

R.T. Patterson Company, Inc.

Engineers and Consultants

CLIENT

AK Steel Corporation
Butler, Pennsylvania

PROJECT

No. 5 EAF and LMF Installation

PROJECT SCOPE

The project consisted of installing a new Electric Arc Furnace (EAF) and a twin station Ladle Metallurgy Furnace (LMF) at the AK Steel Butler Works with a production rate of 1,450,000 tons of steel per year. Major components for the modifications to the existing Melt Shop Facility are:

- Extend existing Melt Shop Building by two (2) bays
- Dismantle existing Degassing Facility for twin LMF Facility
- New Electric Arc Furnace
- New Dual Station Ladle Metallurgy Furnace
- Transformer Vaults for EAF (173 MVA) and LMF (56 MVA)
- Operating floors for EAF and LMF
- Alloy Additive Systems for EAF and LMF
- Fume Emissions System for including Drop Out Box, Water Cooled Duct & Quench Tower
- New Water Treatment Facility
- Upgrade of existing substations

RTP SCOPE OF WORK

RTP provided the following installation engineering services:

- Field investigations
- General arrangement and layout drawings
- Demolition and relocation drawings and sketches
- Foundation design and installation drawings for buildings and equipment support
- Structural design and installation drawings for buildings and equipment support
- Architectural design and installation drawings for Transformer Vaults
- Process/utility piping design and installation drawings
- Electrical design and installation drawing complete with conduit cable schedules
- Preparation of equipment procurement specifications
- Preparation of Installation Specifications
- Preparation of Turn-Key Specifications for Water Treatment Facility & Alloy Systems
- Prepare Vendor Proposal Evaluations and Recommendations for Placement
- Project Management Services between AK Steel and equipment suppliers/contractors
- Preparation of building permit drawings
- Project Scheduling
- Project Management



Project Value: \$180 Million