MES.AI

MES.AI is a complete, fully integrated, package that can start from capturing Customer Orders to the delivery of Products, while tracking material used, plant/process performance, asset usage, quality and cost, to produce finished products.

- Tracks all elements involved in production (Products, Quality, Consumables, Process, Assets)
- Controls production by dynamically optimize the Production Schedule
- Learns from history – Integrated Machine Learning (AI) tools
- Optimize core models from learned history
Execution Control System

This system tracks, controls, learns and optimizes the execution of the production:
- Implements Individual process modules for all processes (Furnaces, Casting, Finishing Lines)
- Tracking modules track:
  - Product production within processes
  - Products between processes (heats, slabs, billets...)
  - Assets (use, inventory, life, performance...)
- Control modules at all levels, from a single process to plant-wide production
- Learning Modules collect relevant information to learn from it (applying AI tools)
- Optimizing Modules applies “learned” information to existing control modules

Production Scheduling & Control System

This system controls the production by tracking and optimizing the schedule of orders:
- Groups customer orders into production orders that are optimum for each process
- Plan when orders should be produced maximizing the production capacity
- Schedule (sequence) orders for production that maximizes production output
- Tracking orders as they are produced
- Learn by collecting relevant information to scheduling
- Optimize (dynamically) a production schedule once in production according to real-time conditions

Operation Planning System

This system helps plan the whole plant operation
- Schedule down-time for processes (maintenance)
- Determine what products and how much to produce (more profitable products)
- Determine materials/consumables to buy (considers value-in-use)
- Learning Module determines the Performance of:
  - The overall plant
  - Each process
  - Each product (heats, slabs, billets, coils...)
  - Each material
  - Each crew, etc.
- Optimizes the models used for planning with information “learned”