# ant.
## APPLYING NEW TECHNOLOGIES

## ABOUT US

ANT Automation, LLC is an American company dedicated to provide high quality Automation Services and state-of-the-art industrial software development for Industry. We count on a cohesive group of professionals with around 7 to 12 years of experience in a wide range of technologies and areas such as Engineering, Math, Metallurgical and IT. Our company is providing services in USA, Argentina and Spain.

Our mission is to provide innovative products and quality services to our clients using all our capacity and experience in industry solutions and to build a profitable firm capable of developing and retaining highly skilled professionals.

## EXPERTISE

Our expertise in Automation and Process Control covers all the automation levels:

- **Level 0 Instrumentation and Electrical Engineering:** Basic and detailed Engineering

- **Level 1 Supervision and Control**: PLCs and field HMI programming and commissioning

- **Level 2 Acquisition, Monitoring, Modeling and Optimization**: HMIs / Level 2 programming and process monitoring, process modeling and optimization

- **Level 3 & 4 Production Management**: M.E.S. and E.R.P. systems, Floor Plant Management

## PROCESS

Experience in new implementations and revamping projects in the following areas:

- **Reduction**:Sinter/CokeBy-products plants

- **Melt shops**: EAF, BF, LMF & Continuous Casting Machine

- **Process Lines**: Annealing Furnaces, Re-heat furnaces, Temper Lines, Final Inspections lines, etc.

- **Quality**: Chemical and Metallurgical laboratories software
**IT**: Overall plant management information

## SCADA

Industrial Studio 2010 is a powerful SCADA software that allows the integration of all spreads HMIs and PLCs in one unique application. Exploit your data and control process in real time from many different systems already installed in plant. It's OPC standard compliant v2/v3, compatible with most known PLCs and DCS.

Industrial Studio is compatible with Microsoft Visual Studio 2008 and 2010 (WPF / Silverlight / XNA 3D engine), allowing to just drag and drop controls and immediately read/trend/historic/control and process data from your existing PLCs or existing HMI in floor plant.

Industrial Studio 2010 provides tools in RIA (Rich Internet Applications) for: Real Time / Events / Alarms / SQL Logging / Product Tracking and Reporting

## MES

Provides a complete solution for automation in all your areas. It is a standard platform with the following key benefits:

- Complies with ISA 95 Standard specification. Based on models and terminology from ISA 95, it provides standard interfaces to other systems and standard formats for data.
- Easy to integrate with ERP systems.
- Exhaustive and real time knowledge of productivity ratios, consumptions and standard deviations
- Aid in the continuous improvement of processes and management.
- Scalability and Optimal Performance.
- No license limitations and Open Source

## CIRA

Infrared Artificial Vision Products & Continuous InfraRed Analysis (CIRA) products include:

- Slag Detection in EAF/BOF
- Hot Spot Detection for Hot Metal Cars (Torpedoes) & Ladles
- EAF / Vessel / Ladle Furnaces temperature monitoring

CIRA Products are integrated with state of the art FLIR Infrared cameras, using intelligent artificial vision to automatically detect hot spots, perform tracking, detect slag, etc without human intervention, using new technologies (CUDA) and embedded in RIA (Rich Internet Applications)

## OPTIMIZATION STUDIO

Optimization Studio is a model platform designed to simulate and optimize different processes using RIA web technology with CUDA optimization core.

- **FURNOP**: EAF Optimization, Process model, calculates Electrical Energy, Electrode Consumption, Oxygen / Carbon, Scrap Consumption, Coke, Additives & Refractories among others. Minimizes overall cost in seconds.

- **Steel Shop Planning Optimization**: automatically generates casting schedules and handles all important aspects in the casting process including upstream and downstream constraints. It serves as a decision support solution for the caster scheduling. The generated schedules can be modified and have to be accepted before releasing it to production.

- **COBOP**: Coal Blend Optimization for Coke Plants. Predict the coke quality. Help to the process Engineer in decision making for the coal's purchasing. Minimize coal blending cost accomplishing with coke quality. Minimize the expected sulfur emissions (green operation).