

Chapter 8 Fellows and Awards

By John O'Connell

Among the most prominent Institute recognitions of its outstanding chemical engineers are more than 60 awards, including certificates, plaques, medals, honoraria, monetary prizes, and invited lectures. In addition, the grade of Fellow is awarded to members in recognition of significant professional accomplishments and contributions in engineering. Selections in both categories are based on nominations. This chapter briefly extends the history of the principal awards described in the *HIGH LIGHTS...the First Fifty Years... of the American Institute of Chemical Engineers, 1908 - 1958* (AIChE, 1958) and, for the first time, summarizes the origins and development of the member grade and program of the AIChE Fellows. Also included are the core qualifications for awards and procedures for nominations. Lists of awards, their criteria and recipients, as well as that of the 814 Fellows as of this time, are in the Appendices.

AIChE Awards 1913 to the Present

The first awards of AIChE were given for best contributions to the profession via presentation or publication. The Institute Gold Medal was awarded only in 1912, 1913, 1916, and 1920. Awards finally reappeared in 1932 for the Student Contest Problem with the A. McLaren White Award (first prize), the A.E. Marshall Award (second prize), Third Prize, and Honorable Mention. All of these awards are now sponsored by Omega Chi Epsilon.

The Institute Gold Medal was replaced by the William H. Walker Award in 1935 for “Excellence in Contributions to Chemical Engineering Literature.” The first awardee, Allan P. Colburn, received a certificate and a bronze plaque. The next award, established in 1945, was the Junior Award, whose name was controversial for some years before being replaced in 1958 by the Allan P. Colburn Award for “Excellence in Publications by a Young Member of the Institute.” The original certificate and bronze plaque, which were received by Clyde McKinley and Robert R. White, have been enhanced to the current plaque and monetary rewards.

The Professional Progress Award established in 1947 recognizes contributions to outstanding progress in chemical engineering by a recipient younger than 45 years of age at the end of the calendar year in which the award is presented. The first award was given to Allan P. Colburn by the first sponsor, the Celanese Corporation of America. Currently the award is underwritten by Air Products and Chemicals, Inc. The Institute Lecturer is the honor of being invited by the Executive Board of the National Program Committee to present a comprehensive authoritative review of the chemical engineering science in his/her field of specialization. The first Lecturer was W.H. McAdams in 1949.

The number of Institute-wide awards increased gradually, as given in Table 1. AIChE Institute Awards are selected by the Awards Committee, and AIChE Board of Directors’ Awards are selected by the AIChE Board of Directors. In addition, current numbers of professional and student awards initiated by the Institute are as follows: technical divisions (31),

forums (11), committees (13), and local sections (4). There are now many student awards and scholarships (23). AIChE members also may be qualified for awards given by many other societies and organizations (120). Recipients of the most important awards are given in the Appendix.

Table 1. Current Institute Awards

Institute Awards	First Year	First Recipient
William H. Walker Award for Excellence in Contributions to Chemical Engineering Literature	1935	Allan P. Colburn
Allan P. Colburn Award for Excellence in Publications by a Young Member of the Institute	1945	Clyde McKinley Robert R. White
Professional Progress Award for outstanding progress in chemical engineering by a recipient less than 45 years of age	1947	Allan P. Colburn
Warren K. Lewis Award for Contributions to Chemical Engineering Education	1963	Barnett F. Dodge
Alpha Chi Sigma Award in Chemical Engineering Research	1966	Harry G. Drickamer
R.H. Wilhelm Award in Chemical Reaction Engineering	1973	Neal R. Amundson
Award for Service to Society	1973	Lawrence K. Cecil
Chemical Engineering Practice Award	1974	Robert G. Heitz
Arthur Dehon Little Award for Chemical Engineering Innovation	1988	George R. Chludzinski
Institute Award for Excellence in Industrial Gases Technology	1993	S. Alexander Stern
Board of Directors Awards	First Year	First Recipient
Founders Award for Outstanding Contributions to the Field of Chemical Engineering	1958	Thomas H. Chilton, J.V.N. Dorr, Olaf A. Hougen, S.D. Kirkpatrick, Warren K. Lewis
F.J. and Dorothy Van Antwerpen Award for Service to the Institute	1978	F.J. Van Antwerpen

AIChE Fellows: 1969 to the Present

The Fellow grade of membership originated from a proposal of the Professional Development Committee, principally developed by D.L. Katz, R.E. Lenz, and P.B. Lederman, and submitted by Katz on April 1, 1969. The proposal was presented to Council by Lederman on May 3, 1969, and Council approved it in August 23, 1969. The new grade was established, because “many more contributed significantly to their profession and discipline than the 110 men now honored with Institute awards.” Election to Fellow is based on contributions made to the engineering profession and significant accomplishments in engineering. Both “professional attainment” and “engineering achievement” were used in the criteria. The former included contributions to the advancement of fellow chemical engineers and the engineering profession. The latter was to be based on engineering practice, process developments, or leadership in projects or product development, and managerial techniques for bringing engineering efforts to fruition. Technical publications, patents, and theoretical developments also would be satisfactory evidence of engineering accomplishments. The major contribution could be in either engineering or service to the profession, but it was preferred that some accomplishments be present in both areas.

