

Meltshops Solutions

EAF Optimization Technology

AMI Automation, a Resonac Company, is a global leader in automation and control solutions. We specialize in designing, manufacturing, and implementing innovative technologies to enhance process safety and efficiency across industries such as steel, mining, cement, pulp & paper, and power generation.

Meltshops Solutions

Leading the way in Electric Arc Furnace Optimization Technology, we provide innovative, modular control systems designed to maximize EAF efficiency and empower operators to achieve peak furnace performance. Our solutions are flexible, user-friendly, and built to enhance productivity while reducing energy consumption.

Products

Electric Arc Furnace Optimization & Safety



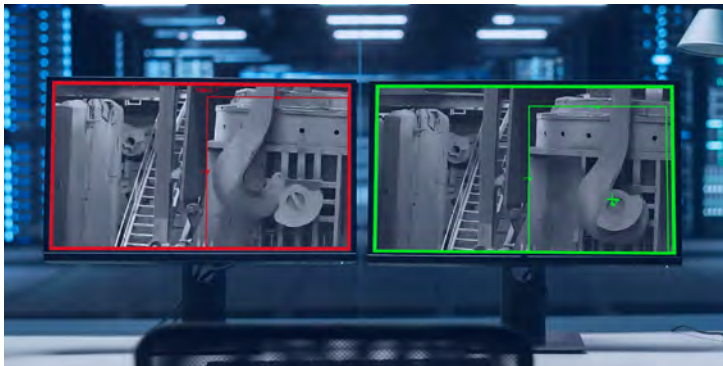
EAF OPTIMIZATION & SAFETY DIAGRAM

Electrode Regulation System

The DigitARC® PX3 Electrode Regulation System is the core of AMI's EAF optimization solutions. With over 35 years of expertise and implementation in 275+ Furnaces worldwide, it delivers proven reliability and efficiency for even the most demanding EAF and LF applications. Our advanced electrode control technology ensures optimal arc stability, real-time performance monitoring, and seamless operator interaction through an intuitive interface. Today, more than 80% of the North American EAF steel capacity is melted with the AMI regulation systems.

SmartFurnace®

The SmartFurnace® System enhances productivity and reduces energy use per ton of steel. As an advanced AI-driven expert system, based on the SmartKnB® platform developed by AMI, it dynamically adjusts electrical and chemical energy inputs based on real-time heat conditions. Recognizing that every EAF is unique, we provide the tools and expertise needed to optimize performance. With a modular design, the system enables coordination between energy input controls, while its open architecture allows for seamless customization, ensuring maximum efficiency.



IOHOOK MONITORING FOR GOOD LADLE HOOKING



MV HARMONIC FILTER



GRAPHITE ELECTRODES MELTING SCRAP



AMI ENGINEERS ON SITE

IoProducts

Advanced solutions for monitoring and controlling critical aspects of the steelmaking process. Built on the SmartKnB® graphic development platform, they provide advanced customization within an open, user-friendly architecture. By integrating Artificial Intelligence, and Image Processing, these modules accelerate digitalization, improving efficiency, safety, and overall process optimization.

Power Solutions

We provide power electronic solutions that play a key role in enhancing Meltshop performance. The DigiFCR® X4 is our Firing Circuit Replacement system, designed to fully upgrade the controls of existing DC EAF power rectifiers. It improves current regulation while also extending protection for the furnace. Meanwhile, the DigiSVC® is our advanced Static VAR Compensator that stabilizes voltage, improves power factor, and compensates for reactive power in industrial electrical systems. Both solutions can be delivered with new power electronic hardware or as retrofits for existing systems, regardless of the original manufacturer.

Automation

Level 1

Our Level 1 services cover Electric Furnaces, Ladle Furnaces, Continuous Casters, and Vacuum Degassers, delivering tailored solutions that enhance efficiency, reliability, and performance. With deep industry expertise, we support all major PLC and HMI brands, ensuring seamless integration and optimized operations. Our fast and safe start-up process adapts to each client's unique requirements, while our ergonomically designed HMIs provide intuitive, real-time insights to streamline operator control and decision-making.

