



Jacobs University of Bremen and SMS group kick off joint research and development project

As part of its digitalization offensive, SMS group has kicked off a research and development project on intelligent production planning in cooperation with Jacobs University of Bremen, Germany. The project will cover aspects such as dynamic reacting to specific production situations, use of artificial intelligence and autonomous learning of automation systems.

The dynamic planning and optimization processes to be developed during the project will be integrated into the automation environment in place at the SMS group customer Big River Steel in the U.S.A, which includes, for example, the X-Pact® MES 4.0 production planning system. Specifically, the project is to provide solutions and optimization models for “production planning with real product cycle times”, “yield optimization through smart campaign planning” and “re-scheduling of sequences in CSP® plants (Compact Strip Production)” after



interruption of casting”.

Improved adherence to production schedules and increased yield by reducing downgrading and scrap will have positive effects on the economic efficiency of the customer’s production facilities. For example, it is planned to introduce machine learning and pattern recognition techniques to predict the timeliness of orders. A further objective of the project is the development of a planning module based on artificial intelligence - X-Pact® MES 4.0 Performance Enrichment Analysis. This module is to detect

relationships between production parameters and performance indicators on the basis of historic production data. These capabilities are intended to be used, for example, to perform scalable, self-learning order analyses and generate plans that take into account order schedules.

The joint project was officially kicked-off at the end of 2017. During a presentation of the project at Big River Steel in the U.S.A., representatives of the Jacobs University explained their views of what steps should be taken to implement a “Learning Factory”. They presented previous reference projects to illustrate the University’s capabilities and suitability as a partner for this project. The responsible research group is internationally renowned for the high quality of its network-based analyses of complex systems, its strong international orientation, the highly professional project management and the excellent know-how in modern data analysis methods.

PMB Silicon commissions SMS group to supply two submerged arc furnaces



PMB Silicon Sdn. Bhd., based in Sarawak, Malaysia, has contracted SMS group to supply two SAF (Submerged Arc Furnace) for the production of silicon. The planned production capacity is 32,000 tons of silicon per year. Commissioning is scheduled for autumn 2018.

SMS group's scope of supply includes the basic and detail engineering as well as the equipment for the 24-MW submerged

arc furnaces, which essentially comprises two furnace-rotating gear units, the furnace vessels, gas hoods, the installation of a power supply and mains voltage compensation system, and the supervision of erection and commissioning.

A special feature is the rotating furnace vessels, which prevent carbide precipitation in the furnace mix.

With this plant PMB Silicon is securing its in-house silicon production. Silicon produced in this way is used as a main alloying element for the production of aluminum alloys in Press Metal Bernhard plants.

Poh Ming Koon, CEO of PMB Technology Berhad (center, standing), his team, and the SMS group team get together for the kick-off meeting.

ElvalHalcor orders aluminum hot rolling mill

ElvalHalcor S.A. the newly emerged business of Elval Hellenic Aluminium Industry S.A. and Halcor Metal Works S.A., Greece, will boost its output of prime aluminum flat rolled products.

The company which belongs to the Belgium-based Viohalco holding awarded the German SMS group GmbH with an order to supply a new four-stand aluminum tandem hot finishing mill for its Oinofyta plant near Athens. This investment allows for the increase of ElvalHalcor’s current presence in aluminum packaging, industrial, transportation and architectural applications and sets the base for expansion in the automotive and aerospace sectors.