Increasing yield and production rate

Paper manufacturer sees profitability increase of $4.5 million from operational and business improvement.

Iggesund Paperboard Ltd is a major manufacturer of paperboard with a turnover in excess of $150m with 2 board machines producing more than 150k tonnes of board annually.

The client had invested a substantial sum in capital projects but was not realising it’s potential. Production had reduced and customers had been lost.

This was in part due to the reliability of board machine no. 1. Frequent breaks of this equipment as well as other associated losses, including planned and unplanned downtime had led to reduced output, and therefore reduced profitability.

Iggesund Paperboard Ltd engaged ABB to provide a Operational and business improvement programme that would:

- Reverse the adverse trend in manufacturing performance
- Deliver an increase in ROCE (Return on Capital Expenditure)
- Engage the workforce in value added improvements leading to a culture of continuous improvement
- Be able to be sustained by Iggesund long term

Solution

A thorough investigation of the client’s production performance was carried out and management practices were assessed to identify areas of concern and opportunities for improvement. A series of structured feedback workshops were then held to help the customer identify these problem areas for themselves, in order for them to place more credibility on the results.

The customer was then facilitated to identify six key projects to address, using cross-functional Manufacturing Improvement Teams (MITs). Each team received training in some standard tools and techniques of continuous improvement and problem resolution. Wherever necessary they were trained in additional, specific methodologies appropriate to the needs of that team.

By following a structured improvement process the teams were able to identify root causes, qualify these with the appropriate personnel and gain acceptance of their improvement ideas through improved communication.
ABB personnel supported the first three teams throughout the whole process. Thereafter, ABB helped develop an internal facilitator who was gradually allowed to run his own teams. He now has full control and by doing so has transferred ownership of the continuous improvement culture into the customer’s culture, thus creating sustainability.

Using this facilitation method and by engaging in a partnership with the customer we avoid the trap of providing a report that is never used and only gathers dust. We participate with the customer and act as an integral part of their company until the issues are resolved and some level of sustainability remains when we leave the site.

**Benefits**
The customer achieved the following outcomes:

- Breaking frequency reduced from more than 2 to less than 1 per day
- Caustic washes reduced from 6 hrs to 2 hrs with improved results
- Planned shuts totally redefined
- Surface problems identified as related to chemical additions
- Required safety measures identified and guards designed
- 180 quick hits identified at the papermaking / finishing interface
- Operator morale significantly improved
- Facilitator trained for sustainability
- More than 10% increase in yield
- Maximum proven rate increased by more than 14%
- Continuous improvement culture transferred and sustainable
- Continuous improvement facilitator installed and trained
- Overall profitability increase of $4.5 million