

Quad Infotech Inc Quad Mill Operation System Spring, 2000 [QMOS] News

[QMOS]Flat – Roll Shop Management for Flat Mills



For the past three years, Quad Infotech has been working with flat rolling mills to develop [QMOS] to address their needs. Now, [QMOS]Flat has been successfully implemented at Worthington Steel's new cold mill in Decatur, Alabama.

Like the regular [QMOS] modules, [QMOS]Flat monitors and schedules Roll Shop and setup shop activity, provides setup information to the mill control system, and records production results. What makes [QMOS]Flat different, however, are the adaptations made to manage the flat rolling process, and the streamlining or automation of many day-to-day events.

New rolls are purchased and added to the inventory, and then crowned in order to be ready for use in the mill. Results from the sophisticated Waldrich/Siegen grinders are automatically transferred into [QMOS]Flat, eliminating errors which may occur from manual data entry. These results include diameters, equipment used, profile, and eddy-current readings.

Many rolls are then sent to an outside vendor for chroming. [QMOS]Flat tracks the rolls through this process, and when they are returned, a Stand Building work order is automatically created.

When the rolls are assembled, they are ready for use in the mill. Physical roll data is transferred directly to the GE Mill Control system, ensuring correct information for the right rolls is used.

Tonnage and length rolled are communicated directly from GE to [QMOS]Flat, and when the rolls are removed from the mill, the Stand Tear Down work order is automatically produced.

Upon completion of the tear down process, an automatically created roll grinding work order begins the cycle all over again.

"The whole process has been running real slick", says Tony D'Antonio, Worthington's Roll Shop Manager. "We never have any problems with the automatic work orders. And the sequence of events that transfers data from the grinders is as sweet as it can be!"

Tony uses the [QMOS]Flat Roll Grinding Report quite extensively. "I feel real comfortable with the results, and I use the data to compare cost per ton and tons rolled." He says that the guys in the shop are comfortable enough now, that they come to him occasionally with their own suggestions on how to enhance the system.

An important aspect of flat roll grinding is being able to judge grind wheel performance. The grind wheel that is used to grind each roll is directly transferred into [QMOS]Flat.

Tony says that the grind wheel usage is working out fine, "as long as we update when the wheel is changed!" He's just beginning to use the Grind Wheel Reports to track the use and performance of each grind wheel.

Quad is now working on improving and streamlining the scheduling features of [QMOS]Flat. Changes to the roll set concept are also underway to better reflect practices in the flat rolling industry. These major improvements are expected to be released before the summer of 2000.

As the word is spreading, Tony has gotten direct inquiries from other flat mills, which is only good news for Quad Infotech and the entire [QMOS] team.

[QMOS] Development **[PSC] Helps Improve Mill Operation at Birmingham Steel**



After several years of extensive research and planning, the new [QMOS] Production Scheduling and Control module [PSC] was installed at Birmingham Steel in Seattle, WA in August, 1999.

[PSC] is a module that provides the necessary tools for management and operations personnel to easily plan and schedule the production of the mill on a monthly, weekly and day-to-day basis, and to monitor the results.

[PSC] begins with the sales order, and prepares the production demand and Long Term Plan. The Short Term Schedule then is derived from this plan, which manages the production for a shorter period. The allocation of the most economical billet size to the orders enables the mill managers and Quality assurance personnel to order the best length of the billets from the melt shop.

[PSC] is completely integratable with the rest of the existing [QMOS] modules. Thus, the scheduled and assigned billets can then be monitored throughout the process from the Caster to the Billet Yard, Reheat Furnace, Hot Shear,

Cold Shear, Bundling and Scale Stations.

Jeff Janson, Quality Control Supervisor with Birmingham Steel, was a main contributor to the design of the module. There were a number of key objectives he hoped to realize with [PSC].

"We wanted to get rid of all of the paper we used to deal with, and eliminate duplicate data entry", he

says. "We need real time access to information, and to be able to generate production and inventory reports easier."

