**Superior Sizing Technology Helps a Gypsum Liner Producer Control Cull and Reduce Internal Size Costs**

**Prequel™ 2000E Sizing Agent**

**Customer Challenge**
A North American gypsum liner producer was experiencing excessive cull production due to sizing variation. Historical data analysis showed out-of-spec Cobb Test was the prime reason. The mill was also interested in reducing sizing program costs which was around 75% of their total chemical costs.

The incumbent alkyl succinic anhydride (ASA) and old generation cationic polymer batch system didn’t achieve the customer expectations. It was causing sizing variability. Poor equipment set-up by the competitor was also partly to blame.

**Recommended Solution**
Solenis recommended Prequel 2000E ASA sizing agent emulsified in Prequel 500 emulsification cationic liquid starch. Solenis’ proprietary design PLC-controlled HASE 300B emulsification system was used to make and supply the ASA emulsion directly to the paper machine.

**Results Achieved**
Solenis’ ASA sizing program helped the mill meet their goals of reducing cull board for Cobb test variability and reducing sizing cost/ton. Prequel 2000E/Prequel 500 outperformed the competitor ASA/polymer program. Our state-of-the-art emulsification equipment allowed the customer to control set points and operate directly from the DCS.

**Prequel ASA - Sizing Efficiency in Gypsum Board**

<table>
<thead>
<tr>
<th>ASA Dosage, Lb/ton</th>
<th>Solenis</th>
<th>Competitor</th>
<th>Incumbent</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Production</td>
<td>53.4</td>
<td>51.5</td>
<td>46.9</td>
</tr>
<tr>
<td>ASA Dosage, lb/ton</td>
<td>4.08</td>
<td>6.2</td>
<td>5.1</td>
</tr>
</tbody>
</table>

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