

Managing drive availability through preventive maintenance

PT Riau Andalan Kertas (RAK) is an advanced and sophisticated paper mill and part of April Group in Riau province of Sumatra, Indonesia. The company produces 2 million t/a pulp in the biggest pulp mill in the world and 350,000 t/a of uncoated fine paper.

As in every successful manufacturing company, equipment availability plays a key role in the operating strategy in RAK. The experienced RAK maintenance personnel have a practical and advanced approach to maintenance. Due to this PM1 drive maintenance at the mill has been very successful.

ABB has a maintenance schedule for every drive product family. They are based on ABB's extensive experience and know-how of manufacturing and maintaining electric drives.



RAK PM1 hall

Maintenance schedules and preventive maintenance kits – the backbones of sustaining availability

PM1, which has a PPS200 drive system of ABB comprising of 49 ACV700 drive sections, was commissioned in 1997. This drive serves as a good example of the need and the advantage of adopting preventive maintenance schedules for sustaining optimum availability of drives.

The RAK PM1 drive operation was excellent in the five first years, but then the drive maintenance team noticed a slight decline in availability. To restore and sustain the original high availability RAK and ABB teamed together and decided to make a site survey to analyze the situation.

Based on the site survey results, RAK together with ABB concluded that all the maintenance

according to the ACV700 maintenance schedule had to be performed.

Up to then RAK was conducting maintenance according to their maintenance plan. However, the maintenance schedules based on the latest experience were not available at the early years of RAK PM1 operation.

A plan for preventive maintenance with service part replacements (preventive maintenance kits) was made for the period ending in June 2005. RAK maintenance team carried out the preventive maintenance with all part replacements during regular scheduled shutdowns of the paper machine. There was no additional downtime for carrying out the preventive maintenance work.

Product Lifecycle Services

- Installation & Commissioning
- Training
- Support & Remote Services
- Spare Parts & Repairs
- Maintenance & Field Services
- Migration & Retrofits
- Optimization





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Case notes

High availability with low cost

A planned preventive maintenance according to the maintenance schedule is a very economical method to realize drive maintenance.

It supports not only high availability of the equipment, but provides also low price service parts, since preventive maintenance kits are sold 15-40 % cheaper than the same parts sold as separate spare parts.

Objective

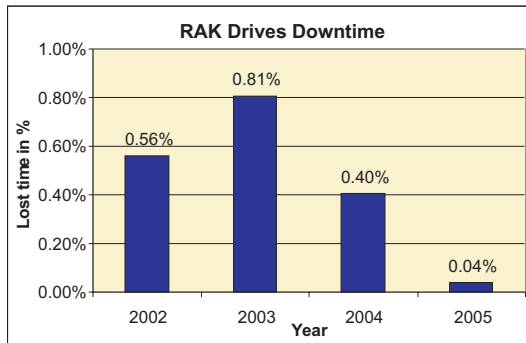
To ensure high availability of paper machine drive system with trouble-free and reliable operation.

Solution

A preventive maintenance was carried out in 2004-2005 in pre-planned regular shutdowns without disturbing production.

Benefits

Drives availability has improved significantly in 2004-2005



ACV700 drive cabinets

Other customer benefits from preventive maintenance include:

- Increased service engineer product knowledge
- Better comprehension of the future maintenance needs
- Updated spare part inventory

Satisfied customer

In 2005 RAK PM1 ACV700 drives performance has been excellent, and the customer is satisfied with the job. Continuous support to the customer through resident engineer and preventive maintenance according to the maintenance program has created a trouble-free and predictable win-win situation to the parties.

Future maintenance

RAK maintains their ABB drives according to the maintenance programs adopting ABB drives maintenance schedules. After observing the results achieved in the PM1 drives maintenance, RAK is now focusing on preventive maintenance of ACS600 and SAMI STAR single drives.



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