

International Pump Users Advisory Committee



Dara W. Childs has been Director of the Turbomachinery Laboratory since 1984 and holds the Leland T. Jordan Chair in Mechanical Engineering at Texas A&M University. He received B.S. and M.S. degrees (Civil Engineering, 1961, 1962) from Oklahoma State University, and his Ph.D. (Engineering Mechanics, 1968) from the University of Texas. He was named an ASME Fellow in 1990, and received ASMEs Henry R. Worthington Medal in 1991.

Dr. Childs' expertise is in dynamics and vibrations, with an emphasis in rotordynamics. He has conducted research and engineering projects for NASA, DOD, and private firms. Current research includes: high-pressure testing honeycomb and hole-pattern gas damper seals; testing high-pressure laminar oil seals; force measurements in magnetic bearings using fiber-optic strain gauges.

Dr. Childs has authored numerous reviewed publications related to rotordynamics and vibrations, and the book, *Turbomachinery Rotordynamics*. He is presently completing a new dynamics book entitled, *Dynamics in Engineering Practice*.



Ronald B. (Ron) Adams is Global Portfolio Manager, HPI, with Sulzer Pumps, in Houston, Texas. He has been with Sulzer since 1991 and has held various sales management and alliance management positions. Previously, he was with Ingersoll-Rand Pumps for almost 19 years.

Paul W. Behnke is Principal Engineer with Bechtel Power Corporation, in Frederick, Maryland. He is responsible for technical aspects of rotating equipment procurement, installation, startup, and operations. In past positions, he has successfully led a multiplant business unit operations through dramatic growth and business operations restructuring; led the consolidation and restructuring of selected prejoint venture assets; improved customer service, safety, and asset management by aggressively implementing ISO 9001 quality systems and Six Sigma processes; developed new products using concurrent engineering teams and product platform strategies. Mr. Behnke has over 23 years' of rotating equipment engineering experience in the electric power, water resources, oil production, hydrocarbon processing, and general industry market segments.

Mr. Behnke holds a BSME from Rutgers University and an MBA from Lehigh University. He is a registered Professional Engineer in the State of New Jersey and in the Commonwealth of Pennsylvania. He has been awarded two U.S. patents.



James M. (Jim) Blanding is a Senior Consultant in the Engineering Mechanics Group in the DuPont Company, in Houston, Texas. His consulting primarily involves plunger and plunger/hydraulic diaphragm pumps and compressors in process and metering applications. In these and related process systems, Dr. Blanding specializes in diagnostic measurements, online remote condition monitoring, and performance analysis. To complement this experimental work, he also performs detailed computational modeling of pump and compressor performance, rapid transients in process gas and control systems, and pressure pulsation.

Dr. Blanding received B.S. and M.S. degrees (Mechanical Engineering) from Virginia Tech before joining Union Carbide in 1976 as a Consultant in acoustics. He returned to Virginia Tech in 1978 for a Ph.D., as instructor on the Faculty of Mechanical Engineering teaching Mechanical Vibrations and other undergraduate courses. Dr. Blanding joined DuPont in 1981.

Dennis G. Bowman is a Consulting Engineer with Alfred Conhagen, Inc., in La Marque, Texas, a manufacturer and refurbisher of large rotating equipment, including pumps, serving the power utility and oil refining and pipeline industries. He has 29 years of industrial experience in centrifugal pump design, analysis, and troubleshooting. Mr. Bowman has designed pumps for nearly all safety-related services in PWR type nuclear power stations and performed the only full scale, full speed, full load flow visualization study of cavitation (8000 bhp per stage) boiler feed pumps.

Mr. Bowman has a BSME degree from California State University, Pomona, and is a registered Professional Engineer in the State of California. He has authored technical papers for ASMEs Fluid Machinery Division and Texas A&Ms International Pump Users Symposium, and has been granted patents for unique pressure boundary joint designs and fabrication techniques.



Gary Daileda is currently Director of Operations Services for TEPPCO, in Houston, Texas. Since joining TEPPCO in 1982, he has held a variety of positions in engineering, operations, maintenance, and business development. He is currently responsible for pipeline control, measurement, material control, and preventive/predictive maintenance for TEPPCO. He has been involved with numerous capacity expansion projects with TEPPCO, encompassing the hydraulic rerate of existing centrifugal pumps as well as the sizing and selection of new pumping equipment. As District Superintendent for Operations and Maintenance from mid-1989 through mid-1991, he was involved on a daily basis with field technicians responsible for maintenance and repairs to rotating equipment.

