

IB Business Management – Operations Management

5.3C: Lean Production and Quality Management Activity



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5.3 LEAN PRODUCTION AND QUALITY MANAGEMENT: ACTIVITY C

Read the case study information below and answer the questions that follow.

KAIZEN THINKING FIRES PRODUCTIVITY



Arlia Roselin, co-owner of Ambi-rad, when asked why she failed for many years to introduce new ideas aimed at increasing competitiveness, gives a simple answer: she was too busy expanding. Her Midlands engineering company is a European leader in gas-fired, 'radiant tube' heating systems. But Ms Roselin found little time to think about how to increase quality and productivity. "We were a top-down company with all new ideas coming from the directors," explains Ms Roselin. The government industry minister for industry is particularly keen that smaller manufacturers should take on board **lean production** methods. The lean production methods being promoted are '**Kaizen**' or continuous improvement programmes, '**Kanban**' and '**Andon**'. These three lean production methods have all been used by Japanese firms in the last 20 years. The competitiveness problems were highlighted in a recent EU report, which put Britain in 11th position out of 15 in the EU productivity league table.

At Ambi-Rad, Ms Roselin decided to take action and implement Kaizen thinking under which workers in the company hierarchy are given more control over decisions and encouraged to come up with suggestions for quality and efficiency improvements. Most of the 150 workers at Ambi-Rad's main plant in the UK are divided into eight groups, each one responsible for specific aspects of production. Team leaders encourage new ideas and link the shop floor and senior

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managers. One recent idea came from Ashleigh Yi, an assembly worker at Ambi-Rad for 13 years. She suggested punching holes in a piece of metal in a different place to shorten the overall production process. The proposal was implemented, leading to a small but worthwhile productivity improvement. “I feel I am much more involved,” says Mrs Yi. “As a problem occurs, rather than carry on regardless, we are now encouraged to think of a way around it.”

Some of the ideas are very simple, but suggestions from people like Mrs Yi have taken \$600 000 a year off the company’s costs. The Kaizen scheme has enabled Ambi-Rad to maintain profits at a time of severe difficulty in the engineering business. In the past two years, many comparable UK companies have seen orders and earnings hit by the economic recession and weak demand in important markets.

“Partly because of the new manufacturing ideas we have kept pre-tax profits at ten per cent of sales, which is really excellent by the standards of other engineering companies,” Ms Roselin says. This year Ambi-Rad expects to have sales of £18 million, more than twice the figure five years ago, and exports roughly a quarter of its turnover. Ms Roselin wants savings from Kaizen-based ideas to reach £1 million annually over the next few years.

Source: www.BusinessManagementIB.com

QUESTIONS: 28 MARKS, 55 MINUTES

1. Define **lean production**. **[2 marks]**
2. Distinguish between the ‘**Kanban**’ and ‘**Andon**’ methods of lean production. **[6 marks]**
3. Explain **one** condition that would be necessary for the Kaizen philosophy to be successful at businesses such as Ambi-Rad. **[4 marks]**
4. Explain how Kaizen groups can help reduce costs for businesses such as Ambi-Rad. **[6 marks]**
5. Evaluate the benefits for three stakeholder groups in Ambi-Rad from the firm adopting Kaizen, specifically, and lean production methods more generally. **[10 marks]**

