

# Lean Manufacturing

Our Lean Programme focuses us on building an organisation that delivers sustainable and continuous improvement

The focus on cost leadership and margin improvement is one of our five strategic objectives. Additionally, in a business where we need to manage the challenges presented by cyclicity in our end-markets, a focus on process efficiency and quality is fundamental.

Focusing on the need to excel in our key operational processes, we commenced our Lean Programme in 2008. The goal is to generate short-term operational gains whilst also building an organisation that delivers sustainable and continuous improvement. Some of our core requirements are that:

- Standardisation of tasks and processes is the cornerstone of safety, quality, productivity, and continuous improvement
- Employee motivation and customer satisfaction are critical foundations for the long-term success of the Group
- Improving information flow is instrumental to guarantee fast and effective cross-functional processes.

The initial focus of the Lean Programme was on improving Safety management on the shop floor. We then launched an initiative to improve Quality in production, which will be followed by productivity improvement projects.

We focus on ensuring the long-term success of these initiatives by:

- Implementing a robust shop floor organisation centred around strong first level managers
- Growing our problem-solving capabilities through training, coaching and workshops to "learn by doing"
- Designing information systems that will support the improved processes.

In 2013, we maintained our focus as follows:

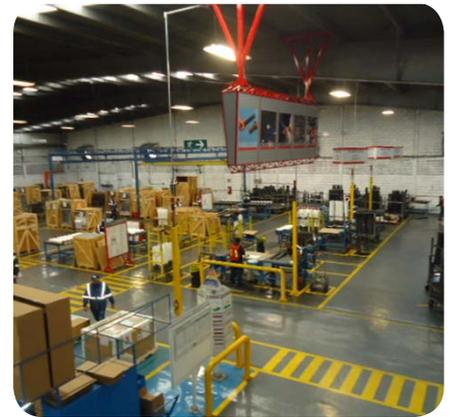
- Several lean and practical problem solving training sessions were carried out

- A training programme for shop floor managers was designed and piloted
- Delivering successful workshops that provided significant results in terms of productivity increase and lead time reduction
- Production control & logistics training was organised in all regions to accelerate material and information flows across functions, giving a framework for substantial inventory reduction
- A bespoke Manufacturing Execution System, to collect all relevant quality control data and ensure end-to-end traceability of our products was designed
- We started the roll-out of a Sales & Operations Planning application, to collect and distribute forecasts, allowing production levelling and inventory reduction without jeopardising service to our customers.

In 2014, we will continue the deployment of lean practices, with a special emphasis on:

- **5S** to reinforce work environment appropriation by workers and continue to increase safety. This will be also the first step on the way to improve the maintenance of key equipment
- **Equipment flexibility** improvement and a batch reduction plan in key processes to support inventory reduction
- **Specific project maintenance targets** to enhance equipment efficiency and reliability
- **Labour efficiency** by the reinforcement of the standardisation of work and "Kaizen" processes.

We aim to incorporate our Lean Programme in a global Excellence model to embed a consistent Group-wide approach to operational efficiency.



**Monterrey**

Viso assembly central area showing 5S coloured marking

## 5S

5S is an operational methodology developed in Japan to improve employees' workspace efficiency. It is based on five Japanese words: Seiri (Sort); Seiton (Set in order); Seiso (Shine); Seiketsu (Standardise); and Shitsuke (Sustain). The method is based around a shop floor team, and includes the use of standardised colours to identify and store items used, and specific obligations to maintain work areas to perpetuate the 5S approach. An example is shadow boards for tools - where missing tools are immediately visible against their outline.