Mr. Daileda received a B.Sc. degree (Water Resources Engineering Technology) from Pennsylvania State University.



William A. (Alan) Evans is the Global Business Development Manager for the Commercial Water Markets for the A.W. Chesterton Company, in Groveland, Massachusetts. He has more than 24 years of experience working with various types of rotating equipment including pumps, agitators, turbines, compressors, and drives. Prior to joining Chesterton, Mr. Evans was a Rotating Equipment/Reliability Engineer in the chemical process/utilities industry for more than 14 years.

Mr. Evans holds an MBA (High Technology Management) from Northeastern University, a B.S. degree (Mechanical Engineering Technology) from Rochester Institute of Technology, and an AAS degree (Mechanical Engineering) from Pennsylvania State University. He is a member of STLE, Chairman of the Seals Technical Committee, and sits on the International Pump Users Symposium Advisory Committee.



Bruce E. Freeland is Vice President of Engineering for SPX Process Equipment, headquartered in Delavan, Wisconsin. He is responsible for all product and technology development for mixers, sanitary pumps and valves, and metering pumps produced under the Lightnin, Waukesha Cherry-Burrell, and Bran & Luebbe brand names. His past experience includes management responsibility for mixer product development at Lightnin and product and market development of pumping equipment while working for Goulds Pumps, in Seneca Falls, New York.

Mr. Freeland has presented various technical papers in the past and has been a member of API, serving on Task Forces focused on pumping equipment (610, 685). He is currently an Advisory Committee member for the International Pump Users Symposium.

Mr. Freeland received his B.S. degree (Mechanical Engineering) from Clarkson University and is a registered Professional Engineer in the State of New York.



Herman A.J. Greutink, formerly Vice President and Technical Director, is now Consultant to Johnston Pump Company, in Brookshire, Texas. Mr. Greutink has demonstrated his engineering expertise on large vertical pump projects worldwide, and he is internationally acknowledged as one of the pump industry's long standing experts on vertical pump design, testing, and application. He frequently conducts pump seminars for the engineering personnel of customers and for consulting and construction firms throughout the world.

He was educated at the Mechanical Engineering College in Enschede, The Netherlands. From 1951-58, Mr. Greutink was Project Engineer for Aramco, Oil Handling Facilities, Dhahran, Saudi Arabia. Since 1958, he has been in engineering management at Johnston Pump Company. He is a member of the Hydraulic Institute and ASME.



Kerry F. Gunn is currently a Rotating Equipment Technologist at Sterling Chemicals, Inc., in Texas City, Texas. He is involved in technical support for machinery repair; troubleshooting of rotating equipment; and design, selection, and installation of new machinery. Prior to his current position, Mr. Gunn worked for five years at Quantum Chemicals Houston Plant as an Area Maintenance Engineer and Project Engineer. Previously, Mr. Gunn was a Senior Research Engineer at Exxon Research and Engineering for nine years. He participated in design, construction, and operation of synthetic fuels pilot plants.

Mr. Gunn received a B.S. degree (Mechanical Engineering, 1975) from Oklahoma University and an M.S. degree (Mechanical Engineering, 1977) from Purdue University. He is a member of the Vibration Institute and ASME.



Thomas D. (Tom) Hess, Jr., is the Group Leader in the Rotating Equipment Reliability Group at Premcor Delaware City Refinery. He is responsible for improving reliability and reducing life-cycle cost for the machinery in the refinery. His primary activities include mentoring and training, participating in OEMI (operation, engineering, maintenance, and inspection) teams, risk-based decision making, root cause failure analysis, vibration analysis, and reviewing and developing procedures. Prior to joining Premcor, Mr. Hess worked for the ARCO Chemical central engineering group providing consulting services for ARCO facilities worldwide, Bently Nevada as a field vibration analyst, and Philadelphia Gear as a Test Engineer and Staff Engineer.

