

CURRICULUM VITAE

ROGER WASHBURNE STAEHLE

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Vital

Born: February 4, 1934, Detroit, Michigan

Education

- B. Met. Engr., The Ohio State University, 1957
- M.S. Met. Engr., The Ohio State University, 1957
- Westinghouse Reactor Engineering School, 1959
- Ph.D., The Ohio State University, 1965

Employment

- Naval officer and nuclear engineer with United States Navy and Atomic Energy Commission (with Vice Admiral H. G. Rickover). Naval Nuclear Reactor Development, 1957-1961
- Graduate student, research associate, and International Nickel Fellow, The Ohio State University, 1961-1963
- Graduate student, research associate, and Battelle Fellow, The Ohio State University, 1963-1964
- Assistant professor, The Ohio State University, 1965-1967
- Associate professor, The Ohio State University, 1967-1970
- Professor, The Ohio State University, 1970-1979
- Director, Fontana Corrosion Center, 1975-1979
- Dean, Institute of Technology, University of Minnesota, 1979-1983
- Professor, Chemical Engineering and Materials Science, Institute of Technology, University of Minnesota, 1979-1988
- President & chairman, Automated Transportation Systems, Inc. (now Taxi-2000) Minneapolis, 1984-1986. (On leave from University of Minnesota)
- Industrial consultant, North Oaks, MN, 1986-Present
- Adjunct professor, University of Minnesota, 1988-Present

List of consulting clients available on request

Client Organizations: 111

Client Law Firms: 30

Board Memberships, Advisory Committees, Commissions

- Automated Transportation Systems, Inc., (now Taxi-2000) board of directors, co-founder, corporate secretary, president, chairman, 1983-1987
- The Charles Babbage Institute, trustee, 1979-1983
- Citizens League, board member, 1982-1984
- Data Card Corporation, board member, 1979-1983
- Donaldson Company, Inc., board member 1979-1983
- First Midwest Venture Capital, Technical Advisory Committee, 1980-1982
- Great Northern Iron Ore Properties, trustee, 1982-present
- Minnesota Alliance for Science, advisory committee and founder, 1982-1985
- Midwest Research Institute, board member, 1979-1982
- Minnesota Commission for Educational Excellence, 1983-1986
- Minnesota Cooperation Office, board member, 1979-1983

- Minnesota High Technology Council, board member and co-founder, 1982-1983
- Minnesota Wellspring, board member and co-founder, 1981-1983
- North Star (Research Corporation) board of directors, 1981-1983
- Packer Engineering, board member, 1981-1987
- Teltech Resource Network, board member and founding board member, 1984-1987
- Department of Materials Science & Engineering, The Ohio State University, advisory committee, 1987-1992
- Minnesota Public Utilities Commission, Team of Science Advisors, chair, 1994-1999

Honors

- TMS Meeting, “Chemistry and Electrochemistry of Corrosion and Stress Corrosion,” in honor of R.W. Staehle, New Orleans, February 2001.
- Electrochemical Society (ECS) Fellow Award, 2000.
- NACE Fellow Award, (First Group of Fellows) 1993.
- NACE T.J. Hull Award, for outstanding contributions to NACE in the field of publications, Corrosion '92.
- Distinguished Alumnus, The Ohio State University, College of Engineering, April, 1989
- Willis Rodney Whitney Award from NACE for Outstanding Contributions to Corrosion Research, 1980
- Research in Progress meeting of NACE: special award (1979) for organizing the first conference
- National Academy of Engineering, 1978
- International Nickel Professor of Corrosion Science and Engineering, 1971-1976
- ASM Fellow, (First Group of Fellows) 1975
- College of Engineering awards for achievement (three awards) 1966, 1969, and 1970
- Ohio ASEE Award for Innovative Teaching, 1975
- Delta Chapter of the Society of Phi Zeta, the Honorary Veterinary Society, 1973
- Tau Beta Pi, Sigma Xi, Phi Eta Sigma at OSU by 1957

