Corr-Pro® Rotary Joints with DP Controls for Plain-Shell Lower Corrugating Rolls

Case Study

Challenge

A corrugated packaging plant located in California (USA) was having issues with poorly bonded board after starting up from a stoppage of any duration, resulting in excessive waste and lost production. Kadant identified the root cause to be thermal bowing of the lower corrugating roll. The thermal bowing caused the glue roll gap to change as the roll turns. A larger-than-required glue gap results in too little starch applied to specific locations on the medium on each rotation leading to a poor bond between the liner and the medium.

Solution

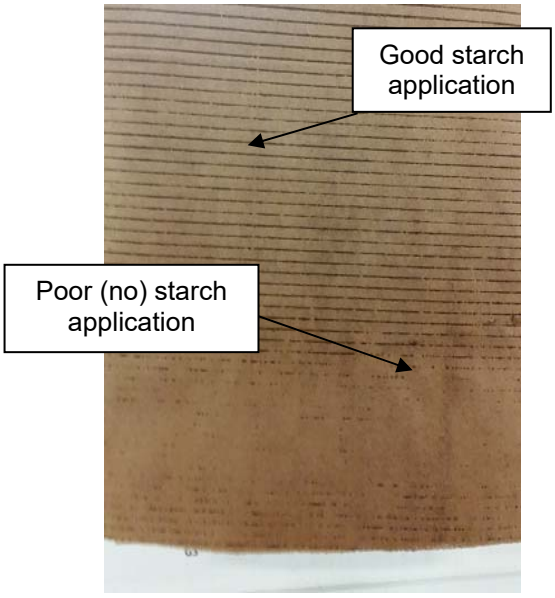
After completing a steam system study, Kadant recommended a managed differential pressure control strategy for the lower corrugating roll and upgrading to the Corr-Pro® rotary joint with a rigid stationary syphon.

Results

The rigid rotary joint and syphon system combined with the managed differential pressure control strategy greatly reduced the amount of residual condensate left in the roll when the machine stops. This eliminated the thermal bowing and allowed the machine to make salable production immediately after starting up.

Highlights

- Corr-Pro rotary joints and rigid stationary syphons ensure reliable condensate removal.
- Differential pressure control of plain-shell lower corrugating rolls is an effective way to eliminate thermal bowing.



"Soak Test" showing glue lines

Corr-Pro rotary joint with rigid stationary syphon

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