Mr. Hess has a B.S. degree (Mechanical Engineering) from Villanova University. He is a member of ASME, the Vibration Institute, and is a registered Professional Engineer in the Commonwealth of Pennsylvania.



Judy E. Hodgson is a Pump Consultant in the Rotating Machinery Group in Engineering at DuPont, in Wilmington, Delaware. Her specialty is modeling and analyzing pumping systems. She has been a pump consultant since 1997. Prior to that, she had project, maintenance, and research and development assignments with DuPont.

Ms. Hodgson received her B.S. degree (Mechanical Engineering, 1991) from Penn State University.



Michael B. Huebner is a Staff Engineer in the Flow Solutions Division of Flowserve Corporation, in Deer Park, Texas. He has more than 20 years' experience in the design of mechanical seals, centrifugal and positive displacement pumps, and fluid conditioning equipment. For Flowserve, he has served in design, testing, and application functions in both the U.S. and Europe.

Mr. Huebner received his B.S. degree (Engineering Technology) from Texas A&M University. He is a member of the International Pump Users Symposium Advisory Committee and the API 682 Task Force.



Michael W. Johnson is a Pipe Stress Engineer in the Reliability Engineering Department of Reliant Energy, in Houston, Texas. He has more than 20 years of experience and is responsible for high energy piping and ISI programs at Reliant.

Mr. Johnson graduated from the University of North Dakota (1980) and is a registered Professional Engineer in the State of Texas.



John P. Joseph II is an independent consultant with Rotating Equipment Systems Technical Associates, in Houston, Texas. He was previously with BP Amoco where he provided technical and maintenance support for rotating equipment systems to existing asset organizations in BP Amoco, and to Project Management on new projects. Prior to that, Mr. Joseph was with the Amoco Petroleum Products Refinery, in Texas City, Texas. He supervised the rotating equipment engineers and the rotating equipment specialists for the refinery. Mr. Joseph spent six and one half years as Superintendent of Central Shops and three years in Amoco's Refining and Transportation Engineering Department, in Chicago, Illinois. Previous assignments at the Amoco Texas City refinery also included the Rotating Equipment Consulting Group, the Project Engineering Group, and as a Maintenance Engineer on the Hydrocracking Unit.

Mr. Joseph received his B.S. degree (Mechanical Engineering, 1972) from the University of Texas at El Paso.



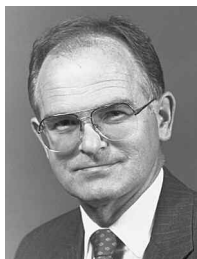
Julien LeBleu, Jr., is the Principal Engineer for Rotating Equipment for Lyondell Chemical, in Lake Charles, Louisiana. He is responsible for all rotating equipment in the Lake Charles facility and has more than 30 years of experience in the field of rotating equipment. He has worked for General Electric Company as a technical director for the installation and maintenance of large steam turbine and generator sets. Mr. LeBleu is a licensed aircraft mechanic and has worked on both reciprocating and jet aircraft engines. He is a member of the International Pump Users Advisory Committee, has authored several articles, and has lectured at Pump Symposia.

Mr. LeBleu received his B.S. degree from the University of Florida (1974).



William R. (Bill) Litton is the Pump Initiative Manager with Magellan Midstream Partners, LP, in Tulsa, Oklahoma. He is an experienced professional engineer with 25 years of experience in the petroleum industry. He has ability and experience in mechanical equipment, prime mover economics, power optimization, and pipeline system hydraulics. Mr. Litton also has project engineering ability and experience in handling pipeline expansions, pipeline pump stations, refineries, fractionators, gas and processing facilities and crude oil, refined products, NH₃, and propane terminals (brine cavern and excavated caverns). He also has experience in maintaining mechanical equipment company-wide to provide reliable and economical service. This includes rerating of pumps and pump modifications to reduce resonant and nonresonant vibration levels.

Mr. Litton has a B.S. degree (Mechanical Engineering, 1979) from Kansas State University and a B.S. degree (Mathematics, 1978) from Emporia State University. He is a registered Professional Engineer in the State of Oklahoma.



