



PSImetals Newsletter



**** production management for metals *** May 2007

Dear Sir or Madam,

we are pleased to present to you this edition of our PSImetals Newsletter in its second year of existence and we hope that the topics which we have chosen will meet with your interest.

Topics of this Newsletter

Successful Projects and Implementations	Functional Subjects
<u>Trial operation of logistics system successfully completed at voestalpine Stahl GmbH</u>	<u>Material and inventory management with PSImetals</u>
<u>CAQC system officially accepted by voestalpine Stahl GmbH</u>	<u>Increased steelworks performance with PSImetals KPI Monitoring</u>
Latest Orders	Events
<u>DOFASCO: Specification for a manufacturing execution system (MES)</u>	<u>Steel Events in Düsseldorf, Germany:</u>
<u>Shougang: Production management system</u>	<u>METEC, Fit im St@hl, PSImetals UserGroup</u>

We would be very pleased to receive questions or helpful suggestions from you. Please don't hesitate to give me a call (+49-30-2801-1881) or send me an e-mail (rrzepka@psi.de).

Yours sincerely
Rainer Rzepka
Solution & Product Management

PSI Business Technology
for Industries GmbH

P.S.: Please have look at our homepage www.psi-bt.com as well!



On top with PSImetals

Successful Projects and Implementations

Trial operation of logistics system successfully completed at voestalpine Stahl GmbH

At the end of February 2007, trial operation of the functions of the first stage of the new BDST logistics system for the slab yard and slab finishing shop was successfully completed at voestalpine Stahl GmbH. The introduction of PSImetals is to boost overall output of the hot wide strip mill of the Austrian steelmaker within the scope of an internal optimization project. Thanks to optimization measures, the resultant increase in slab transport performance is achieved with minimum changes to transport equipment and reduced storage area. With PSImetals, the transport control system has been completely replaced, thereby optimizing storage strategies, the generation of slab piles, the necessary transport operations and the use of transport equipment. Thanks to improved transport capacity utilization,

this means increased material throughput along with reduced storage and transport costs.

The implementation of the first stage included material flow handling in the storage hall from where the two pusher-type furnaces of the wide strip mill are to be supplied as well as the supply of two cranes with transport jobs, including the implementation of the crane terminal. The supply of interfaces with 13 process computer and production planning systems as well as the furnace scheduling and rolling program adaptation functionalities were also changed to *PSImetals*. PSI developed the control room dialogs for the workplaces at the entry end of the furnace and in the furnace hall.

The next step will involve the integration of the new walking-beam furnace for the wide strip mill, including furnace scheduling, and subsequently the introduction of *PSImetals* step by step in the remaining areas of the slab yard and slab finishing shop of voestalpine Stahl GmbH.

CAQC system officially accepted by voestalpine Stahl GmbH

On 1 March 2007, voestalpine Stahl GmbH in Linz, Austria, issued to PSI the official statement of acceptance of the Computer Aided Quality Control System (CAQC-SM) which is based on *PSImetals*. At the same time, PSI was awarded the follow-up contract for several system upgrades, including, for example, automated version reconciliation of software functions between the test and productive databases.

At voestalpine Stahl GmbH, the CAQC system controls the quality-assured production in the converter steelworks by pre-setting detailed, quality-relevant process parameters in conjunction with a detailed user guidance system. The steelworks already crucially influences the quality parameters of high-quality steel grades. A heat must have achieved defined quality level parameters as far as possible before it is poured. The CAQC-SM handles the predictive control of all quality targets and assesses the actual situation in the heat metallurgy with a view to quality. For this purpose, all relevant quality and treatment requirements are stored in the CAQC-SM and steel-grade-specific recipes (best-practice recipes) for production in the liquid phase are configured. During the production process, the system sets the necessary treatment steps and parameters and checks the quality specifications (such as temperature, chemical analysis, additions, treatment times, etc.) online for compliance. In the case of deviations, updated recipes are generated by *PSImetals* on the basis of the rules stored in order to achieve the production targets.

Functional Subjects

Material and inventory management with *PSImetals*

PSImetals PES enables companies in the metals industry to effectively track and control processes, so that the transparency of processes and operations can be enhanced. *PSImetals* PES enables inventory monitoring and warehouse management in both the heat and solid phase. *PSImetals* PES identifies every material across all system levels and ensures ongoing reconciliation of the inventory map in SAP. Complete and consistent material tracking is ensured by posting all actions performed on and with a material as material-related events and by using a material and storage history. Exact inventory control with *PSImetals* PES means planning reliability, the traceability of all steps starting with the receipt of goods, and provides complete documentation for quality assurance and supplier assessment.

