

The newsletter for steel and aluminium producers from Broner Metals Solutions – dedicated exclusively to business solutions for metals production

## New Release 33.2 Features Improve Production

### Feeder Groups

Plants with Continuous cold rolling and processing lines can now reduce costs and improve 'On Time Delivery' by using Broner's Feeder Group functionality in our solutions.

Continuous lines are often sensitive to large jumps in width or gauge, which can result in line stoppage due to strip breaks. Broner's new Feeder Groups algorithm will search for alternative material to fill gauge or width gaps, when there is no preferred material available.

This functionality can also be used to ensure continuity of production when preferred material is not available due to logistics or stock yard restrictions. In this case, available, alternative material will be scheduled until the preferred material becomes available.

Existing users of Broner's Production Scheduling will receive Feeder group functionality as part of Release 33.2 and this can be used with minimal training or configuration.

ner (PP) and Production Scheduler (PS) modules.

Customers with volatile demand, variable products and complex manufacturing constraints will benefit.

The response time has improved 5-10 fold which allows "what if" scenarios to be evaluated and also allows more rules and constraints to be included in the optimisation process. The result is Production Planner and Production Scheduler modules that do more to reduce production costs and inventory and increase productivity and on-time delivery, while recognising supply chain constraints and restrictions.

Users of these solutions will receive these performance enhancements as part of Release 33.2. No configuration or training is required to receive these benefits.

### Global temperature Optimisation reduces steel making cost and increases quality.

Broner customers can now reduce steel making costs and increase slab quality using the new global temperature optimisation functions of our Melt Shop Control Centre solution.

Steel plants that have problems to control the temperature of steel ladles arriving at the caster turret or have to make last minute adjustments to casting speed to accommodate

delays due to temperature adjustment in ladle furnace are likely to benefit from this new solution.

The Melt Shop Control Centre is a pacing solution that monitors the production of each heat in real time though its planned steel making route until the casting process incomplete. This

▶ continued on page 2

### Inside this issue:

Broner Release 33.2 1

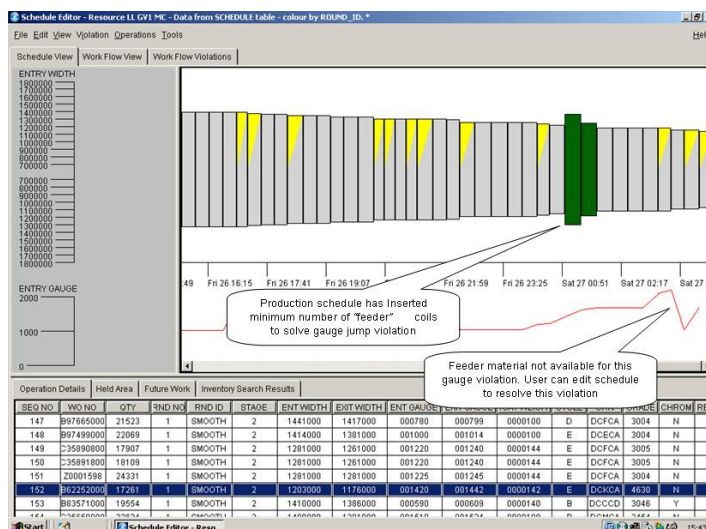
Usiminas Upgrade Software Solutions 2

Quality Management 3

Broner Sponsors Charity Campaign 3

Contacts 5

Feedback 5



### Improved Performance of Broner's Production Planner & Product Scheduler Modules

Optimisation of Planning and Scheduling KPI's has been greatly enhanced by improvement to the response time of Broner's Production Plan-

▶ continued from page 1

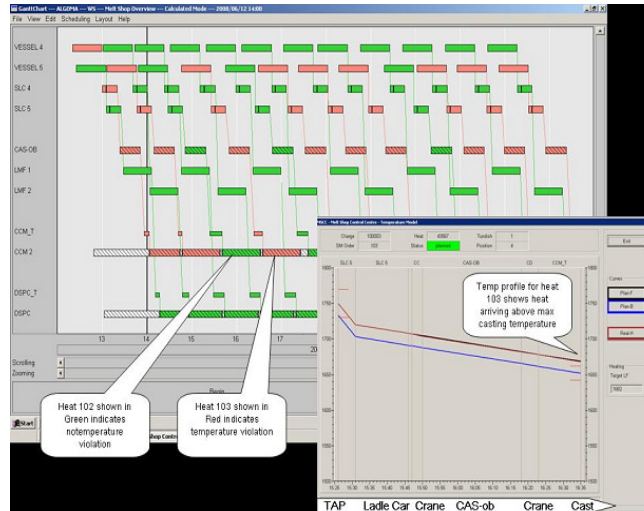
includes start and end time of processing at each station and current temperature. The MSCC compares this information to the schedule and identifies any conflict in timing or temperature needed for casting. When a conflict is detected the scheduling function will automatically reschedule all running and planned heats to resolve the conflict. This includes adjusting the start and end times, waiting or buffer times or using alternate routes. The goal of the scheduling algorithm is to keep the casting speed for running sequence stable.

The new global temperature optimisation is an option for the scheduling algorithm that aims to tap heats as close to the aim tap temperature as possible and aims to cast heats as close to the aim casting temperature as possible. This optimisation also considers all running and planned heats in one optimisation that uses the flexibility of buffer times and alternate routes to minimise deviation from the ideal temperature profile. This results in a number of benefits:

- Increased capacity at the BOF as there is less time used for temperature adjustment
- Reduced cost of energy in the ladle furnace for last minute temperature adjustments before casting
- Increased caster productivity as liquid steel supply is more stable
- Increased surface quality of cast products due to stabilisation of casing speed.

