



Overview

(Updated August 2009)

Taking the First Step

In the early 1980's, the ASC Board of Directors identified a number of broad industry needs that might best be addressed through an effective partnership between industry and the academic community. A committee of industry leaders was formed to examine possible avenues the Council might take in spearheading such an effort. This committee, later named the Education Foundation Committee, recommended that the Council initiate an Education Program having as its long-term goals the following:

- Support research at selected universities which has wide industry appeal and contributes to the industry's technology base
- Promote faculty and student awareness of employment opportunities in the industry
- Foster the development of graduate and undergraduate courses on adhesive/sealant technology which are responsive to the needs of industry
- Encourage continuing education of industry personnel through short courses, seminars, "hands on" equipment training, etc.

The Pilot Education Program

As a first step, ASC's Education Foundation Committee approved implementation of a modestly-funded three year "Pilot" Education Program, during which time the Council would:

- Fund research fellowships and/or provide outright grants at several regional located universities
- Organize an annual summer employment program
- Establish effective working relationships between industry personnel and university faculty

The Universities

Following an extensive review of forty colleges and universities located throughout the United States, four institutions were selected to participate in the program:

Commencing with the 1984 Fall Semester

- The University of Akron – Institute of Polymer Science
- The University of Connecticut – Institute of Materials Science
- The University of Southern California – Department of Chemical Engineering

Commencing with the 1985 Fall Semester

- The Virginia Polytechnic Institute – Center for Adhesion Science (CASS)

Pilot Education Program Funding (1984-1986)

Funding was made possible through the generous, voluntary support of 103 participating ASC member companies, raising a total of \$320,385. The four academic institutions were awarded \$20,000 each year to assist graduate and undergraduate students engaged in adhesive/sealant study. After the early success of the Pilot Education Program, the Council's Board of Directors instructed staff to take the necessary steps to incorporate an Education Foundation.

ASC Education Foundation

On August 21, 1986, the ASC Education Foundation was incorporated. At the Education Foundation Board of Directors first meeting on October 29, 1986, the Board adopted the Foundation Bylaws and elected its first set of officers.

Why Virginia Tech?

The Education Foundation Technical Advisory Committee evaluated the pilot program universities based on six criteria: use of ASC funds, quality of students attracted to the university, quality of faculty, quality and availability of facilities and equipment and programs and seminars for the industry and found they were essentially equal. The unanimous recommendation of Virginia Tech as the site for ASC's Center for Adhesion and Sealant Science was based on a final criteria: the commitment of the university. Virginia Tech surpassed the other universities in their dedication to and active involvement in working with the Council, the conveyance by both faculty and school officials of enthusiasm for the ASC education program and finally, the existence of an understanding of the future value of the ASC program above and beyond the monies immediately available. On April 1, 1987, the ASC Board approved the committee recommendation and made Virginia Tech the recipient of all future Education Foundation funding.

Fundraising

Since its inception, 80 companies have contributed approximately \$3.6 million to the Foundation. The initial campaign goal of \$5 million was not realized and only \$2.2 million was raised. The initial objective was to raise sufficient funds to endow the Foundation and not require continual fundraising. In 1994, a second Advancement campaign was initiated with a goal of \$2.5 million; 39 companies made one time or multi-year pledges pledging approximately \$1.4 million, short of the goal of \$400,000 per year.

Funding CASS

The first year of funding for the 1987-88 academic year began with \$75,000. The total contribution from ASCEF to CASS accounted for 12 percent of the CASS budget. From 1987 through 2003, the Education Foundation's support totaled \$3.4 million.

Historically funds from ASC are used for student awards, travel for students, faculty and staff to ASC conventions, Industry-on-Campus event, distribution of research papers, production and distribution of CASSette, office equipment and two CASS staff positions.

Also, in 1989 the Education Foundation set up an Endowed Professor Fund at Virginia Tech to recognize the importance of maintaining an industry presence on campus. The first recipient was Dr. Thomas Ward, who served as Endowed Professor until the end of 2006, at which point he retired from the University. Dr. David Dillard was selected to succeed Dr. Ward and currently serves as Endowed Professor.

