

Optimization of thermal-metallurgical processes

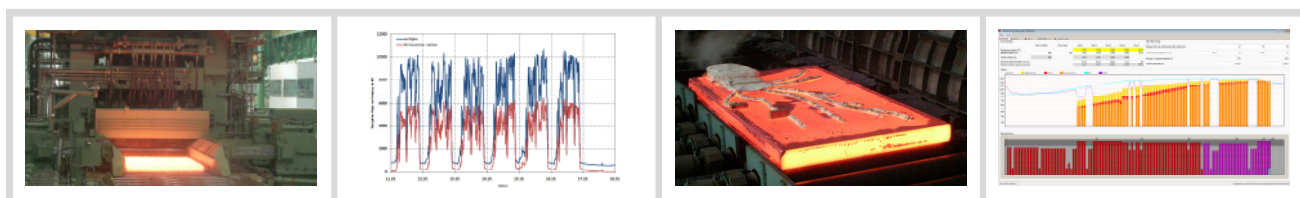
GIWEP

The Gesellschaft für Industrielle Wärme-, Energie- und Prozeßtechnik mbH – **GIWEP** for short – is an independent and autonomous enterprise located in Mülheim on Ruhr. **GIWEP** was created 1987 due to the alliance of theory and practice, the Institute of Industrial Furnaces at RWTH Aachen University und Mannesmann Röhrenwerke in Mülheim on Ruhr.

The focus of our work is the **optimization of processes in thermal-metallurgical plants** with regard to **quality and efficiency** of production like e. g.:

- Improvement and stabilization of product quality
- Increase of temperature uniformity within the material
- Optimization of plant throughput and flexibilization of production
- Reduction of energy consumption and material losses
- Workload reduction for the operating personnel
- Documentation of material properties and course of heating processes

In order to achieve these objectives for our customers we are offering services and products based on our extensive and broad experience with thermal-metallurgical plants.



Engineering

Our engineering services include consulting and project planning, thermotechnical calculations, plant dimensionings as well as studies and training on thermotechnical problems.

Measurements and Examinations on Plants

We perform measurements and examinations on thermal-metallurgical plants, evaluate obtained data, assess the current state of plants and develop suggestions for improvements and extensions of examined plants.

Plant Modernization

Regarding modernization of thermal-metallurgical plants we provide our customers with a comprehensive range of services, starting with analysis of current situation of plants, planning, conception, creation of requirement specifications and project support up to execution as well as maintenance and spare part service.

Process Control Systems

Our model based process control systems enable fully automatic plant operation, complete process documentation as well as a significant increase of production quality and efficiency, particularly with regard to energy consumption, material usage and improved production flexibility.

Offline Models

Our offline models are plant-specific software solutions without direct process connection and refer to a multitude of thermotechnical, mathematical and graphic modules.

Measurement Technology

The measurement systems we use are to be applied for technological control and supervision of thermal-metallurgical processes. In connection with corresponding add-ons for our process control systems it is possible to further optimize production processes in qualitative and energetic respect.

- Walking beam furnaces
- Walking hearth furnaces
- Pusher type furnaces
- Rotary hearth furnaces
- Roller hearth furnaces
- Double walking beam furnaces
- Floater furnaces
- Bell type furnaces
- Chamber furnaces
- Bogie hearth furnaces
- Electric arc furnaces
- Induction furnaces
- Cooling plants