Society Memberships, Present

- American Association for the Advancement of Science
- American Concrete Institute
- American Institute of Chemical Engineering
- American Institute of Metallurgical Engineers
- American Society for Metals
 - Corrosion Oxidation Committee, chairman, 1973
 - Editorial Policy Committee, 1979-1981
- American Society for Testing and Materials
- Electrochemical Society
 - Corrosion Division
 - Secretary-treasurer, 1972-1973
 - Vice chairman, 1974-1975
 - Chairman, 1976-1977
- National Association of Corrosion Engineers
 - Research Committee, 1969-1981; 1994 - Present
 - Vice chairman, 1972
 - International Relations Committee, 1973-1981
 - Honors and Awards Committee, 1999 - Present

Society Memberships, Past

- American Nuclear Society
- Federation of Materials Society
 - Conservation Committee, chairman, 1978-1981
 - Committee to Develop a Materials Collection with the Smithsonian Institution, 1978-1981

Accomplishments as Dean of the Institute of Technology, University of Minnesota

- Co-founded and co-developed major collaborative linkages between the Institute of Technology and the community through the Minnesota High Technology Council, Minnesota Wellspring, and the Alliance for Science. Outside collaborating organizations included technological, banking/financial, Governor and Governor's Office, Legislative, Labor Unions, public sector, K-12 schools, liberal arts colleges in the Minnesota region, and other colleges within the University.
- Organized or co-organized, with appropriate faculty, the following collaborative University-community (industry) centers:
 - Charles Babbage Institute
 - Microelectronic and Information Sciences Center (MEIS)
 - Corrosion Center
 - Productivity Center
 - Institute for Mathematics and Its Applications (IMA)
 - Biotechnology Center
- Organized development program for the Institute of Technology: raised \$12 million from private sources for the Institute of Technology.
- Organized and initiated the Corrosion Center at the Institute of Technology and brought funds to the University of Minnesota at the rate of \$1 million per year starting in 1979. Continuous funding to 1987 by Department of Energy.
- Chair of University of Minnesota Consolidated Fund Drive, 1982.

University Participation at Ohio State University

- Responsible for \$6 million in research income at Ohio State University including largest industrial grants obtained by OSU professor: Edison Electric Institute, \$1 million in 1972: \$1.7 million in 1975 from Electric Power Research Institute: \$2.3 million in 1978 from Electric Power Research Institute
- Teaching and Learning Task Force, 1970-1974
- University Research Committee, 1969-1972
- College of Engineering Research Committee, 1969-1973 and 1978-1979
- Ad Hoc Faculty Committee for Development of Recreation Facilities, 1969-1972
- Organized joint program with English Department to develop direct teaching of English in engineering classes, 1974-1978
- University Committee on Patents and Copyrights, 1973-1975
- Co-organizer of joint seminar program between History and Metallurgical Engineering Departments, 1973-1978
- Member, Bio-Engineering Coordinating Committee, 1971-1978
- Developed Fontana Research Center at The Ohio State University
- Developed research group of approximately 40 which included: full-time research staff, professional co-workers, senior technicians, visiting scientists, industrial fellows, post doctoral students, graduate students, undergraduate assistants, administrator, and secretaries. Built laboratories including \$1 million of high pressure high temperature electrochemical equipment.
- Research Areas:
 - Corrosion and passivity
 - Hydrogen embrittlement
 - Stress corrosion cracking
 - Corrosion fatigue
 - Bio-materials
 - Fracture
 - High pressure high temperature electrochemistry studies
 - Surface chemistry including Auger analysis, ellipsometry, ion scattering
 - Nuclear metallurgy
 - Analysis of failures
- Also conducted interdisciplinary research program with Department of Veterinary Medicine and Department of Orthopedics on materials for orthopedic implants

College Teaching at Ohio State and University of Minnesota

- Corrosion engineering and science
- Materials selection
- Analysis of failures
- Nuclear metallurgy
- Combined 'In Situ' English with Department of English
- Materials science

Post Graduate Education (Short Courses) : Organizer of the Following:

- Corrosion of Engineering Materials Short Course given at OSU, 1966-1979, given seven times.
- Stress Corrosion Cracking Short Course given at OSU, 1967-1979, given four times
- Corrosion Short Courses given on site at International Nickel, Olin Metals, Convair, and General Electric
- Corrosion Short Course sponsored by AIChE twice per year through 1985
- Advanced Aqueous Corrosion Short Course given at OSU in 1968
- Chemical Stability of Engineering Materials Short Course given twice per year for UCLA and for the Continuing Education Institute through 1979
- Seminars for Electric Power Research Institute:
 - Inconel, 1974
 - Condenser, 1975
 - Decontamination, 1975
- Failure Analysis Course given at General Electric, Schenectady, 1971-1974

General Professional Activities and Accomplishments

- Chairman and organizer of first Research in Progress Program, NACE, 1967
- Editor, *Corrosion Journal*, 1973-1979
- Co-founder and co-editor with M. G. Fontana of *Advances in Corrosion Science and Technology*, Plenum Press, 1970-present
- Chairman, U.S.A. Corrosion Delegation to U.S.S.R. in November 1975
- Chairman and founder, Corrosion Advisory Committee (International, University, Industry, Utilities, Suppliers, Federal Government), Electric Power Research Institute, 1974-1980
- Chairman, Advisory Panel, Metallurgy Division, National Bureau of Standards, 1975-1977
- Member, Advisory Panel for Materials Research, National Bureau of Standards, 1976-1978
- Chairman and organizer of International Conferences:
 - Fundamental Aspects of Stress Corrosion Cracking, OSU, 1967
 - Localized Corrosion, Williamsburg, VA, 1971
 - Corrosion Fatigue: Chemistry, Mechanics, and Microstructures, University of Connecticut, 1971
 - High Temperature High Pressure Electrochemistry of Aqueous Solutions, University of Surrey, England, 1973
 - Stress Corrosion Cracking and Hydrogen Embrittlement of Iron Base Alloys, Firminy, France, 1973
 - Materials Problems and Research Opportunities in Coal Conversion, OSU, 1974
 - US-Japan Meeting on Passivity and Its Breakdown of Iron and Iron Base Alloys, Honolulu, 1975
 - First U.S.-Japan Symposium on Corrosion Problems in Light Water Reactors, Mt. Fuji, Japan, 1978
 - Reliability of Materials for Solar Energy Systems, Solar Energy Research Institute, Golden, Colorado, 1978
 - Improving the Understanding and Control of Corrosion on the Secondary Side of Steam Generators, Airlie Conference Center, Airlie, Virginia, October, 1995.
- Member, Editorial Board of *Surface Science Magazine*, 1979-1984
- Member, Advisory Committee to Sandia Laboratory on extraction of energy from magma sources
- Member, National Research Council Committees:
 - Panel on Review and Evaluation of Alternative Chemical Disposal Technologies, 1995-1997
 - Isolation Plant in Sweden, 1979-1982
 - WIPP - Panel on Waste Isolation Pilot Plant, 1979-1985
 - Shipboard Incinerator Materials Development, NRC, 1975-1977, chairman
 - Committee of the National Academy of Science to study above-ground storage of radioactive waste, 1974-1976
 - KBS-2 - Panel on Evaluation of the KBS-2 Waste

- Argonne Corrosion Center, Argonne National Laboratory, Advisory Committee, 1980-1981
- Organizing Committee for International Conference on Surface Effects in Crystal Plasticity, Hohegeiss, Germany, 1975
- Chairman of U.S.-U.S.S.R. Corrosion Working Group under the U.S.-U.S.S.R. Cooperative Agreement for Science and Technology, 1974-1978
- International Council on Alloy Phase Diagrams, Joint ASM-NBS Committee appointed 1978-1985

Publications

List of publications available on request

- Edited Volumes - 23
- Review Articles - 39
- Research Articles - 126
- 91 Technical Reports for various national and international government organizations including DOE and EPRI
- Editorials in Corrosion Journal- 32
- Patent - 1