Growth and Expansion of the [QMOS] Family

Quad Infotech recently reached agreement with North Star Steel to install the [BTC] module, (Bundle Tag Control), in five of their plants. The Michigan Division has been using [BTC] for quite some time, and this will now bring the other North Star mills up to the same point. Candi Wallace of North Star Steel says that after seeing [BTC] in Michigan, their other divisions wanted it to close the loop and be able to track each billet through to the bundle it ends up in.

This follows closely on the heels of Birmingham Steel's Seattle Division's implementation of [BTC] last year. Dan Gallagher of Birmingham Steel is relieved to now have accurate yield calculations available instantly.

The new QMOS Saw & Shear Blade Inventory module [SBI], was installed into two mills as part of the version 6 release in September, 1999. This module monitors the inventory of saw blades and shear blades, tracks their use real time in the mill, and records maintenance of the blades. North Star Steel's seamless pipe mill in Youngstown, Ohio uses large saws to cut the hot billets and finished pipe. Birmingham Steel in Seattle uses [SBI] to track usage and inventory of blades from their three hot shears and their cold shear.

Co-Steel Lasco in Whitby, Ontario recently became the first [QMOS] user operating with a SyBase® version. Currently

operating for just the structural mill, Lasco's Roll Shop installation has been designed for multi-mill production. Installation of the bar mill is due for mid-2000.

Has [PSC] helped? Jeff says that it certainly has made the roll shop operation more efficient because the production schedule is already done for them. Eliminating the duplication of work has been important for Roll Shop Supervisor Mike Halberg.

"We're also very happy with the Long and Short-Term Planning functions, as well as with Cut Sheets," Jeff adds.

"We still need to improve the speed of scheduling the Charge Reports. Our lab technicians are very busy, and need more time to do the rest of their job. That will be a huge advantage when it's fixed up."

Next on the horizon is the integration of the Billet Yard Management portion of [PSC] with the Bundling System [BTC]. This will give Jeff complete billet inventory tracking, so that he'll know the exact number of tons and value in inventory at any time.

Quad Infotech is very pleased with the progress of the project. There have been several inquiries from other customers, and there is a lot of excitement about the future of [PSC].

quadinfotech.com

Have you ever visited the Quad Infotech web site? If you haven't, you might be surprised at what you'll find.

Descriptions of the entire family of all [QMOS] products are available. Information is obtainable on Roll Shop Planner, Shift Management, and Production Scheduling. Also covered is [QMOS] for Flat Rolling, and for Kocks® Precision Rolling.

You're interested in [QMOS] training? News about upcoming class schedules, complete with course descriptions is all as close as your mouse at the Quad Infotech web site.

If you've perhaps attended a [QMOS] presentation at an A.I.S.E. convention, or read a published article in a trade magazine, maybe you'd like a transcript. It's all available for you to read.

Latest [QMOS] implementation and development news, and even employment opportunities with Quad Infotech can all be examined.

Quad Infotech has future plans to enhance it's internet presence. The [QMOS] Task List will soon be available on the

web. Customers will be able to use this to record their enhancement requests directly on-line, track the progress of their items, and see what other mills are requesting.

Also in the works is enabling customers to access their own mill production status and reporting features. What mill manager wouldn't love to be able to check up-to-the-moment mill performance 24 hours a day from the comfort of their own home?

A screenshot of a software application window displaying a data table. The table has multiple columns and rows, with some cells highlighted in blue. The window title bar is visible at the top, and the table content is the primary focus.

[QMOS] News

[QMOS] Version 6: Improvements in RSP, New GSP

Quad Partnership

Quad Infotech is pleased to announce the signing of an agreement with Sheffield Forgemasters Limited, (SFR), to market [QMOS].

SFR is one of the largest roll manufacturers in the world, producing cast and forged rolls in the UK for all types of rolling mills. Seventy percent of their production is exported with significant markets in Europe, North and South America, and the Far East.

It is believed that through this partnership, improved service can be offered by providing leading edge software to manage customers' roll inventories and roll shops.

