

Make more and faster with less costs Making a step change in operational excellence

ABB Full Service® improves plant and financial performance.

"The Full Service Agreement allows the proven ABB methodologies to be implemented at our site while also enabling the affected staff to improve their personal competencies in a leading technology company." For Sappi Cape Kraft, the improved efficiency allows the mill to focus on paper development, marketing and customer interaction.

Jonathan Hermanus, General Manager,
Sappi Cape Kraft Mill

The Sappi Cape Kraft paper mill in South Africa, a show case of a leading global paper manufacturing company, manufacturing Linerboard and Fluting (corrugating medium) from waste paper.

In 2009 Sappi was looking for a sustainable solution to improve their productivity and overall equipment effectiveness through maintenance outsourcing.

This type of maintenance outsourcing, in terms of a partnership, is not common in the heavy industry environment in South Africa, thus presented a major learning curve. ABB, at the time, already had a successful implementation at another international Sappi site, and the idea of a partnership resonated strongly with the sense of a family environment culture at the mill in Cape Kraft

Sappi selected ABB Full Service® maintenance outsourcing and the results have exceeded the expectations.

ABB Full Service improves Overall Equipment Effectiveness (OEE) at Sappi Cape Kraft

The main machinery of the mill consists of a paper machine and a coating machine. The mill that started its operation in 1981 has a capacity of 56,000 tons liner and fluting products, and 6,000 tons coated products.



Sappi Cape Kraft Mill, South Africa

To realize the Sappi Cape Kraft vision of leading the way with sustained Operational Excellence, Sappi chose ABB as a partner to improve OEE. The target set by the customer was to achieve a 10%-unit improvement in OEE over a 5 year period. Another important goal in partnering with ABB was to introduce the systematic ABB Full Service processes and tools to develop sustainable maintenance competencies at the mill.

After executing the Feasibility Study and completing the Partnership Development phase the actual Maintenance Alliance Agreement started on 1 May 2009 with 31 Sappi employees transferring to ABB. The Full Service agreement was implemented by a professional site team successfully although this was the first full scope agreement of its kind in South Africa. The partnership with a demanding client has been open and fruitful in a difficult market downturn environment.

When looking at today's operations at the mill, both Sappi and ABB can be satisfied judged by the indicators of Successful Partnership, and as the main targets have been achieved or exceeded. The partners have implemented many improvements, such as systematic reliability approach, maintenance processes, OEE improvement, Multidisciplinary Teams, recognition and celebrations, one goal, combining the strengths of two global organizations. Sappi systems and ABB systems have been integrated seamlessly.

Although the current performance targets have been achieved there is a lot to do to reach the world-class targets set in the beginning. The roadmap is clear for becoming the OEE leader in Sappi group, and ABB acknowledges the continuing support from Sappi Cape Kraft.

Behavior Based Safety (BBS) and building Partnerships

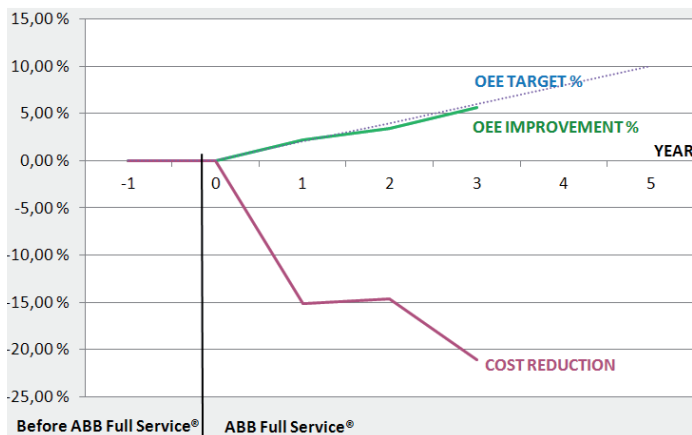
The ABB staff is fully committed to the site BBS program where the focus is on observing tasks to identify and eliminating barriers to safety. The amount of observations, which is also one of the Key Performance Indicators (KPIs) in the Full Service agreement, increased by 100%. The site achieved 2-years with only 1 minor lost time injury.

Other KPIs include Overall Equipment Effectiveness (OEE), Total Maintenance Costs (TMC), maintenance performance, mean time between failures, customer satisfaction and environmental performance measures, all of which have been selected to provide comprehensive management control and are monitored on a daily/monthly/yearly basis.

In year 3 now, Sappi Cape Kraft feels that working with ABB has been very successful. There is a common view about the goals and how to achieve them. Working together enabled the Mill to achieve increased targets even during the recent downturn in market conditions. While ABB focus on maintenance operations, Sappi focus on key variables to the process as this is where significant process cost, e.g. steam and chemicals, can be reduced. The opportunity for new product development is also utilized and various product trials are facilitated on the Paper and Coater machines.

It's about complete maintenance concept, sufficient resources for development and introducing best practices

The focus currently is on artisan competency, i.e. assessing if an artisan can competently complete required tasks and provide training where gaps exist. This is a tedious process showing long-term benefits in years 4 to 5 when the required OEE targets will be tougher to achieve.



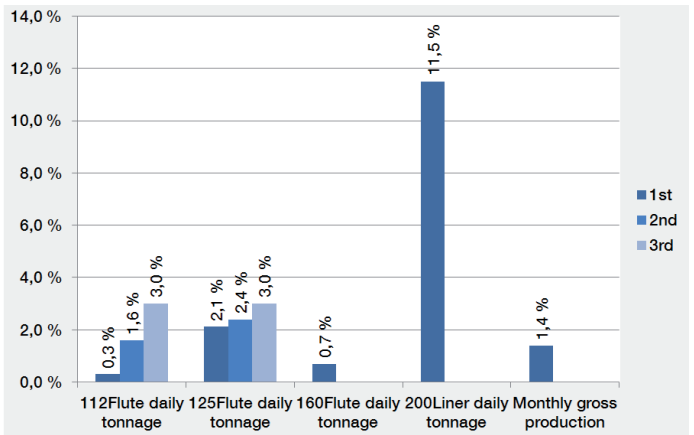
Improve OEE while reducing costs

Benefits

During the first two years ABB has delivered the following benefits:

- Increased Behavior Based Safety contribution and reduced accident statistics
- The comparable OEE improvement of PM1 is 6.56 %-units over two years.

Nine production records



Runtime records

- Longest Runtime record in hours: 1st improvement 18.3%; 2nd improvement 25.7%

Uptime records

- 1st Machine Availability improvement 0.8%. (Downtime/day reduction of 12 minutes)

Developed the maintenance structure to support both the maintenance and process development requirements.

Delivering high quality maintenance

ABB Full Service agreement covers the total responsibility of all maintenance activities at Sappi Mill:

- Daily maintenance
- Major maintenance
- Shut down management
- Material and contractor management
- All maintenance personnel transferred to ABB
- Long-term fixed price agreement; first agreement term 5 years

Key Success Factors

The ABB maintenance partnership is a win-win "partnership". Both parties constantly work together to achieve common goals. This is like a marriage and does face challenges with both parties really want to make it work.

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