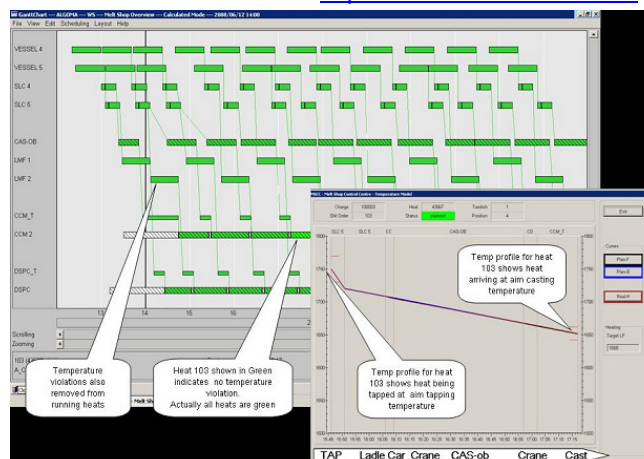
The Melt Shop Control Centre also includes a ladle allocation functions and the ladle age and thermal condition can be included in the temperature optimisation to increase accuracy.

The following example shows a before and after scenario. In the first case the steel plant schedule is optimised without the temperature function. In the display, colour codes are used to indicate heats that meet the aim tap and casting temperature (in green) and those that are either above the aim casting temperature (in red) or below (in blue).



In the second example, the temperature optimisation mode has been turned on and all heats are now green indicating they are planned to tap and cast at the aim temperature.

This functionality is included with Broner's Melt Shop Control Centre solution. Please visit <http://www.bronermetals.com/>



[melt\\_shop\\_control\\_centre.php](http://www.bronermetals.com/melt_shop_control_centre.php) for more details. Existing Broner customers already using the Melt Shop Control Centre will receive this functionality in the Release 33.2. Broner offers training and implementation consultancy services to ensure that implementation of this function will deliver best results.



## Usiminas Upgrades Software Solutions

Usiminas Cubatão and Ipatinga plants have upgraded their existing Broner Software solutions to Release 33.2.

The new features in Release 33.2 will assist both plants to increase on-time delivery and productivity while minimising industry costs and lead times.

The Cubatão and Ipatinga plants have also recently put into production an enhanced plant coordination solution using Broner's latest version of the Melt Shop Control Centre (MSCC) module. The MSCC provides steel plants with the following benefits:

- Increases productivity of production facilities
- Increases cost-efficiency and resource utilisation of production facilities
- Increases visibility of the ongoing and planned production

For further information on the Melt Shop Control Centre module please refer to the following link: [http://www.bronermetals.com/melt\\_shop\\_control\\_centre.php](http://www.bronermetals.com/melt_shop_control_centre.php)

## Quality Management Specifically for Metals

Broner's Quality Management module enables customers to increase productivity and lower costs, by allowing users to continuously monitor product quality at each production step and find the best solution for recovering non-prime materials for use as prime quality for the original or alternative customer orders.

The Quality Management module forms part of Broner's Manufacturing Execution System (MES) Suite, and is designed in accordance with the ISA 95 Specifications for Manufacturing Execution Systems.

Quality Management supports Quality Execution and Quality Recovery workflows to perform the following functions:

- Verifying material produced at various stages of production
- Collecting quality related events and data and store in piece history to support:
- Final usage decisions
  - ◊ Printing test certificates and customer orders
  - ◊ Support customer claims
  - ◊ Support cause/defect analysis
- Updating APS and ERP systems with Quality Status.
- Managing Sampling and Test instructions
- Integration with Test Equipment or LIMS systems

- Tracking samples from cutting through preparation and testing
- Specifying material item specific rework processes

The Quality Module provides a full range of features to support workflows for in-line Quality assessment (Non-Conformance Reporting), application and release of holds, quality recovery actions and sampling and laboratory management.

Quality recovery functions give inspectors a choice of actions for planning rectification workflow such as, waiver (do nothing and continue processing), modify process or quality instructions for the material item, insert rework operations, re-grade, re-allocation, whole or partial scrap or some combination of these.

The Quality Management module is supplied as package solution which can be configured to suit individual plants. Configuration is made through the quality management database, configurable screens, L2 and LIMS interfaces and quality rules.

David Mushin, Broner CEO says " Broner has developed the Quality Management module with the steel industry in mind. For example, our MES database contains a unique planned routing for each material item which allows rectification actions such as re-work operations, process and quality instructions to be defined for each material item. This enables an inspector to plan corrective actions for individual material items without the need to create a new manufacturing order".

***" Broner has developed the Quality Management module with the steel industry in mind"***

## Broner Sponsors Parkinson Ocean Challenge

On the 2nd January 2011, ex Marines Mathew and Christian Cleghorn (Tim Hurn, Broner's Business Development Director's Son-in law) will begin one of the world's toughest rowing challenges, and row across the Atlantic Ocean unsupported in order to raise money and awareness for Parkinson's Disease.

While there has been significant improvement in maintenance drugs developed by the major pharmaceutical companies, there are relatively little funds available for researching a cure to this debilitating disease.

Broner are sponsoring this event to help redress this imbalance. If you would like to find out more information about this amazing project, track their progress or would like to donate the please visit :<http://parkinsonsoceanchallenge.co.uk/>.

All the money raised by this project will be donated to the Parkinsons UK to support their research pro-

jects If you would like to find out more about these research projects please visit <http://www.parkinsons.org.uk/research.aspx>



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