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William H. Gauvin

(Date) November 8, 1991

(Revised 20 February 1989)
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WILLIAM H. GAUVIN

1913 Born in Paris, France on 30 March

Education
1941 B. Eng., chemical engineering, McGill University
1942 M. Eng., chemical engineering, McGill University
1945 Ph.D., physical chemistry, McGill University

Professional Experience
McGill University, Department of Chemical Engineering
1942-1945 Lecturer
1947-1961 Associate Professor
1961-1971 Research Associate
1971-to date Senior Research Associate

Pulp and Paper Research Institute of Canada, Montreal
1951-1957 Consultant
1957-1961 Head, Chemical Engineering Division

1945-1947 Plant Superintendent, F. W. Horner Ltd., Montreal
1961-1970 Research Manager, Noranda Research Center, Montreal
1970-1982 Director, Research and Development, Noranda Mines Ltd.
1982-1983 Director, Advanced Technology, Noranda Research Center, Montreal
1983-1990 Scientific Advisor to Director, Hydro-Quebec Research Institute
1983-to date President, William H. Gauvin Technologies, Inc.

Honors
1958 L. H. Weldon Medal, Canadian Pulp and Paper Association
1960-1961 Chemical Institute of Canada Awards (for best papers published in the Canadian Journal for Chemical Engineering)

1963 R. S. Jane Award, Canadian Society for Chemical Engineering
1964 Senior Moulton Medal, Institution of Chemical Engineers of Great Britain
1966 Palladium Medal, Chemical Institute of Canada
1966 Médaille Archambault, ACFAS
1967 D. Eng., Honoris Causa, Waterloo University
1968 Membre d'Honneur de la Société de Chimie Industrielle de France
1968 Best Paper Award, Canadian Society for Chemical Engineering
1969 Fellow, Royal Society of Canada, Academy of Science
1970 Alcan Award, Canadian Institute of Mining and Metallurgy
1972 Distinguished Lecturer Award, Canadian Institute of Mining and Metallurgy
1973 Fellow, American Institute of Chemical Engineers
1975 Companion of Order of Canada
1979 Gold Medal, Société d'Encouragement pour la Recherche et l'Invention, France
1981 Honorary Fellow, Institution of Chemical Engineers, United Kingdom
1982 Honorary Fellow, Chemical Institute of Canada
1982 Chemical Institute of Canada Award (for best paper published in the Canadian Journal for Chemical Engineering)
1983 Montreal Medal, Chemical Institute of Canada
1983 D. Sc., Honoris Causa, McGill University
1984 Jules Stackiewicz Award in Heat Transfer, Canadian Society for Chemical Engineering
1984 D. Sc., Honoris Causa, Queen's University
1984 Prix Marie-Victorin (Prix des Sciences du Québec)
1985 Medal of the Canadian Research Management Association
1986 Thomas W. Eadie Medal, Royal Society of Canada
1986 D. Sc., Honoris Causa, McMaster University
1986 Julian C. Smith Medal, Engineering Institute of Canada
1986 Founding Member, Canadian Academy of Engineering
1987 Foreign Member, National Academy of Engineering of the United States
1988 The Izaak Walton Killam Memorial Prize in Engineering
1988 Award for Innovation in Drying, Versailles, France (Sixth International Drying Symposium)
1989 Inaugural Lecturer, First Eugenie Lamothe Symposium, McGill University
ABSTRACT

William Gauvin begins with background information about his childhood experiences in Europe, his formative education, and his emigration during the Depression to join his family in Canada. He describes his education at McGill University, which culminated in both wartime work on RDX as well as several early electrochemistry papers. He next recounts his employment with Frank W. Horner Ltd., and the initiation and development of his lifelong spray drying work. Gauvin relates his recruitment to the Pulp and Paper Research Institute, his move to Noranda, and his associations with Hydro-Quebec and other industrial research centers. While recounting the circumstances behind each of these professional "turning points," he discusses the evolution of the chemical engineering department at McGill and the involvement of his graduate students at these research centers. Throughout the interview, he emphasizes the often difficult balance between research and management views on R&D, and between technical feasibility and economic feasibility of new technologies. Gauvin reviews his contributions to science policy, industry-academe cooperation, and government support for R&D. He concludes the interview with a consideration of chemical engineering in Canada today, and of the highlights of his own career in the field.

INTERVIEWER

James J. Bohning, Assistant Director for Oral History at the Beckman Center, holds the B.S., M.S., and Ph.D. degrees in chemistry. He was a member of the chemistry faculty at Wilkes University from 1959 until 1990, where he served as chair of the Chemistry Department for sixteen years, and chair of the Earth and Environmental Sciences Department for three years. He was Chair of the Division of the History of Chemistry of the American Chemical Society in 1987, and has been associated with the development and management of the Center's oral history program since 1985.
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   McGill administration and current financial problems. Reasons for dual theses and Ph.D. in physical chemistry. Establishment of chemical engineering program at McGill. Carl Winkler. Work on electrochemical deposition of copper and industrial interest in the work.
Spray Drying and Miscellaneous Remarks

Initial spray drying design and subsequent study of significant design factors. Len Torobin and particle dynamics. Computers. Une passion: la SCIENCE. Inaugural Lamothe Lecture. Purpose of oral history; Beckman Center interviews with chemical engineers. Spray dryer design; subsequent use by Horner.

Views and Influence on Government Support for Industry R&D

Oriented freedom in R&D. Paper on benefits to the government of industrial R&D support. Response to the paper. Promotes "actions concertées." Involvement in quasi-governmental organizations. Appointed "Délégué Général" of National Research Council; difficulties of the job, and emphasis on fundamental research and motivation of people.

Science Council Report on Northern Development


Noranda and R&D Difficulties


Plasma Processes

Davy McKee and other companies using plasma technology. Reasons for slow commercialization of this technology. Peat process and hindrances to application. Plasma torches. Toxic waste disposal and plasma technology.

Chemical Engineering in Canada

Current status of chemical engineering in Canada. Demographics of undergraduate student population at McGill. Reasons for high enrollment at University of Toronto. Graduate student population at McGill. Promotion of university-industry projects, and a current example.

Review of Career and Concluding Remarks

High point of career. Greatest satisfaction of career. Concluding comments on unusually strong industrial involvement coupled with concurrent thesis direction. Industry-academe cooperation intrinsically important to chemical engineering.

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