The subjectivity associated with judging attainment has caused some difficulties in setting the procedures for electing Fellows. When Council adopted in 1969 Section 8 of the Constitution, later moved to the Bylaws, it stated that election to Fellow was by “vote of Council upon nomination by five Fellows or members.” Since then, periodic changes to the Bylaws have occurred related to the functioning of the Committee on Admissions, such as in November 1995 and June 2007. Currently, the Bylaws state “It shall be the duty of the Committee to see . . . that the names of the applicants qualified for election to Fellow be recommended to the Board of Directors for election. In considering the qualifications of nominees for Fellow, the Committee should use a formal evaluation method and its best judgment in evaluating the Contributions to the Profession, the Significant Accomplishments in Chemical Engineering, and Years of Chemical Engineering Practice from materials submitted

on the training, accomplishments, and experience of each applicant as submitted in the nomination packet.”

The guidelines for election to AIChE Fellow that were approved in 1970 included both the articulation of attainments as given in the Constitution and Bylaws, and other details not published on the nomination form. These included “*The man’s significant accomplishments in engineering* may be evidenced by an important invention or development . . . (or) a series of patents . . . which together indicate significant technical accomplishment. Publication is not the only evidence of technical contribution. . . . Job title in and of itself should not be considered as sufficient evidence for fulfillment. . . . Teachers may fulfill the career development portion of the requirement by having made significant contributions in the educational arena. These should take into consideration what novel contributions to educational methodology he has made and/or whether he has truly inspired those people who have been his students or have worked for him. *Professional attainments*. . . . A man should have a significant record of service. This need not all be with the Institute. However, service within the Institute at some minimum level and at some time with his career should be weighed heavily. Being a local section chairman for one year is certainly a significant contribution but in and of itself would not be sufficient to fulfill the requirements. . . . Active service on national committees over an extended period . . . a major role in developing a national meeting. . . . other types of service . . . through other professional societies, or through major public office or service, or through other significant contribution to society [would be a significant contribution].”

Shortly after the procedures were determined, the Admissions Committee received nominations and began considering recommendations to Council. Two nominations were examined at the February 1971 meeting, but were held for later consideration. At about the same time, Council voted that “all living Past Presidents through 1970, who meet the required number of years of chemical engineering practice and full membership status, be declared Fellows of AIChE.” The Council also voted to accept the suggestions of the Admissions Committee to elect the first three Fellows: J.R. Fair, E.R. Gilliland, and R.E. Lenz.

Admissions Committee activity continued when six were approved on June 8. The Chair of Admissions, C.R. Landgren, submitted a letter to Council on June 22, 1971 listing the names and some particular accomplishments of the six recommendations. The citations were provided only as a way of evolving a set of criteria to be used for recommendation. Of the six, E. H. Amick, Jr. was the only one elected unanimously, even though his recommendation was made posthumously (Amick had died during the considerations). The Admissions Committee Minutes of July 8, 1971 show that four more were approved for ballot, and ten were deferred to the August meeting. At the August 5 meeting, six of the ten previously deferred were approved for ballot, three were further deferred, and one was denied. Nominees were denied or deferred because they lacked outstanding contributions in professional attainment or engineering accomplishments, or their contributions were in branches to other than chemical engineering.

On August 12, the Secretary for Council determined that election to Fellow grade should now be part of a regular routine operation. As a result, Council voted that 14 members recommended unanimously by the Admissions Committee be elected to the grade of Fellow. During the first year of nominations and selections, all 16 living Past Presidents and 34 others became AIChE Fellows.

Realizing that the spontaneous nomination of worthy AIChE members for Fellow was not happening often as expected, the Secretary proposed in 1972, a program to facilitate nominations such as automatically electing AIChE Presidents at the end of their term and AIChE members who received awards sponsored by other groups such as the Fritz Medal, the Perkin Medal and election to the National Academy of Engineering, etc. The Secretary also proposed that the Fellows Subcommittee of the Admissions Committee inductees be composed solely of AIChE Past Presidents who could evaluate and elect by mail. It is not clear how many of these proposals were adopted, but in the subsequent years the number of Fellows grew steadily. By November 2007, the total number was 814, and currently the number added exceeds those deceased by as many as 20 per year.

