

## Case Study

### IntelliPERMIT™ boosts plant safety at Samancor Metalloys



Samancor Metalloys, West Plant - Meyerton, Gauteng, South Africa

**Johannesburg, April 2005 - The Metalloys division of Samancor Manganese has invested in IntelliPERMIT™ to help improve plant safety and enhance management control over safe-work permits issued at their site in Meyerton, Gauteng.**

Samancor Manganese forms part of the Carbon Steel Materials Division of the BHP Billiton group. The three electric arc furnaces at Samancor's Metalloys plant in Meyerton are among the largest in the world. The plant, which produces ferromanganese and silicomanganese, supplies the local steel industry and exports manganese alloys to steel producers worldwide.

The metals industry is characterised by highly hazardous production environments and therefore management of safety is a key focus area. Permit-to-work systems are critical in hazardous operations in order to safeguard employees and the environment, thus ensuring responsible and sustainable operations.

Despite their critical nature, most permit-to-work systems suffer from a lack of visibility and management often find it difficult to proactively implement controls to ensure that procedures are consistently followed. Auditing these systems is tedious and often deviations are only discovered after an incident has occurred.

IntelliPERMIT™ provides operations management at Metalloys with tools to effectively manage their permit-to-work processes and ensure that safe working procedures are followed and the highest safety standards consistently met when permits are issued for maintenance staff and contractors to perform work on site.



#### Implementation Project at Metalloys - West Plant

The project to implement IntelliPERMIT™ at West Plant, the first of five production units at the Meyerton site, took 2 months and was completed by ApplyIT's team of consultants in November 2004, on time and within budget.

"Our needs at the plant were specific: we had to fill the gap between procedures and what was happening in practice," says Steynberg van Rensburg, production superintendent at West Plant. "We required a system that enforced the rules of safe work, controlled authorisation and provided visibility of work in progress across the plant."

IntelliPERMIT™'s patented rules engine allowed operations management at West Plant to build rules into the system according to their defined procedures. These rules ensure that hazards are correctly indicated on the permit and the necessary safety precautions are adhered to. The result is that information recorded on all permits is of the highest integrity.

The exacting level of commitment to safety on the plant, called "**Zero Harm**", meant that buy-in from top management and the production teams at West Plant did not present a challenge.

**Paper Processes**

- Poor handwriting
- Permits filled in 'by rote' without proper consideration
- Inefficient, bottlenecks in the control room
- Difficult to audit

**Lack of Control**

- Gap between procedures and practice
- No active controls to ensure appropriate PPE & precautions
- Poor control over authorisations
- Difficulty managing work done by contractors

**Lack of Visibility**

- Status of outstanding work is 'hidden' in various permit books
- Contractors leave site without signing permits
- Permits seldom cross referenced correctly

#### Common permit-to-work problems



From the time the system went live it performed to standard. User acceptance of the system was rapid and onsite support from ApplyIT was required for only two days following go-live.

"IntelliPERMIT™ integrates with our SAP Plant Maintenance system and the plant's existing permit process, so that the system fits our business process rather than the other way around," says Van Rensburg.

Now, at any one time those operating the plant can see exactly what's happening in every area of the plant, what permits are active and what isolations are in place.

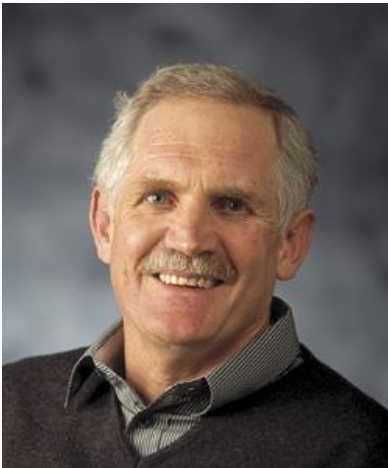
According to management, in the months following go-live, numerous benefits are already being enjoyed at the plant, including high quality permits-to-work, high visibility of work in progress, improved efficiency of the permit-issue process, comprehensive audit trails and the fact that permits can only be signed by duly authorised people.

A second phase of the rollout was completed in March 2005 which saw the deployment of biometric identification, using fingerprint scanners, for the "signing" of permits. The use of this leading edge technology has allowed for a completely secure method of electronically signing permits and has further streamlined the authorisation process.

### Site-wide use of IntelliPERMIT™

Following the success of IntelliPERMIT™ at West Plant, implementation of the system at the remaining production units on the Meyerton site is underway.

Production management at Samancor's Metalloys believe that the significant benefits offered by IntelliPERMIT™ and the potential to improve operational safety will encourage other operations within the group to look at similar initiatives.



***"The safety of our employees is our highest priority. Permits-to-work, risk assessments and access control form one of the cornerstones of our safety drive.***

***ApplyIT's IntelliPERMIT™ offers a state of the art system to integrate these elements seamlessly"***

**Philip Hechter, Vice-President RSA Operations, Samancor Manganese**

**For more information about IntelliPERMIT™ contact ApplyIT:**

P O Box 2717, Westway, 3635  
Tel: +27 31 275 8080  
Fax: +27 31 265 9855

e-mail: [enquiries@applyit.com](mailto:enquiries@applyit.com)  
website: [www.applyit.com](http://www.applyit.com)

# Intelli PERMIT™

At West Plant an average of 350 permits are issued per week from three issue points.

A user survey was carried out 3 months after the system went live. At this time, more than 100 employees and 350 contractors at the plant had either issued or been issued with permits using IntelliPERMIT™. According to the survey...

**94%** of users said that issuing a permit in IntelliPERMIT™ was faster and more efficient than their original paper permit system.

**100%** said that it took them less than 1 month to become confident in using the electronic system to issue permits.

**75%** said that they felt IntelliPERMIT™ improves safety on the plant

**94%** said that they would not like to return to the old method of issuing permits