William J. (Bill) Mabe is the Director of Technology Development and Quality Assurance for Sundyne Corporation, in Arvada, Colorado. He is primarily responsible for coordinating technology and product development for Sundyne's business units. Mr. Mabe joined Sundyne in 1974 as a Senior Engineer involved in high speed centrifugal pump design. Previous turbomachinery experience includes six years at Rocketdyne, Liquid Rocket Division of Rockwell International, where he was a member of the technical staff responsible for the analysis and design of the space shuttle turbo pumps. He has several patents related to pumping equipment.

Mr. Mabe holds a B.S. degree (Mechanical Engineering) from the University of Missouri at Rolla and a Masters of Business Administration and Technology Management from the University of Phoenix.



Vernon L. (Vern) Maddox, Jr., is Senior Engineering Advisor with Equistar Chemicals LP, Channelview, Texas. In this capacity, he serves as a consultant to all Equistar facilities on machinery engineering, condition monitoring, and vibration analysis for new and existing equipment. Mr. Maddox also provides services to new projects in the area of equipment selection, specifications, and installation and startup of rotating and reciprocation equipment. He has 39 years of experience in machinery engineering, troubleshooting, and condition monitoring. Prior to his current assignment, he was in charge of reliability engineering and condition monitoring operations at the Equistar facilities at Clinton, Iowa, and LaPorte, Texas.

Mr. Maddox has a B.S. degree (Mechanical Engineering) from the University of Texas, Austin. He is a member and former Director of the Vibration Institute and is a registered Professional Engineer in the State of Texas.



William D. Marscher is President and Technical Director for Mechanical Solutions, Inc., in Parsippany, New Jersey. He has held senior positions at Dresser Pump, Pratt & Whitney, and Concepts NREC, and founded Mechanical Solutions Inc. in 1996. He has spent his career of 33 years involved in the design, development, and troubleshooting of pumps and all kinds of turbomachinery. His capabilities and experience include finite element analysis, rotordynamic analysis, experimental modal analysis, vibration testing, predictive maintenance, and the mechanical design of fluid systems. His machinery vibration test procedures won the Dresser Creativity Award, and his rotor bearing rub analysis method won the ASLE Hodson Award. He has authored and coauthored chapters for seven handbooks, and is coauthor of the book, *Centrifugal Pumps*, published by Oxford University Press.

Mr. Marscher has BSME and MSME degrees from Cornell University, where he was a NASA Fellow, and an M.S. degree from RPI.



Gerald L. (Jerry) Morrison is the Nelson-Jackson Professor of Mechanical Engineering at Texas A&M University. He received his Ph.D. degree from Oklahoma State University (1977). He is a member of various societies including: ASEE, Associate Fellow in AIAA, Fellow in ASME, Pi Tau Sigma, and Tau Beta Pi.

Dr. Morrison's research interests are in turbulent fluid flow and instrumentation. His research in coherent structures in turbulent flows has enabled him to develop expertise in hot wire anemometry, laser Doppler anemometry, acoustic measurements, and spectral analysis, and in other conditional sampling techniques.

Dr. Morrison manages a program to study labyrinth seals. This includes empirical and analytical schemes to predict leakage rates with experimental verification of the two schemes, and the use of a 3-D laser Doppler anemometer to measure the flowfield inside an actual seal. He is also active in the research area of flow fields inside centrifugal pumps and turbochargers.



Lev Nelik is President of Pumping Machinery, LLC, in Norcross, Georgia. He has more than 25 years of engineering, manufacturing, management, sales, and field experience in the pump industry. He has previously worked with Ingersoll-Rand, Goulds Pump, Liquiflo, and Roper Pump. Dr. Nelik is an International Pump Users Symposium Advisory Committee member, a former Associate Technical Editor of the *Journal of Fluids Engineering*, and as Associate Editor of *Water and Waste Digest*. He is a full member of ASME and APICS certified.

Dr. Nelik is a graduate of Lehigh University with an M.S. degree (Manufacturing Systems) and a Ph.D. degree (Mechanical Engineering). He is a registered Professional Engineer, and he has published over 50 papers, including a book, *Centrifugal and Rotary Pumps: Fundamentals with Applications*, and a chapter on pumps for the *Encyclopedia of Chemical Technology*. He has traveled extensively and consulted worldwide on pumps reliability, design, and pump/system analysis.



