Mott Souders, Jr.

1904-1974

By Max S. Peters

Mott Souders, retired from Shell Development Company, died on December 11, 1974, one day after his seventieth birthday. Following his retirement from Shell Development Company in 1963, Dr. Souders had acted as a consultant. At the time of his retirement, he was Director of Oil Development for Shell Development Company.

Born on December 10, 1904, in Red Lodge, Montana, Dr. Souders received a Bachelor of Science degree in chemical engineering from Montana State College in 1926 and a Master of Science degree in 1927 and a Doctor of Philosophy degree in 1931, each from the University of Michigan. He was a leader in developing new industrial process ideas, particularly chemical processes involving mass transfer and extractive distillation.

Dr. Souders' career with Shell Development Company started in 1937, when he was named Assistant Manager of the Chemical Engineering Section. He became Manager of the section in 1946. In 1950 he was named Associate Director of Oil Development and became Director in 1957. In 1961 he was appointed a Member of the Advisory Council to the Vice-President and General Manager of Shell Development Company. He was elected to membership in the National Academy of Engineering in 1970.

Dr. Souders had the prime technical responsibility for the wartime programs to develop processes for producing toluene, butadiene, and penicillin in connection with which he held a

number of patents. In all, he held twenty-two patents in various phases of chemical engineering. He wrote more than seventy technical papers, and he was the editor of numerous textbooks and handbooks, most recently *The Engineer's Companion,* a compilation of useful information for the practicing engineer. He was recognized as a leader in anticipating the process engineer's need for basic data for his predictions.

While at Shell, Dr. Souders made major contributions to methods of fractionation requirements, and he also contributed to the technical vocabulary such expressions as "K-value," "stripping factor," and "extractive distillation." He pioneered in relating physical and thermodynamic properties of components to molecular structure, and he was largely responsible for the establishment of Shell Development Company's strong Chemical Engineering Department.

Among the awards received by Mott Souders are the Professional Progress and Founders Awards from the American Institute of Chemical Engineers and the AIChE Institute Lectureship in 1963. He received the honorary degree of Doctor of Science from Montana State College in 1954 and a citation from the University of Michigan at the Centennial of Engineering in 1953. During the period 1935-37, he was a Sterling Fellow at Yale University.

Despite his busy technical life, Mott Souders had time to serve his profession with distinction. He always took an interest in beginning engineers and worked closely with education activities through the AIChE. He was active on numerous committees in the AIChE and served as a member of its Council from 1964 to 1966.

Mott Souders' engineering ability seemed to be the product of innate capacity enhanced by intense study and broad experience. He had an uncanny ability to take an engineering problem, whether in petroleum or in penicillin, determine the likely direction in which the solution would lie, and quickly fashion a number of approaches to be carried out by those working with him to solve the problem. He was a real inspiration to other engineers to think deeply and constructively. His significant contributions in the chemical engineering field will be of importance for many years to come.

In addition to his technical accomplishments, Mott Souders was a warm, sensitive human being and a true friend. He leaves behind him a rich heritage of technical accomplishments, leadership, and personal determination.