Press Release

Tvarit AI solution optimises Procast Guss processes

TiA AI software optimises energy consumption and quality
Scarcity of skilled employees and high energy costs challenge foundries
"AI can help us a great deal."

Gütersloh, 7 June 2022. Iron foundry Procast Guss, based in Gütersloh, Germany, will in future cut its energy consumption using Tvarit GmbH's TiA AI solution. Simultaneously, its casting processes are to be further optimised systematically and scalably. The foundry intends in this way to tackle the current challenges to the foundry industry. "Rising energy prices are an existential threat to the foundry sector", emphasises Florian Feddeck, managing partner at Procast Guss GmbH. "The scarcity of skilled staff and the growing product-quality demands place additional burdens on us. We are pursuing totally new paths in tackling these challenges using AI." The TiA software detects quality deviations and energy losses at an early point and provides strategies for optimisation. This knowledge, once learnt, can be applied by the software to other machines and other products.

"We are impressed by Procast Guss's innovative spirit and their courage in rethinking existing processes", comments Jürgen Schmiezek, of Tvarit. "We look forward to supporting this company and to playing our part in shaping a sustainable future with zero-waste manufacturing"

Tvarit GmbH's solution was selected because it has been specially developed for the foundry industry. Unlike other AI instruments, this software also integrates into its computations physical parameters, such as metallurgical composition, rheology, solidification behaviour and component geometry. This enables it to describe the reality of casting processes with an accuracy of practically 100%.

"It is extremely difficult to master and control casting processes", notes Feddeck. "Humans are stretched to their limits. For this reason, innovations are pursued only slowly in this industry. But I am convinced: AI can help us a great deal." Using such a solution, even less experienced employees will be enabled to implement changes in real time and assure practically faultless production. TiA "conserves" knowledge on all facets of casting processes and expands it continuously. The longer the software is in use, the smarter and more accurate it becomes.

Procast Guss GmbH
Procast Guss GmbH is one of Europe's leading contracting foundries. Its range extends to conception, design, casting, machining, coating and assembly of cast-iron components. Procast Guss has production capacity for 40,000 t of cast products. Both standardised and newly developed cast-iron materials are cast. Procast Guss's customers are active in the mechanical-engineering, commercial vehicle and toolmaking sectors. The company has 330 employees working at a total of three locations, and is domiciled in Gütersloh, Germany. www.proca.st

TVARIT GmbH

TVARIT GmbH is a leading deep-tech software corporation. TVARIT develops and implements the TiA (TVARIT Industrial AI) industrial artificial intelligence solution. This technology supports, in particular, companies in the foundry and metalworking industries on their road to sustainable zero-waste production and maximisation of overall equipment efficiency (OEE). TiA's hybrid algorithm describes mechanical reality with an accuracy of close to 100%. TiA conserves, expands and scales process knowledge, and this software therefore provides an answer to the problem of the increasing loss of knowledge and experience in industry. TVARIT has already received several distinctions, including 1st place in the "Start-up Award" of the DIGITAL FUTUREcongress and 2nd place in the "Factory of the Year" industrial competition. Customers include, inter alia, the MAXION, KAMAX, KSM and Schunk Group companies. TVARIT GmbH has its registered offices in Frankfurt am Main, Germany.
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