2000 to Present

By 2000, confirmed pledges were \$22,000. The balance remaining in investments was just over \$600,000. At the January 2001 Board meeting, Mark Collatz presented the "Restructuring the ASCEF for the 21st Century". After discussion, the Board approved the new plans. The plan kept the longstanding Foundation goals of: 1) educating students, 2) educating current company employees and 3) organizing and sponsoring focused research. Also included would be projects with other colleges and universities as well as expand current programs to include distance learning, and white papers. The plan was to be funded from new contributions solicited from member companies. However, attempts to raise additional funds were unsuccessful. By December of 2001, the Board approved that the remainder of the funds should continue to go to CASS to support students (at the time EF contributions of about \$300k accounted for 50% of total CASS funding needs)

An example of programs funded in 2001 included:

- Fellowships for 8 graduate students for research activities
- New, academics-led Short Courses in Waterborne, Mechanics of Adhesion, Wood Adhesion, and Sealants I & II.
- *Introduction to Adhesives & Sealants* employee training course
- North American-wide intern program (with summer intern program)
- Graduate-level distance learning programs through CASS
- White paper on waterborne adhesives developed by CASS

By 2003, due to insufficient balance of funds in the EF Account, the Board agreed to put the Foundation on idle until final recommendations could be made. CASS was dissolved and merged into the Macromolecule Interfaces Institute (MII@VT). For a couple years, stand-alone ASC Short Courses involving Virginia Tech professors were

run out of the EF. Since 2006, this practice ceased (all Short Courses are now run through the ASC) and no new projects have been launched.

The remaining monies (about \$30,000) are invested with ASC's Reserve Fund Manager, RBC Dain Rauscher. ASC's Auditor has advised the Council that these remaining funds should be invested in projects true to the EF mission (i.e. academia focused) and are not to be used or applied to ASC activities. In June 2009, the EF Board unanimously approved spending down these funds on projects which involve the development of educational materials targeted at designers, engineers and architects (i.e. end-users who influence the use of adhesives over mechanical fasteners).

Additional Background Information

(originally drafted in 1999)

ASCEF Mission

The mission of the ASC Education Foundation is to:

- Increase the number and technical knowledge of graduates entering the adhesive and sealant industry.
- Encourage and support research in adhesive and sealant science.
- Strengthen employees' capabilities to develop practical solutions to short- and long-term industry need.
- Promote interdisciplinary programs and exchange between industry and academia.

The primary focus of the ASCEF has been on the training and education of students in adhesion science. Support of the Foundation is an active strategy for investing in the future. More than 300 students earning undergraduate, Master's and Doctoral degrees have been educated through CASS. The ASCEF has provided funding at some level for some 150 students. These students receive training and education in adhesion science and can earn a certificate in Adhesion Science at the time of graduation (new in 1998).

Industry-on-Campus program

- The Industry-on-Campus (IOC) tours were developed to provide industry personnel with a chance to talk to faculty and students about industrial research needs and to visit the labs at CASS. The ASCEF provides funds to support this activity.
- Individuals from 35 companies have attended the IOC tours since 1989.
- Promote in Catalyst, web and by invitation; follow-up calls made to member rep and technical person; average attendance – 8-10 people; budget is \$3,000

Promotion to Membership

- CASS Annual Report mailed to every Board member in Fall
- Thank you letter sent to donors
- Dr. Dillard made presentation at Membership Meeting at '99 Fall Convention
- Past Conventions have held separate "CASS" sessions for information
- CASS exhibits at each Convention
- Article on CASS and ASCEF in Adhesive and Sealant Industry magazine March 99

Training Students

Undergraduates. As of June 1999, 133 students graduated from the CASS program with a B. S. degree and 99 students received support from ASCEF.

Post-Graduates. As of June 1999, 115 students graduated with a Master's degree; 19 students received support from ASCEF. A total of 133 students graduated with Ph.D. and 26 students received funding.

1.2 Think Glue Program

This program was initiated in 1995 to prepare undergraduates for employment in the industry by providing industry research internships. Ten ASC member companies have participated. Companies commit to two years of funding for a stipend and supplies given directly to CASS and to salary for an onsite company internship.

Member Companies Employing Graduates

Recruitment of CASS graduates for summer and permanent employment has been a key concern of the ASCEF Operating Committee and Board for many years. The need to increase internships at ASC companies and increase the numbers of graduates hired continues. In the last 10 years, ASC member companies have hired 51 graduates from the CASS program.

The following companies have hired CASS graduates over the years:

3M	Air Products and Chemicals
Amoco	Armstrong World Industries
Ashland Chemical Company	AT Plastics
Bostik	Carlisle SynTec Corporation
Dow Chemical Company	Dow Corning Corporation
E. I. DuPont de Nemours	Eastman Chemical Company
Essex Specialty Products	Exxon
Franklin International	Georgia Pacific
Graco	H. B. Fuller Company
National Starch & Chemical Co	Shell
Tremco	