Each metal known in *PSImetals* PES has a defined storage position. This can be a real storage position in the warehouse or yard as well as a logic (virtual) storage position. The

use of material-specific properties to identify and classify different materials facilitates processing and reduces the necessary working time. Inventories with identical properties are managed as batches. Individual material units (for example, pieces) with identical properties are assigned to the same batch even if they are physically stored in different storage positions. The heat in the steel works is also a batch for these purposes because the material properties of a heat are identical. Subsequent changes in material properties are applicable to all pertinent physical material units. Main parameters (such as analysis, supplier, inventory status) are assigned to the batch; only properties of a concrete material unit (such as quantity, quantity unit, physical storage position and status) are managed separately for such a material unit. This enables the distribution of a batch to any number of different physical storage positions (for example, hoppers). When the properties of a sub-set of a batch change, a new batch is generated for this very sub-set. The residual quantity remains in the original batch.

The material and inventory management functionality of *PSImetals* is already successfully in use with leading steelmakers, such as Böhler Edelstahl or Swiss Steel. A new, upgraded concept is currently being implemented for several users, including, for example, Saarlöhle, Maanshan Iron & Steel and SeverCorr.

Increased steelworks performance with *PSImetals* KPI Monitoring

PSImetals offers fully integrated KPI monitoring for every phase of the planning and production process in the metals industry in both the solid and liquid phase. The combination of production and quality data in realtime with the plant-spanning order and sequence planning functionality of *PSImetals* APS/ALS provides all the information concerning the present and future performance of a KPI at all times. Material currently posted, plant or transport messages as well as changes in the production schedule are immediately presented via the key performance indicators with their entire consequences. This closes the circle between production analysis, decision-making and predictive influencing of production via the *PSImetals* planning systems. Another effect is motivation for staff who now have a continuous overview of the degree of target achievement via the KPI dashboards.

The flexible architecture which is strictly broken down into the data processing, data consolidation and data evaluation layers enables integration into existing management information systems or portal solutions, such as the SAP NetWeaver portal. Basic data can be extracted from SAP systems or level-2 systems via *PSI*integration or the SAP NetWeaver XI integration platform and integrated into KPI analyses and forecasts.

News & Events

Latest Orders

DOFASCO Inc., Canada's leading flat steel manufacturer, commissioned *PSI* with the preparation of the specification for a manufacturing execution system (MES). The MES covers all level-3 functions, including detailed planning for the hot wide strip mill and the entire cold rolling areas as well as the finishing lines. The solution to be implemented in the next step is to be based on *PSImetals*.

In October 2006, the **Shougang Group Corporation** (Capital Steel Industries), one of the largest iron and steelmaking groups in the People's Republic of China, ordered an integrated production management system based on *PSImetals* for the new ShunYi cold rolling

mill. The cold rolling mill will start productive operation in 2007 and will produce 1.5 million tons of cold-rolled and galvanized material with coated material to follow at a later date.

Forthcoming Events

For the fifth time now, the **Fit im St@hl** IT symposium will be held at Düsseldorf's Stahl-Zentrum. Under the motto "Innovative IT Strategies", competent experts will present on 12 and 13 June 2007 papers on how they adapt IT strategies to the business strategies of their companies.

In the run-up to "Fit im St@hl", the PSImetals users conference on 12 June will offer an excellent opportunity to exchange views and establish new contacts. Avail yourself of the opportunity at this year's **PSImetals UserGroup** to learn how you can make even better use of the potential offered by PSI's production management solutions!

On 12 - 16 June, the 7th International Metallurgy Trade Fair **METEC** will open its doors in Düsseldorf. As a leading supplier of production logistics solutions, PSI will demonstrate tailor-made solutions based on the PSImetals industry standard in **hall 6, booth E74**. Parallel to the METEC trade fair, you can learn more about our reference projects in the steelmaking industry at the international **InSteelCon** steel conference. Visit our presentations in the Congress Center Düsseldorf:

PSI's presentations at METEC InSteelCon	Speaker	Date
Quality-assured production in the oxygen steelmaking plant in Linz	Lehner/Jandl/Kokert/Felberbauer/ Hofer, voestalpine Stahl H. J. Ponten, PSI BT	13 June 2007, 12.20 pm Track B, Session 8.3
Mathematical optimization of logistics processes at the hot rolling mill of voestalpine Stahl GmbH	G. Kager, voestalpine Stahl C. Neuberger, PSI BT	14 June 2007, 14.00 pm Track D, Session 23.1
Planning CSP with PSImetals ALS	W. Runde/J. Neuer, SMS Demag Dr. T. Glaß, PSI BT	14 June 2007, 14.40 pm Track D, Session 23.3
Key performance indicators monitoring in cold rolling plant	B. Gimlott, PSI BT	14 June 2007, 15.40 pm Track D, Session 23.5

The dates at a glance:

Fit im St@hl	12 - 13 June 2007	Stahl-Zentrum Düsseldorf
PSImetals UserGroup	12 June 2007	Stahl-Zentrum Düsseldorf
METEC	12 - 16 June 2007	Fairgrounds Düsseldorf
InSteelCon	11 - 15 June 2007	Fairgrounds Düsseldorf

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