



AMERICAN INSTITUTE OF
CHEMICAL ENGINEERS

The Mid-Michigan Chapter of the American Institute of Chemical Engineers cordially invites you to a dinner presentation:

It's Candy...How hard can it be???

Wednesday, October 19, 2005

Tuscany Banquet Hall, 801 E. Wackerly, Midland

Speaker: **Mr. Craig Moyer**
Director, Capital Programs
The Hershey Company

Topic: The presenter takes a somewhat lighthearted look at the chemistry, physics and mechanics of manufacturing an American icon, the Hershey Kiss.

At first glance, the Hershey Kiss is simply a piece of chocolate candy. Further reflection, however, exposes a less than subtle shape which evolves from a single pointed tip flowing downward and outward and expanding through three dimensions through curved shoulders to a perfectly flat bottom. How does this complex geometrical shape come to be? Internal flow properties of chocolate influenced by the peculiarities of sugar, cocoa and milk protein particles suspended in a fat cause chocolate to be anything but normal. The multi-crystalline nature of the fat and the desire to have a shelf stable product necessitate processes which promote the growth of only the most stable fat crystals at the time the shape is formed. This leads to the need for the fat and the other ingredients to undergo a thermal treatment which selectively creates stable crystalline seed while melting out those less stable. Given this and a myriad of other attributes associated with the use of a variable raw material base, it's hard to believe the intricate geometrical shape of a Hershey Kiss is simply the product of squirting a measure of chocolate onto a flat surface. Yet, to the laymen, that is how it has been done for almost 100 years.

Now here's an idea. Let's put an almond inside a Kiss.

After all, It's Candy...How hard can it be???

Date: Wednesday, October 19, 2005

Time: 5:30 - 6:00 PM Cocktails, Social
6:00 - 7:00 PM Dinner
7:00 - 8:00 PM Presentation

Dinner Cost: \$25.00 - Please bring cash or check payable to Mid-Michigan AIChE to the dinner.

Menu: Buffet meal featuring two entrees, salads, vegetables, and accompaniments.

RSVP: Please RSVP to Brett Birchmeier (bbirchmeier@dow.com) by **Friday, October 14.**

On the Web: The section web site is found at www.mmaiche.org

Craig Moyer's Biography:

Craig F. Moyer is Director, Capital Programs, The Hershey Company. He is a Harrisburg, PA, native, and is a 1973 Chemical Engineering graduate of Northeastern University. He is a Registered Professional Engineer in Pennsylvania. Craig has been with Hershey since 1973 and has held numerous responsibilities beginning in Quality Assurance and progressing through various engineering positions in Product & Process Development as well as Project Engineering and Project Management.

In the early 1980's, Craig was the lead process design engineer and start up manager for an \$80 million grassroots confectionary facility in Stuart's Draft, Virginia. Since 1983, he has held various Engineering Management positions within the Hershey organization. In 1989, Craig was named Project Manager of the \$130 million "West Hershey" chocolate manufacturing facility. From 1993 to 2002, he was responsible for corporate wide process engineering. In 2002, Craig was named Director, Capital Programs, where he is currently responsible for managing Hershey Foods' \$200 million annual capital program.

Craig and his wife, Lois, live in Lawn, PA, where they enjoy road cycling (each trying to average 2000 miles per year), hiking, gardening, traveling and reading.