Vinod P. Patel is a Senior Principal Machinery Engineer, Machinery Technology, for KBR, in Houston, Texas. He has been with KBR for 30 years. In his current assignment, he is responsible in the preparation and auditing of specifications, equipment evaluation, engineering coordination, and testing and installation startup of rotating and special equipment. He has worked in the various application of rotating machinery in the petrochemical and refinery processes including ammonia, LNG, olefins, cat-cracking, and hydrotreating for domestic and international projects.

Mr. Patel received B.S. and M.S. degrees (Mechanical and Metallurgical Engineering) from Maharaja Sayajirao University of Baroda, India, and Youngstown University, respectively. He is a registered Professional Engineer in the State of Texas.



Eugene P. (Gene) Sabini is the Director of Technology for ITT Industries, Fluid Technology Group, in Seneca Falls, New York. He is responsible for applied research and hydraulic design of all new products and field rerates. Other responsibilities include testing, FEA, CFD, rotordynamics, rapid prototyping, and condition monitoring. Mr. Sabini was previously Manager of Energy Engineering Design with Goulds. He was responsible for both the product engineering and the mechanical/hydraulic design and testing of the energy related double suction and multistage API pumps.

Mr. Sabini has 32 years of experience in the pumping industry including design and development of many centrifugal pumps for the chemical, API, power utilities, and municipal industries. He spent 25 years with Worthington Pump designing, engineering, and testing custom centrifugal pumps from both a mechanical and hydraulic standpoint.

Mr. Sabini received a BSME (1968) and M.S. (1975) degree from Stevens Institute of Technology.



Bruno Schiavello has been Director for Fluid Dynamics at Flowserve Pump Division, Technology Department, in Phillipsburg, New Jersey, since 2000, and previously served in the same position with Ingersoll Dresser Pump Company. He started in the R&D Department of Worthington Nord (Italy), joined Central R&D of Worthington, McGraw Edison Company, and then Dresser Pump Division.

Mr. Schiavello was co-winner of the H. Worthington European Technical Award in 1979. He has written several papers and lectured at seminars in the area of pump recirculation, cavitation, and two-phase flow. He is a member of ASME, AIAA, Societe Hydrotechnique de France, and the International Association for Hydraulic Research. He has served on the International Pump Users Symposium Advisory Committee since 1983.

Mr. Schiavello received a B.S. degree (Mechanical Engineering, 1974) from the University of Rome, and an M.S. degree (Fluid Dynamics, 1975) from Von Karman Institute for Fluid Dynamics, Rhode St. Genese, Belgium.



John W. Silcott is an Engineering Associate with Celanese Ltd. working in the corporate Center of Excellence for rotating equipment and is located in Houston, Texas. His primary responsibilities are rotating equipment reliability and technical support, to include project review and support, consulting, problem solving, vibration analysis, lubrication, predictive/preventive maintenance programs and Best Practices. He worked for Dow Chemical from 1970 to 1974 and joined Celanese in 1974 where he has worked in technical and supervisory roles associated with rotating equipment.

Mr. Silcott received a B.S. degree (Mechanical Engineering, 1970) from New Mexico State University. He is a member of the Vibration Institute, ASME, Chairperson of the Advisory Committee for the Industrial Maintenance Technology program at Texas State Technical College, and a member of the International Pump Users Symposium Advisory Committee since 1987.



Joseph A. (Joe) Silvaggio, Jr. is Manager, Pump Projects and Engineering at Siemens Demag Delaval Turbomachinery, Inc., Trenton, New Jersey, and has been with them since 1968. His past experience at Demag Delaval includes the areas of aerodynamics, flow analysis, seal development, design of centrifugal compressor stage elements, centrifugal pump design and flow analysis, boiler feedpump design and analysis, and testing of steam turbines.

Mr. Silvaggio is a member of Sigma Tau and Pi Tau Sigma. He is also an active member of ASME and has held several offices in the Trenton, New Jersey, section. At present, he is on two ASME Performance Test Code Committees and is a member of the Board on Performance Test Codes.

Mr. Silvaggio holds both B.S. and M.S. degrees (Mechanical Engineering) from the University of Pennsylvania. He has written and coauthored numerous technical publications, and is a member of the International Pump Users Symposium Advisory Committee.



