

## Case Study

## Compañía Mega Optimizes Alarm Management With Honeywell Alarm Configuration Manager



“Compañía Mega recognized the need to optimize our alarm management, and collaborating with Honeywell specialists, we trained ourselves for that purpose. Honeywell's ACM tool gave us a robust solution, allowing quick connection with the facilities in service. In addition, our system is now one step closer towards migrating to Experion PKS.”

- Daniel E. Machaca, Production Manager D.O., Compañía Mega

### Background

Compañía Mega, a joint venture between The Dow Chemical Company and Brasoil Alliance Company that provides essential hydrocarbon feedstocks to Dow's Bahia Blanca site in Argentina, has two gas plants linked by a 600 km pipeline. The separation plant, located in the Loma La Lata natural gas field in Neuquén province, separates the rich gas from the reservoir and the heavy components. The residual gas from the process is injected in the national system, and the rich liquefied portion is transported to the fractionation plant in Bahia Blanca, where it is fractionated into ethane, propane, butane and gasoline.



Aerial view of natural gas separation plant at Loma La Lata, Province of Neuquén, Argentina

### Benefits

As part of a systematic program to detect plant problems, and define and implement improvements through technological

solutions in automation and control, Compañía Mega identified the need to optimize management of its plant's alarm control system. This initiative was carried out through workshops involving Compañía Mega and Honeywell jointly, and conducted within the framework of preventive, predictive and proactive maintenance that Honeywell has provided to the company since 2001, which covers the control system and all plant instrumentation (both Honeywell and third-party).

Compañía Mega chose Honeywell's Alarm Configuration Manager (ACM) to optimize alarm management. This solution not only involved implementation of the ACM system and its integration with the existing process control system, Honeywell's TotalPlant™ Solution (TPS), but also included the previously introduced recommendations of the EEMUA (Engineering Equipment Materials Users Association, Pub 191 "Alarm Systems - A Guide to Design, Management and Procurement") to enable Compañía Mega to define a systematic alarm configuration for its units.

Among other benefits, the Honeywell solution:

- Standardized the process through definition of a plant alarm policy so that all staff operates with the same quality of alarms.
- Dramatically reduced the number of alarm activations requiring operator intervention.
- Provided peace of mind to operators by not overwhelming them with unnecessary alarms.
- Improved the response time of operators to verify incoming alarms and make decisions when an alarm is activated.

- Reduced human error in the management of alarms, avoiding unnecessary production stops, equipment failure, vents, etc.

### Challenge

At Compañía Mega's natural gas separation plant, it was necessary to reduce the number of alarms that the system was generating. The sheer number of alarms—especially high and low priority—made it difficult for operators to prioritize the ones they should attend to. This led the operators, as a result of the saturation the excess events created, to automatically recognize many of the alarms which increased the possibility of human error in the attention of the alarm.

Although alarms were prioritized (e.g., Emergency, High, Low and Journal) to determine the course of action, the panelists had to take into account the order of occurrence, making it necessary to look at the display and analyze which alarms were significant. This involved a waste of valuable time when the operator needed to make important decisions and act quickly. The alarms could have different importance or level of attention according to the order in which they occurred. For example, stop pump and low pressure in the pipe alarms may have different meanings according to the order of occurrence. If initially the pump stopped working, the low pressure alarm will be a result. But if the first alarm is the low pressure alarm, followed by the pump stop alarm, this could indicate a broken pipe. In short, too much information was provided to efficiently manage the alarms.

### Solution

The first step of the solution provided by Honeywell was to introduce Compañía Mega to alarm handling according to the recommendations established by the EEMUA, analyzing the treatment of a control alarm group of one of units to classify these alarms under the standard.

### For More Information

Learn more about how Honeywell's Alarm Configuration Manager can help improve operator performance, visit our website [www.honeywellprocess.com](http://www.honeywellprocess.com) or contact your Honeywell account manager.

### Honeywell Process Solutions

Honeywell  
1250 West Sam Houston Parkway South  
Houston, TX 77042

Honeywell House, Arlington Business Park  
Bracknell, Berkshire, England RG12 1EB

Shanghai City Centre, 100 Junyi Road  
Shanghai, China 20051

[www.honeywellprocess.com](http://www.honeywellprocess.com)

After training, a multidisciplinary team of Compañía Mega, responsible for analyzing the overall requirement, could extend the analysis to all the unit alarms and other units, implementing the policy in the TPS control system. The metrics indicated that after implementation of the policy on the control system, there was a considerable drop in the number of alarms and operators could work more calmly and efficiently.

But there was still a challenge to be solved: ensuring that the alarm policy is met and all operators work with the same quality of alarms. That's why Compañía Mega chose to implement the Honeywell ACM system. Favio Paganini, D.O. Production Supervisor, was the Compañía Mega employee responsible for the coordination, implementation and startup of the alarm management system.

The ACM system was easily integrated to TPS through Experion PKS, forming a single point of responsibility for the alarm policy configuration. Periodically, the ACM process downloaded the alarm policy to TPS, avoiding the possibility of arbitrarily changing the policy in the control system. In this way, the operation is guaranteed under the alarm policy defined by the company. The ACM also includes alert definitions—which are at a lower level of importance than the alarms themselves—allowing reporting to operators about shifting values in the process variables.

In summary, the Honeywell ACM allows Compañía Mega to document and rationalize, manage changes, audit and force, and modify alarms dynamically depending on the plant state, and have a complete view of plant behavior in post-event reports.

### About Alarm Configuration Manager

Honeywell's Alarm Configuration Manager (ACM) helps users engineer an alarm system to meet their site's alarm management policies and ensure the configuration remains in effect over the lifecycle of the plant.

Alarm Configuration Manager is designed to prevent degradation of alarm system performance. It also enables mode-based alarming via its documentation and rationalization functions, assisting the plant in optimizing alarm system support for the operator. Alarm Configuration Manager is a key component of Honeywell's Advanced Alarm Management suite.

