

## Introduction - Company Profile

### Corporate overview

Rexam is a leading global consumer packaging company with sales of £4.7 billion in 2011. We have 83 manufacturing sites in 25 countries across the globe and we employ 19,000 people in our continuing operations. Headquartered in London, England, we are an established member of the FTSE 100, a global leader in the manufacturing of beverage cans and one of the world leaders in rigid plastic packaging. We are business partners to some of the world's most famous and successful consumer brands such as Coca-Cola, InBev and PepsiCo, and blue chip global brand owners such as Procter & Gamble and GlaxoSmithKline.

Our vision to "be the *best* global consumer packaging company" is strongly supported by Rexam's four embedded core values: Continuous Improvement, Trust, Teamwork and Recognition. We have been committed to a path of Lean Enterprise across all our operations as a way of putting our Values into practice for over ten years. This approach is an essential part of what we call the "Rexam Way".

### Manaus Ends plant

The Plant is located in the industrial district of Manaus, Amazonas, central Brazil, built in the second half of 2006. It began operations at 20% of planned capacity in November 2006, with its capacity expansion plan based on two more phases, in May 2007 with 50%, and finally reaching 100% in November 2007.

The Plant operates 24 hours a day, seven days a week manufacturing aluminium ends on two lines that are fully dedicated to clients such as InBev, Heineken, Coca-Cola and other national brands, with a total production of 22 million beverage can ends each day. There are 228 employees on site, 179 direct and 49 indirect in this 164,379 sq ft facility.

OEE rose from 71.4% in 2008 to 79.4% in 2011 due to the Lean Enterprise culture and many continuous improvement efforts.

### Process and product

The process features four distinct phases: cutting and shaping of the basic ends from aluminium rolled stock, application of the sealing compound, the cutting shaping and addition of a ring pull or tab, and packing of the finished ends.

Production is carried out under controlled conditions, using the concept of 'quality at the source'. Some administrative programmes, training and a rigorous approach to safety ensure a good work environment and an excellent customer service.

The layout of the production process is divided into two modules of high speed and high level of automation.

All waste generated in the aluminium production process is recycled.

Product variations include value added ends in colours of gold or silver aluminium substrate.

### Continuous improvement process

Rexam has operated a global system of Lean Enterprise since 2004, structured around building capability in specific tool sets of Culture, VSM, 5S, TPM, SMED and Six Sigma. Progress is reviewed annually and awarded a merit of bronze, silver or gold depending on performance levels. Manaus achieved a level of Gold in its first assessment in 2008 and again in 2009.

In 2010, the Manaus Plant was invited to participate in a more sophisticated assessment known as "Beyond Gold", where the implementation of Lean systems was appraised. Again, a system of merit is used to recognise achievement starting at Emerald, Sapphire and then Diamond. Manaus was awarded Sapphire in 2010 and improved to Diamond in 2011.

We have made more than 182 improvement implementations based on SMED, Six Sigma and Kaizen methods, generating savings of US\$4m since 2008.

Six Sigma, Kaizen and SMED projects are defined based on the deployment of our Balanced Scorecard through the hoshin plan. Performance is evaluated periodically in a strict PDCA way.

In 2011, 93% of our staff implemented at least one improvement project using Lean tools.

The effectiveness of our processes is demonstrated by our performance indicators, where we show the evolution of the Plant since 2008.

Our commitment to continuous improvement through Lean Enterprise has led Manaus to apply for the Shingo Prize in 2012.

### Achievements

- Gold level, 2008-2009
  - Beyond Gold - Sapphire level in 2010
  - Beyond Gold - Diamond level in 2011
- Recognition from its environmental supplier 'Rio Limpo' for a successful recycling partnership
- Rexam Risk Management Best Practice Award (cans/ends) - EH&S category

- Rexam Chief Executive "Cornerstone Award" 2008 – Project winner in profitable growth category: local sale of scrap aluminium
- Rexam BCSA Award – Best in 2010 in Operational Excellence
- SESI Award for Quality at Work (PSQT) in the Large Companies category for innovation and creating an environment for safety and occupational health

### **Safety & environment**

- A programme for "Elimination of Risk Points" has identified and treated more than 9,963 unsafe conditions that could allow accidents to happen, since 2008
- Zero Lost Time Accidents since January 2010
- Zero environmental incidents since early 2008
- Monthly Safety Inspections conducted by management, covering all areas of operations, warehousing and administrative areas
- External HACCP accreditation since 2010 (Hazard Analysis and Critical Control Points)
- 100% recycling of residual processed aluminium

### **Quality**

- ISO 9001:2008 accreditation
- One Black Belt and five Green Belts
- Six Sigma methodology used for analysis and decision making at all levels
- Since the beginning of the internal SPC (Statistical Process Control) audit our factory has reached a performance level of 91.6% in 2010 and 92.6% in 2011
- Quality Assurance teams work directly with the customer, increasing the rate of satisfaction

### **Employee morale**

Our Plant continuously improves its processes through teamwork, trust and recognition through utilising the skills of our employees.

All 228 employees at the Plant are engaged in twice yearly performance appraisals and objective setting. The continuous development of all employees is set up from the performance evaluation and a personal development plan (PDP) is generated to develop the skills and capabilities of our employees.

Internal training of technical skills among our staff focuses on improving operational performance and health & safety through the TTO (Technical Training Operations) programme, where the crew with more experience assists in training new technicians.

The TTO programme also invests in qualification through partnerships with educational institutions in training new technicians.

Rexam executes employee engagement surveys regularly and in the 2010 survey Manaus Ends achieved a response rate of 100%, with an Index Participation of 74% favourable. (Sector Rate: 76%). Continuous improvement plans were created and are underway.

The Plant recognises the employees' contributions every year. The "More Rexam" programme award winner is voted for by every employee and the award goes to those who have excelled in safety, process, quality, maintenance and practice of the Rexam values.

There is also a scoring system to recognise employees' contribution in Lean activities, such as Six Sigma, VSM, TPM, 5S, SMED and Kaizen projects, each quarter.

The "Good Day" programme is based on continuous improvement. Each time the Plant exceeds its goals it makes a donation to a charity chosen by the workers themselves. The Plant reached 77 records since 2008.

The Plant encourages two-way communication between employees and leadership, through clear and open communication, providing an environment for sharing among the teams.

Also, all employees have access to established corporate communication channels, such as monthly newspapers, posters, meetings, special campaigns and intranet news to be informed on Company guidelines.

### **Delivery performance and cost reductions**

- OTIF performance has increased consistently from 81.20% in 2008 to 97.42% in 2011
- Assured supply quality through annual audits with major suppliers
- Reduction in power consumption from 2.17 kWh/000 in 2008 to 1.92 kwh/000 in 2011
- Reduction in spoilage from 0.98% in 2008 to 0.56% in 2011
- Reduction in manufacturing cost from 3.97 US\$/1,000 in 2008 to 3.01 US\$/1,000 in 2011.

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