



# Customer Success

## Gensym Welcomes Back Rio Tinto

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**Company**

Rio Tinto

**Number of Employees**

~ 2,000

**Industry**

Mining

**Featured Product**

G2 2011 Enterprise

**Customer Website**

[www.rtft.com/enc](http://www.rtft.com/enc)

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Canada's Rio Tinto Fer et Titane (RTFT) smelts iron and titanium ore into ilmenite, a pigment that is used for paints, surface coatings, plastics and paper. It's part of Rio Tinto, a world leader in finding, mining, and processing the earth's mineral resources. Rio Tinto works in some of the world's most difficult terrains and climates, benefiting local communities around the globe and ensuring that health and safety are priority one.

Roughly twenty years ago, in an effort to run the company as efficiently as possible, Rio Tinto Fer et Titane began looking into areas of opportunity. The business was operating nine furnaces to smelt ore in its main building, and had a control room and operator for each. The team decided to look into a possibility to increase productivity— could one control room and operator actually manage two furnaces? They felt that this was doable, but knew they couldn't make the change alone.

### Opportunity for Efficiency

Rio Tinto began looking for an expert system to help fewer operators run all nine of the complex furnace systems. The expert system would "step in" and computerize all standing operating procedures (SOPs), analyzing variables and any changes to help each operator uncover and react to unusual events right away.

After significant research and discussion with both the operators and union workers, the company realized that Gensym was the partner to make this happen. With Gensym, Rio Tinto could deploy a single operator plus an expert system for every two furnaces.

Rio Tinto built its expert system on Gensym's G2 software, and was thrilled with the results. Not only did G2 help the operators to increase their productivity – it actually uncovered new, simpler and more effective SOPs to improve operations in their current processes. This began a very positive new trend at Rio Tinto – the ability to modernize numerous procedures and make the plant run better in multiple ways over time.



“Gensym helped Rio Tinto save money and improve operations for decades. At one point, we considered doing it ourselves or with a different partner – but we’ve done the research and now realize that there is simply no substitute for G2.”

— Serge Bonin, Rio Tinto  
Process Control Specialist

**RioTinto**

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## Gensym Throughout the Years

For a decade, Rio Tinto worked successfully with their Gensym expert system. So much so, that when the company introduced a new ilmenite ore from Madagascar that had an entirely different consistency from what they’d been using, they decided to use the Gensym system to easily and efficiently switch to a new smelting process.

G2 enabled Rio Tinto to bring the new ore to market more quickly than they had imagined they could. At the same time, G2 helped Rio Tinto modernize the controls for the furnace. Metallurgists introduced a new fuzzy logic into the expert system, and processes became smoother right away.

Unfortunately, the market downturn in 2008 forced Rio Tinto to make some tough decisions. Slower business meant that many of the older operators were offered an early retirement package. Of course, only a year later when business grew again, these experienced operators were nowhere to be found. Suffering from a dearth of expert operators, Rio Tinto once again turned to their Gensym system. Thankfully, the expert system supported the company, offering more junior metallurgists “assistance” with their job – these newbies simply had to very carefully follow the expert system, and there would be little room for error.

## Looking Toward the Future

While Rio Tinto continued to use their G2 system over the years, they cancelled their maintenance package with the company in 2008 to alleviate some of their budgetary challenges. But as Rio Tinto’s business grew and changed, they began to see more opportunities for G2 to bring them greater success. Seeing their expert system as a “virtual metallurgist,” Rio Tinto determined that they could better analyze all of their furnace data, making operations more stable. In fact, by stabilizing the process, Rio Tinto realized that they could extend the life of their furnaces and their tonnage.

As Rio Tinto uncovered more and more of these expert system opportunities, they were required to review other partners they could use in addition to Gensym as their ISO 9001 operating model simply required that multiple software partners be utilized. But as far as they looked, they could not find anything that compared to Gensym’s G2. Rio Tinto felt confident that not only would their decades-old partner be around for the long haul—they’d also be continuing to improve their software over time.

## Welcome Back

In October of 2012, Rio Tinto came back to Gensym with a platinum support package, and has renewed its excitement with the partnership that has helped Rio Tinto make huge strides for nearly thirty years. What started as a money saving decision has built Rio Tinto Fer et Titane into a more efficient, more effective and stronger company than it ever was before, with 24X7 “virtual metallurgists” that will keep business running and advancing for many years to come.

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## Learn More

To find out more about how Gensym’s G2 can help you operate better, contact an account representative today at [success@gensym.com](mailto:success@gensym.com)