Digital OT Systems

We offer a complete and fully integrated suite of systems to support operations of the steel making processes, from customer orders to the delivery of products, tracking and controlling material used, plant/process performance, product quality and cost (\$/ton), customer requirements, and asset usage.

- ▶ Production control modules
- ▶ Scrap control modules
- ▶ Process information (Level 2) systems
- ▶ Asset management modules
- ▶ Production reporting modules

Services

AMITech Center (ATC)

The AMITech Center is a state-of-the-art workspace designed to deliver faster and better support to our customers worldwide. We operate through two strategic locations: our Headquarters in Monterrey, Mexico, and our newly established office in La Coruña, Spain (ATC-E), which was opened to strengthen our presence and service across the EMEA region. Dedicated to support Electric Arc Furnace producers with immediate response in emergencies, or collaborating in the continuous improvement of the operation, the AMITech Center represents a major milestone in AMI's commitment to providing innovative, reliable, and immediate technical assistance for our customers.

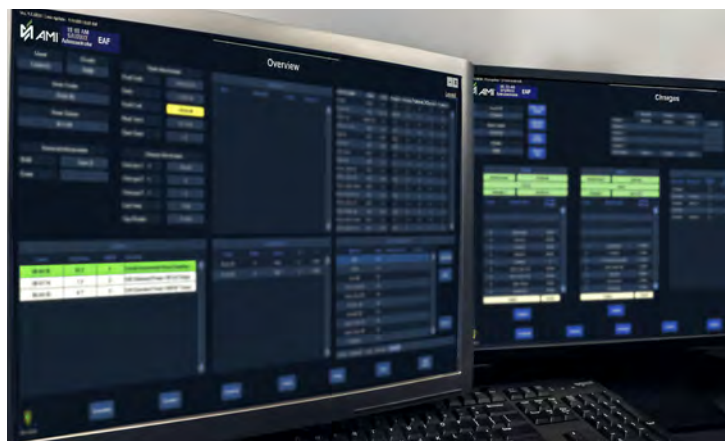
Staffed with highly trained professionals, the ATC engineers offer deep knowledge in EAF operation, process optimization, and system troubleshooting.

The ATC provides a complete range of services to support and optimize EAF operations:

- ▶ **Remote monitoring:** Continuous tracking of furnace performance for optimal operation.
- ▶ **Training:** Hands-on and remote training on the latest EAF optimization tools, including SmartFurnace® systems.
- ▶ **Technical support:** Immediate access to experts for diagnostics, troubleshooting, and guidance.
- ▶ **Process analysis & optimization:** Advanced insights to improve efficiency, reduce energy consumption, and enhance productivity.



AMI LEVEL 1 HMI



AMI LEVEL 2 SYSTEM OPERATOR HMI



ATC-E OPEN SPACE

Technical Services

With the largest EAF Optimization team worldwide, industry-leading expertise is available to enhance furnace performance, efficiency, and reliability. Comprehensive support is provided both on-site and remotely, covering PLC and HMI systems, operator training, diagnostics, and process optimization to ensure every aspect of EAF operations for maximum productivity and cost efficiency.

By integrating the latest technological advancements with data-driven strategies, tailored solutions are developed to help steelmakers achieve sustainable, repeatable, and measurable improvements. Advanced services include:

- ▶ Optimization as a service (OPTaaS®)
- ▶ Remote monitoring
- ▶ Electrode regulation
- ▶ Process and metallurgy
- ▶ Transformer care
- ▶ Ground survey
- ▶ Power study
- ▶ Training



AMI'S ON SITE SERVICE

DigitARC®, SmartFurnace®, SmartKnB®, DigiFCR®, DigiSVC® and OPTaaS® are trademarks of AMI International SAPI de CV. All other products mentioned are registered trademarks and/or trademarks of their respective companies. All specifications in this document are subject to change without notice.