

Hot Mill Furnace Optimization with Beta Planner for Optimal Mill Scheduling

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Keywords: Hot Charging, Scheduling, Furnace Optimization, Energy Savings, Optimized Throughput

INTRODUCTION

This paper describes the solution architecture for modeling the optimization of multiple furnaces with different throughput capacities in a hot strip mill environment for use in cold and hot charging environments.

In 2001, A.I. Systems implemented the BetaPlanner hot charging scheduling solution at a major - and one of the technologically leading steel companies - in Central Europe. After a successful implementation of the SteelPlanner® products, this company wanted to further improve the hot charge solution by making a close synchronization between Level 3 and Level 2 systems of the reheating furnaces. The furnace scheduling solution described here is integrated into the BetaPlanner product.

BetaPlanner is a part of the SteelPlanner® family of products from A.I. Systems. The SteelPlanner® family provides optimizing, decision support, assignment, scheduling, and planning systems for the metals industry as a plant covering solution of production planning, scheduling, and control systems.

The solution has been successfully taken into production in February 2007.

OVERVIEW OF A.I. SYSTEMS

A.I. Systems (AIS) is specialized in the development and the implementation of software for decision support in the areas of production planning and supply chain logistics in process industries.

The AIS Group, headquartered in Linz, Austria, is a leading supplier of planning and scheduling systems for the metals industry. Solutions from AIS increase the efficiency of expensive heavy equipment through the optimization of capacity planning and production schedules. Numerous references worldwide of the SteelPlanner® family of planning, scheduling, and control solutions underline the effectiveness and reliability of SteelPlanner® for the metals industry.

In the Steel Industry, A.I. Systems has built a worldwide leadership position by installing more than 50 components of its "SteelPlanner®" suite. A.I. Systems' software is used by a large number of well-known steel producers, such as Ahmsa, Bethlehem Steel, BlueScope Steel, Corus, CST, DDS, Dofasco, Duferco, Rautaruukki, Siderar, Stelco, Usinor, Voestalpine and WCI.