

R.T. Patterson Company, Inc.

Engineers and Consultants

CLIENT

US Steel – Fairfield, AL
Lexicon, Inc. – Little Rock, AR

PROJECT

Rounds Caster Restart/ New Capital Equipment Improvements

PROJECT SCOPE

In conjunction with the installation of the new EAF project at the Fairfield, AL Works, US Steel upgraded the existing 4-Stand Rounds Caster with New Capital Equipment improvements by SMS Concast.

The facility was idled for approximately 3 years. Lexicon, with the assistance of R.T. Patterson Company providing engineering services, was contracted by US Steel to develop a program for the restart of the Rounds Caster along with the installation of the new capital equipment.

The improvements consisted of the following:

- New Cartridge Molds
- Mold Level Detection System
- Mold Electro-Magnetic Stirring System (MEMS)
- Hydraulic Oscillator
- Modified Secondary Cooling System
- Updated Hydraulic Controls for Withdrawal Straightener
- New Withdrawal Straightener Units with Multi-Point Unbending
- Added Pinch Roll
- New Turn-Over Cooling Bed, Roller Table and Pushing Device



RTP SCOPE OF WORK

RTP provided the following installation Engineering Services:

- Field Investigation and Inspection
- Demolition Drawings
- General Arrangement and Layout Drawings
- Foundation Modifications and New Foundation Drawings
- Structural Repair Drawings and New Structural Drawings
- Process/ Utility Piping Design and Installation Drawings
- Water Balance Analysis
- Evaluate Existing Water and Gas Systems
- Develop Material Specifications
- Electrical Design & Installation Drawings Complete with Cable/ Conduit Schedules
- Specify New Power Distribution Equipment for New Equipment
- Update Drawings for Existing Control Desks and Operator Panels
- Develop New Network Diagram
- Water Treatment Upgrade
- New Turret Loadside Platform
- Ladle slide Gate Hydraulic Control System
- Construction Assistance

