparisons and the resultant, changed setpoints.

In order to ensure this, *PSI metals* documents not only the individual specifications and values reported back in detail, but also any changes in critical master data (recipes, process steps, parameters, functions and procedures) through version management and release procedures.

### **Successful implementation at Maanshan Iron & Steel, China**

Maanshan Iron & Steel, China, will focus in the coming years on the production of high-quality flat-steel products for the automotive and electrical engineering industry and will invest in a new production line with a capacity of 5.5 million tonnes of steel per year.

PSI BT is to supply the production management software within the scope of this expansion investment. For the steelworks and rolling mill No. 4 (hot rolling mill + cold rolling mill), *PSI metals* APS/ALS handles the entire operational order management, control and monitoring of production processes, as well as the organization of the detail planning process by optimising the production sequence of all parts of the plant.

In the steelworks, *PSI metals* PESliquid controls the entire process, from the charging of crude steel to the production of slabs in two continuous casting lines. The Online Heat Scheduling functionality of *PSI metals* automatically directs the scheduled heats through all units of the steelworks. MASTEEL considers direct charging at the hot rolling mill to be one key cost factor that can be influenced. Direct charging enables relevant savings of energy, time and storage space and is supported by *PSI metals*.

*PSI metals* is embedded into MASTEEL's supply chain management and integrates SAP at the company management level, the level-2 systems in the steelworks and the internally developed MES functionality for material tracking in the hot and cold rolling mills.

*PSI metals* was introduced at MASTEEL in two parallel stages, and was successfully commissioned in May and November 2007 after a project term of 7 and 12 months, respectively. The project was handled and implemented by PSI China.

### **"It can't be any better" - Mathematics in *PSI metals*.**

For two years, PSI BT GmbH has been co-operating extensively with the research group on "Combinatorial Optimization and Graph Algorithms (COGA)" at the Institute of Mathematics of Technische Universität Berlin (head: Prof. Rolf Möhring).

Our customers' core problems are mathematically modelled, examined with a view to optimisation potential and analysed with regard to the use of optimisation methods. Depending on the mathematical properties of the task in question, the algorithms provide an exact solution or approximated solutions of demonstrable quality. The benefit for the customer is the mathematically founded evaluation of the planning results: "It can't be any better" or "the approximated solution is, in the worst case, x% worse than the theoretical optimum".

In 2007, ways to improve solution quality and runtime of *PSI metals* applications in productive use were explored within the scope of joint studies. Real improvement potential was found both for the online scheduler for steelworks and for the scheduling system for cutting lines. Together with our customers, we will develop algorithms which exploit these potentials.

## PSI and Russian IBS agree on Partnership

IBS is the leading IT service company in Russia and has 84 of the 100 largest Russian companies among his customers. Metals customers of IBS are important Russian producers like Chelyabinsk Tube Rolling Plant, Mechel, Norilsk Nickel, OMZ, Russian Aluminum, Severstal, Ural Steel a.o.. Within the framework of the partnership, IBS will market PSI software products like *PSI metals* in the Russian market and provide supplementary services. With the partnership, PSI provides the basis for strengthen its position in the quickly growing Russian steel industry. In 2006, Russia was the fourth largest steel producer in the world; it is planned to increase capacity by up to 30% by 2010.

## ARC-Study: Why manufacturers acquire production management systems?

ARC Advisory Group – which claims to be the leading market research and consultancy house for solutions in the production management and supply chain management environment – is currently working on a study on the subject of "why manufacturers acquire production management systems?".

The issues examined include, for example:

- 'What strategic reasons lead to the acquisition of a Production Management system?'
- 'Have the benefits been achieved?'
- 'What inhibited your company from acquiring a Production Management system?'
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What is interesting to us with this study is the unbiased view of our core issue – solutions for production management. We hence forward ARC's call for participation in this study to you, and would be pleased if you were to take part. Please follow this link '[Survey](#)'. Those who complete the survey will receive a FREE copy of the final report by ARC (\$1,500 value).

## News & Events

### Latest orders

**DOFASCO Inc., Canada:** After the successful specification phase PSI BT has been charged with the delivery of *PSI metals* WTM as management system for the slab yard logistics at Hamilton site, Ontario. *PSI metals* will manage five slab yards and support Dofasco with the timely and optimised ordering of the transportation of the slabs for further processing. The start-up of operations with the solution is scheduled for the second half of 2008.

**SMS Meer for CHTPZ Group, Russia:** PSI has been charged by SMS Meer, a company in the SMS Group, with the delivery of *PSI metals* ALS and *PSI metals* PES for the Chelyabinsk large pipe plant and the new finishing line in Pervouralsk. The ChTPZ Group is Russia's second largest producer of steel pipes and primarily manufactures seamless and welded pipes for the Russian oil and gas industry. The start-up of the solutions is planned for the end of 2008 and the middle of 2009.

**Saarstahl AG:** With the implementation of *PSI metals* PES for the automation of the electric steel plant of the Saarschmiede in Völklingen (replacement of aged systems for EAF and Secondary Metallurgy) the following targets should be achieved: Enhancing quality by standardized treatment practices; reduction of human errors by a higher grade of automation; cost reduction by optimization of the charge and alloy materials.

**Vallourec & Mannesmann Tube, France:** After successful completing the system specification phase *PSI metals* will be implemented as integrated production

management system for the tube mill in Aulnoye. *PSI metals* runs the complete process chain from rolling to finishing for the production of seamless tubes. The aims to be achieved are: single-tube tracking, online inventory management (quantity and valuation), quality assurance and a higher level of process control and transparency. In the course of the harmonization of the ERP Level the SAP-implementation afterwards will be prepared.

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