

DOCUMENTS OF THE GENERAL FACULTY

**REPORT OF THE MEMORIAL RESOLUTION COMMITTEE FOR
JOEL O. HOUGEN**

The special committee of the General Faculty to prepare a memorial resolution for Joel O. Hougen, professor emeritus, chemical engineering, has filed with the secretary of the General Faculty the following report.

Sue Alexander Greninger, Secretary
The General Faculty

**IN MEMORIAM
JOEL O. HOUGEN**

Joel Oliver Hougen was born February 26, 1914, in Tacoma, Washington, the tenth and youngest child of the Reverend Johan Olai Hougen and his wife, Anna Elena Stockstad, both emigrants from Norway.

Childhood days for Joel were spent near Vinton, Iowa, a rural community that provided many opportunities for childhood exploration. His high school and university days were spent in Madison, Wisconsin, where his older brother, Olaf, was his mentor and tutor. Olaf Hougen was a legendary figure in the field of chemical engineering and helped build the department at the University of Wisconsin into one of the leading programs in the world. No doubt, Olaf's influence was a prime reason Joel elected to pursue a degree in chemical engineering at the University of Wisconsin.

Following graduation with a B.S. in chemical engineering in 1936, Joel became a process engineer with the American Refining Corporation in Texas City, Texas. In 1941, he entered graduate school at the University of Minnesota, supporting himself and his wife as an instructor. With the advent of World War II, he abandoned his graduate studies in 1944, and his family moved to Los Angeles for a job with Union Oil of California. After the war, from 1946 to 1948, he became an instructor at the University of Illinois. While there, Joel completed requirements for a Ph.D. in chemical engineering from the University of Minnesota.

Joel joined the faculty at Rensselaer Polytechnic Institute in 1948 as an associate professor in chemical engineering and was advanced to professor in 1951. It was during this period that chemical engineers first recognized that the work of electrical engineers on the servomechanism theory and design could have application to the control of chemical processes. Thus, when the opportunity arose in 1956 to work with Monsanto Chemical Company in this new field, he moved to St. Louis to join Monsanto. He also served as adjunct professor at St. Louis University from 1957 to 1960.

He developed methods of plant testing and facilities for data acquisition, conducted plant studies necessary to demonstrate that indeed the principles could be applied, and presented instructional courses for company personnel. This was pioneering work in theoretical studies and implementation of concepts in full-scale processes. Rarely does one have the opportunity to witness and participate in the transfer of technology from one discipline to another. He was recognized for this work by being requested to present the Institute Lecture at the national meeting of the American Institute of Chemical Engineers in Washington, D.C., in 1960.

In 1967, Joel joined the Department of Chemical Engineering at The University of Texas at Austin as the Alcoa Professor. Joel was the first full-time member of the faculty at UT Austin to teach and conduct research in chemical process control. Joel believed that accurate measurements were essential for proper control of chemical processes and that students needed training in modern instrumentation and measurement. He volunteered to teach the first laboratory course in the undergraduate chemical engineering program where he worked tirelessly to convert this laboratory from one based on simplistic measurement techniques into one that used the most modern instrumentation and data acquisition systems of the time. Every undergraduate was required to take this course, and Joel influenced how all of them approached analysis of chemical processes, a skill that no doubt served them well in industry. In addition, he enriched the personal life of the many students he advised.

Joel had a varied career with nearly equal parts spent working in industry, teaching, and private consulting. He published numerous papers and books in his field. Joel held memberships in several professional organizations, including the American Society for Engineering in Education, Chemical Heritage Foundation, and the American Institute of Chemical Engineers. He was a member of the American Institute of Chemical Engineers for over 50 years. He retired from The University of Texas at Austin in 1980.

Joel was a charter member of the Norwegian Society of Texas Austin Chapter through which he enjoyed learning more about Norway and his ancestral history. On "First Fridays" Joel could be found with long time friends at their supper club. He was also active in the Rotary Club and in the Lutheran Church community.

Joel and his wife, Alma, were gracious hosts of many parties and other social functions for a large and diverse set of friends they developed in Austin.

In his retirement years, Joel was active in academic matters and enjoyed travel; however, his true joy was his family. Sadly, his beloved wife of over 65 years, Alma Thorsheim Hougen, died in December 2003.

Joel died at sunset on February 6, 2006, in the peaceful comfort of his home viewing his beloved Texas hill country. Joel was survived by one brother, Harold Christian Hougen; his four children: Kathryn Knutsen, Thomas Hougen, Martha Hougen, Stephen Hougen, and daughters-in-law, Susan Hougen and Marva Hougen; 13 grandchildren: Kristoff Knutsen, Karl and Ramona Knutsen, Kjell Knutsen, Amelia Hougen and Ulrik Pedersen, Malena Hougen, Sara Hougen, Matt Summers, Richard Neff, Kara Hougen, Eric Hougen, and Zachary Hougen; and three great-grandchildren: Wyatt and Sophia Knutsen and Magnus Pedersen. Joel opened his home and heart to many others who became part of his extended family, including Bernadette Ulens and her daughter, Fleur De Wit; Magnhild Follesø; and nieces, nephews, and students from around the world.

A celebration of Joel's life was held on Friday, February 24, 2006, at the Shepherd of the Hills Lutheran Church in Austin where his children, grandchildren, and friends spoke of his unique spirit and generosity.

This memorial resolution was prepared by a special committee consisting of Professors Howard F. Rase (chair) and Donald R. Paul.

Distributed to the dean of the Cockrell School of Engineering, the executive vice president and provost, and the president on August 8, 2007. Copies are available on request from the Office of the General Faculty, WMB 2.102, F9500. This resolution is posted under "Memorials" at: <http://www.utexas.edu/faculty/council/>.