SFR is a member of the Atchison Castings Corporation, which supplies a broad range of highly engineered iron, steel, and non-ferrous castings to a wide range of industries. With 20 locations in the US, Canada, and Europe, Atchison Castings applies the latest foundry technology to the manufacturing and machining of complex products.

[QMOS] Version 6, released in the fall of 1999, includes several major enhancements designed to make roll analysis and setup activity easier.

Roll Analysis in the RSP module, allows roll shop managers to quickly view the status of all passes on rolls , and to easily make decisions on which rolls need to be turned first. Similarly, rolls can be analyzed based on their overall wear, and rolls nearing scrap can be effortlessly re-ordered.

Roll Hardness Analysis is another new [QMOS] feature. Roll hardness is recorded as rolls are dressed, and the readings can be graphed to help spot trends among suppliers, roll material, or even between specific rolls.

The [QMOS] Business Plan lets mills look back on previous production, and easily determine which products are the most economical, and which yield the greatest profit. Products selected can be directly transferred to the [QMOS] schedule if desired.

Comparison of past production rates is now available, providing past tons per hour calculations for any product or product range. This helps users to schedule the mill and support activities more accurately.

Guide Shop Planner [GSP], has been completely redesigned. Guide builders have on-line access to setup information for upcoming production, and can build guides needed for a specific product and stand. Guide tear down can be handled separately, or tracked instantaneously as guides are re-built.

The new and improved [GSP] can be completely operated only using the computer's mouse, making it practical for use in a typical setup shop environment.

The next [QMOS] upgrade is due for release in June of 2000, and as usual will be influenced mainly by customers' requests.



[QMOS] Training

[QMOS]2 – Advanced Analysis & Troubleshooting



Quad Infotech has always provided general [QMOS] training suitable for daily system users and supervisors, either on-site or at Quad's offices. In November of 1999, the first course of [QMOS]2, Advanced Mill Analysis & Troubleshooting was taught in Toronto.

The main highlight of the course is the use of a new and powerful computerized report writing tool – Infomaker®. Participants from six different steel plants were given the opportunity to perform very detailed analysis to suit the needs of their own operation.

The ten attendees were able to work through real examples in class, each using data from their own mill. Class comments praised Infomaker® and the course materials provided, and everyone benefited from being able to use their own data.

The course also featured a tour of the more advanced [QMOS] analytical tools. Newer techniques and capabilities of functions such as Production Analysis, Delay Analysis, and easier manipulation of the Delay Structure were covered. One participant noted that he would be able to make comprehensive use of the Delay Analysis feature, since he now had a better understanding of the feature and the extent of its sorting and filtering abilities.

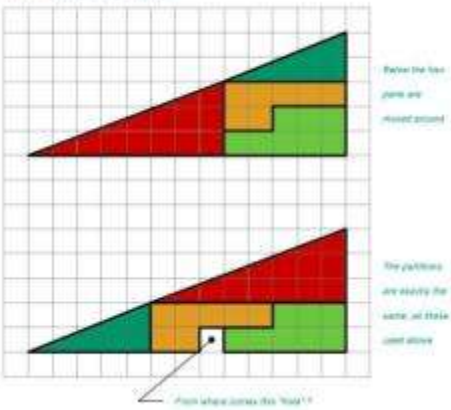
Use and operation of some of the newer [QMOS] features was learned, including Production Forecasting, analysis of past production rates, Business Plan, and Roll Analysis for roll re-ordering and roll turning. Shift Inspector, the new shift balancing and shift closing function was studied. The new GSP (Guide Shop) module was reviewed, and met with much enthusiasm.

A section on data modeling was taught. Participants were shown how a relational database is designed and then built, creating an appropriate table structure, with logical relationships between entities.

Everyone enjoyed the opportunity to compare experiences with personnel from other plants, and acquired more understanding of how [QMOS] could be used to improve their own operations. By the end of the 4-day course, the class agreed that they had certainly gained a great deal of insight into the more advanced capabilities of [QMOS].

Food For Thought

HOW CAN THIS BE TRUE?



Who is Using [QMOS]?

North Star Steel



QUALITY CH



Birmingham Steel – Seattle



Co-Steel Lasco



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