John B. Stokes is a Principal Machinery Engineer for Lyondell-Citgo Refining LP, in Houston, Texas. In his current assignment, he provides technical support for the design, installation, operation, and maintenance of the machinery in the FCCU and Oil Movements areas.

Mr. Stokes received a BSME from Louisiana Tech University in 1978. He is a member of ASME and is a registered Professional Engineer in the States of Louisiana and Texas.



Dewey W. Stump is employed with Frametome ANP, Inc., in Lynchburg, Virginia. He retired from Duke Power Company where he was a Senior Production Specialist. He was assigned to the McGuire Nuclear Station in the Maintenance Execution Support group.

His duties at Duke included technical oversight, parts specification, and repair for rotating equipment maintenance activities. He was responsible for reactor coolant pumps and motors, multistage pumps, compressors, and general pump and motor maintenance. He was responsible for root-cause analysis, mechanical seal specifications, and failure analysis.

Prior to joining Duke Power Company, Mr. Stump worked as an assistant to the plant Maintenance Manager at a large brewing company. He developed and set up the preventive maintenance program and initiated the company's lubrication and spare parts program. He is a member of the *Pumps & Systems* Magazine User Advisory Team.



Joseph M. Thorp is an Engineering Specialist within the Technical Services Department of Aramco Services Company (ASC), in Houston, Texas. He has provided technical support for Saudi Arabian Oil Company (Saudi Aramco) projects in Europe and North America, along with supporting field activities during interim assignments in Saudi Arabia as part of the Consulting Services Department. Mr. Thorp is Saudi Aramco's designated representative to the American Petroleum Institute Subcommittee on Mechanical Equipment that includes Vice Chairmanship of API 610 (Centrifugal Pump) and Chairmanship of API 682 (Seals). He is the API mechanical equipment representative to the International Standards Coordinating Committee who interfaces with ISO, headquartered in Europe. Prior to joining ASC, he worked with Phillips Petroleum Company.

Mr. Thorp holds a B.S. degree (Mechanical Engineering) from Michigan State University and an MBA from the University of St. Thomas. Mr. Thorp is a registered Professional Engineer in the State of Texas.



Roger S. Turley is the Director of Product Management at Flowserve Corporation, Flowserve Pump Division, and is based in Dayton, Ohio. He has 16 years' experience in the pump industry.

Mr. Turley received B.S. and M.S. degrees from Brigham Young University. He has received patents for innovations in pump design and has published several articles in leading industry publications.



Bruce Weber is the Operations Manager for Best Equipment, in Houston, Texas. As Operations Manager, his duties include supervision of the pump repair facility, consulting with clients concerning pumping systems, and pump troubleshooting. Other areas include failure analysis, pump modifications, bearings, high pressure mechanical seals, and lubrication systems. Prior to joining Best Equipment, Mr. Weber was associated with Koch Hydrocarbon, in Medford, Oklahoma, for 18 years. His responsibility as Maintenance Supervisor included 10,000 miles of pipelines that employed 2300 pumps. He also served as a consultant for Koch's four light hydrocarbon processing plants.

Mr. Weber is currently enrolled at the University of Oklahoma, working toward a B.S. degree.



Thomas P. (Tom) Will, Jr., is a Senior Staff Engineer at the ConocoPhillips Bayway Refinery, in Linden, New Jersey. He is responsible for maintenance support, troubleshooting, and reliability improvement of rotating equipment from small pumps to major turbomachinery. Prior positions include Executive Energy Consultant with Conservation Services Corporation of Denville, New Jersey (1986 to 1987), and Senior Staff Engineer with Exxon Research & Engineering Company in Florham Park, New Jersey (1970 to 1986). With CSC, Mr. Will had responsibility for energy audits and application of energy conservation equipment to motor-driven machinery in commercial, institutional, and industrial facilities. With Exxon, he had responsibility for research, design, selection, commissioning, and operation of process machinery with long-term field assignments in the United States, Venezuela, Libya, and Thailand. Mr. Will is a member of ASME, AEE, editorial quality judge for Plant Engineering magazine, and a registered Professional Engineer in the State of New Jersey.

Corresponding Members

César Luis Fernández Valdés
Repsol YPF
Madrid, Spain

Andreas Schachenmann
Sulzer Pumps Ltd.
Winterthur, Switzerland