The initial electees were all male because before 1980 there were not many women chemical engineers who had been in practice for the required 25 years. The first female AIChE Fellow was Patsy Chappellear, followed by Elizabeth Drake, both in the 1980s. Drake commented that the plaque statements had only male-specific terminology; and a version with terms of proper gender was developed promptly. She received both versions.

Nominations

While initial statement of the qualifications have not changed substantially, there have been revisions of the Fellows nomination form, apparently both to make the process simpler for submission and for Admissions Committee evaluation. The current form can be found at http://www.aiche.org/uploadedFiles/Conferences/DepartmentUploads/PDF/Fellows%20Application_NEW_4_NW.pdf. The materials can be filled out electronically followed by submission to AIChE Headquarters in multiple hard copies.

Nominators must complete the form with information about them, and sponsors (who must be Fellows or Senior Members, with no more than two from a single organization) submit letters of recommendation. The nominee must fill out the form requesting information on education, professional employment position, responsibilities and accomplishments, honors and publications, as well as service to chemical engineering and AIChE. The new form gives instructions to the initiator, requirements for Fellow grade, and detailed guidelines for election, including both Bylaw phrasing and examples of suitable and insufficient service contributions. In addition, the form has a “Guide for Sponsors of Nominees” for the structure and content of supporting letters, also with extensive examples.

Fellows Organization 1980s to the Present

The AIChE Fellows did not establish a formal organization for many years. The earliest gatherings at national meetings started about 1980 when those Fellows not on the Executive Committee were invited to join the leadership in discussing the actions and issues of the Institute. Early

on, there were several active individuals, including Marvin Livingood, Henry Brown, William Henke, Klaus Timmerhaus, Ralph Buonopane, Angelo Perna, Deran Hanesian, Ralph Troupe, James Baird, and James Donovan, who moved the Fellows toward a more formal organization. Livingood volunteered to be the “Big Wheel” for some years, and Brown chose the title of “Spare Tire” to substitute when necessary. After Livingood, Timmerhaus, Henke, and Brown were the next “Big Wheels,” and then became the “Flat Tire.” Since then, Perna, Hanesian and John O’Connell (2004-) have been the “Big Wheel” for terms from 2-4 years.

The Annual Meeting program of 1982 lists a Fellows Breakfast event, but the current format was initiated several years later when Perna organized the meal as a special event at national meetings and developed a formal agenda. The Breakfast has been traditionally scheduled early Tuesday mornings and held in the Conference venue. The Breakfasts have evolved to a welcome by the Big Wheel; a Moment of Silence for Fellows deceased since the last Breakfast; individual self-introductions; awarding of pins and plaques to new Fellows; reports from the President, President-elect, and Executive Director and others involved in Institute Activities; business items including commentaries by attendees; and, for many years, one or more humorous stories and jokes, most often told by Hugh Guthrie until he passed away in 2007. The welcome provided at the meetings has been particularly gratifying to the New Fellows and the Institute Leadership has always appreciated Fellow feedback.

The activities of the Fellows Program have become more formalized in the 21st Century. John O’Connell created a password-protected listserv to send messages with meeting agendas and requests for involvement to the Fellowship (<https://list.mail.virginia.edu/mailman/listinfo/aichefellows>).

In recent years, Fellows activities involved cosponsoring events at national meetings. These included the Energy Forum plenary session at the Annual Meeting in Cincinnati in October 2005, and the Globalization Forum in San Francisco in 2006. A variety of other potential activities have been formulated; some have germinated. These include the Fellow’s Forum to provide an opportunity for focused discussion on a timely and important topic; local Career Cycle Clubs with periodic meetings

across generations of professionals to share values, practices and advice; participation of Fellows in Student Chapters and with the Young Professional Advisory Board. At this point, none of these have resulted in long-term activities, but these efforts will be continued so that the Fellows can contribute further to the mission of AIChE.

In 2008, a Task Force, Chaired by Fellow and Board member Cheryl Teich; with Fellows and Board members Neil Yeoman and Ignacio Grossmann; Fellow and Admissions Committee Chair David Eckhardt; Christina Ingram of AIChE staff, and Fellows' "Big Wheel" John O'Connell, was commissioned by AIChE President, Larry Evans, to examine how to improve the impact/support of the Fellows program on the AIChE mission/vision. The group is considering what, if any, modifications of the qualifications, revisions and transparency in the nomination and election processes would be appropriate for contemporary and future times, as well as what enhancements of the Program could make greater Institute impact. Their report is due to the Board of Directors by the Centennial Meeting in Philadelphia in November, 2008.

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Reference

AIChE, 1958; "HIGH LIGHTS...the first fifty years...of the American Institute of Chemical Engineers, 1908 - 1958", F.J. Van Antwerpen, S. Fourdrinier, 1958. Downloaded from <http://www.aiche.org/uploadedFiles/About/Centennial/Books/50/14-Awards.pdf>.

