Novel Retention and Drainage Program Reduces Costs and Improves OME

MicroSolSM Advanced Retention and Drainage

Customer Challenge
A Southern U.S. uncoated freesheet producer was interested in reducing costs and asked Solenis to review their retention and drainage program. The targeted machine is a 1050 TPD horizontal gap former producing offset grades. The incumbent program was structured silica, anionic polyacrylamide, and PAC providing adequate retention and drainage performance.

Recommended Solution
After a wet end audit, along with the appropriate lab testing, Solenis recommended a MicroSol Advanced Retention and Drainage program that included:

- PerForm™ MP9031 structured silica
- PerForm™ SP7202 structured polymer
- PerForm™ PA8147 anionic polyacrylamide

These program components were all fed post-screen through four Solenis Vmax™ injection nozzles. PAC was also split fed to the machine chest and fan pump.

Results Achieved
Results were excellent. PerForm SP7202 was set in ratio control with PerForm PA8147 and controlled by a Kajaani with a target tray consistency of 0.115%. Transition to the Solenis MicroSol program was seamless and all performance metrics and sheet quality targets were met on the first reel. The program delivered a 12% reduction in cost while increasing OME from 96% to 99.1%. The MicroSol program also provides unique flexibility for change. If the customer needs to increase machine speed or sheet ash targets, they can utilize MicroSol.

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<tr>
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<th>Pre Trial</th>
<th>MicroSol</th>
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<tbody>
<tr>
<td>OME</td>
<td>96%</td>
<td>99%</td>
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<tr>
<td>Average Breaks/Day</td>
<td>0.5/day</td>
<td>0.16/day</td>
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