

<b>Project Title:</b>	<b>Replacement of a Phosphoric Acid Egg</b>
<b>Client:</b>	Cognis Corporation
<b>School Year:</b>	2003-2004
<b>Students:</b>	Tanya Jernberg
<b>Summary:</b>	<p>This project was a phosphoric acid egg replacement, sponsored by Cognis Corporation, a chemical production plant in Kankakee, Illinois. In recent years, the acid charge process was changed, which caused the existing egg to corrode because of high temperature and low concentration of acid. The egg needed to be reliable and efficient to allow for a punctual production schedule. Because it was corroding, leaking, causing downtime, and was a hazard to Cognis employees, the existing egg required repair or replacement.</p> <p>The main goal of this project was to research the various options available for the acid egg and to implement the best solution. Whether the solution was to replace or repair the egg, would need to be lined with a material that could withstand the egg's environment. A new egg had to be able to withstand the high temperature, as well as the low concentration of the acid and the potentiality of a mild vacuum pull.</p> <p>The project started by understanding the overall tank process and by gathering information for the possible lining solutions for the tank. There were no aesthetic requirements here, only functional. The final solution and implementation was to replace the egg with a new Teflon lined tank that was easily repairable, financially feasible, and completely capable of handling the current acid egg characteristics of high temperature, low acid concentration, and mild vacuum.</p> <p>The replacement egg was installed, tested, and placed in production according to Cognis standard operating procedures. The final egg was purchased from CB Mills for \$14, 093 and was installed on January 7, 2004.</p>

