



RollCare: Ultrasonic testing of a roll cover.

Tailor-made mechanical roll service

RollCare, RollRep and RollUp Solutions lower costs

Rolls have a huge impact on machine efficiency and a mill's profitability. By reducing unscheduled downtime due to roll problems and increasing the roll change interval, a mill can significantly lower the total cost of operation. To get the most effective and fastest service, Voith has developed tailor-made mechanical roll service modules, which are classified by three steps: RollCare, RollRep and RollUp Solutions.

In fact, one could compare a roll to a car and easily grasp the understanding between car and roll maintenance. Like cars, rolls need periodic maintenance, occasional repairs, and if necessary, upgrades to ensure maximum reliability. Proper maintenance always results in maximum performance.

RollCare

It is essential to clean and inspect bearings, as well as inspect for any wear or damages that may be developing, such as cracks in journals or in the shell. In addition to the bearing assembly work, suction rolls require cleaning of the suction box, replacement of seal strips and air loading

hoses, flushing of shower headers and nozzles, replacement of lip seals and other wear items. Deflection compensated rolls require replacement of seals and testing for leaks. Generally speaking, a lot of small, yet important, details secure the runnability of your paper machine.

RollRep

Like cars, as rolls get older, the components corrode or wear out, and occasionally parts get damaged. Voith, as a manufacturer of rolls, has the experience and know-how to recommend the most appropriate repairs that will be cost effective yet provide reliable service. Some of the roll repairs include: head fit sleeving, ther-

mal spray build-up, re-machining, journal replacement, parts replacement, shell ID honing.

RollUp Solutions

Occasionally, high-tech products need a technology update, to ensure top performance. Voith can upgrade existing rolls to provide improved performance. For example, there may be some weaknesses that need to be taken care of, or there are some possibilities to incorporate the latest engineering concepts and improve the existing rolls. Through analysis of reliability records and design reviews, the weak areas of a roll can be precisely identified and design enhancements can be implemented.



RollCare: Bearing inspection.



RollRep: Thermal coating of a journal.

*RollUp Solutions:
InsiderJet installation.*



Examples of Voith RollUp Solutions:

- Short bearing life can be costly. Water may be getting into bearing housing, or oil may be leaking out. Machine speed has been increased, it may be necessary to convert from grease to oil lubrication.
The solution: Bearing housing can be re-designed for improved reliability.
- A broken end deckle on a suction roll can cause unscheduled downtime.
The solution: An upgrade solution is available to strengthen the deckle mechanisms, and also give visual feedback of the deckle position for easy adjustment of vacuum zone width.
- Suction roll's seal strips may be wearing out too fast; this may cause frequent roll change intervals. Or seal strips have an imprecise position, this may provoke web edge problems and sheet breaks.
The solution: The shower headers and nozzles can be re-engineered to improve the shell lubrication and enhance seal life, thus producing longer roll change intervals.

With Voith's RollUp Solutions, every upgrade project is tailored for the specific need, while ensuring to get the maximum results for a minimal investment. As a result, the ROI can be very attractive.

Voith has a dedicated team of engineers and craftsmen specializing in paper machine rolls. By partnering with Voith, and effectively utilizing these three modules, RollCare, RollRep, and RollUp Solutions, reliability will be improved, downtime reduced, machine availability obtained, and better performance from the paper machine rolls are acquired.

Contact



Jin Kim
Rolls
jin.kim@voith.com



Jochen Honold
Rolls
jochen.honold@voith.com

Infobox: Overview of the benefits

RollCare:

- Periodic maintenance & service
- Suction rolls
 - Deflection compensated rolls
 - Press rolls, wire/felt rolls, reel spools, etc.
 - Shell, head, journal inspection & NDT
 - Grinding, conventional and 3DG
 - Balancing, conventional and multi-plane

RollRep:

- Repair & restore rolls to original design
- Head fit repair
 - Any kind of Machining
 - Journal repair & replacement
 - Parts replacement
 - Shell ID honing

RollUp Solutions:

- Upgrade old rolls with new engineering concepts
- Bearing housing improvement
 - Grease to oil conversion
 - End deckle redesign
 - Shower improvement
 - InsiderJet installation (High pressure oscillating shower)
 - SeaLencer installation (Noise-reducing sealings)
 - Seal strip upgrades