Turbomachinery Symposium 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.

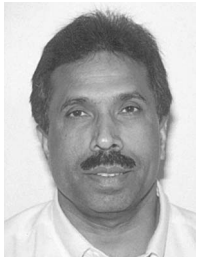
Dr. Childs has authored numerous reviewed publications related to rotordynamics and vibrations, and the book, *Turbomachinery Rotordynamics*. He is presently completing a new dynamics book entitled, *Dynamics in Engineering Practice*.

Richard D. Beck is with Meridium, Inc., in Roanoke, Virginia. Previously he was the Equipment Reliability Group Supervisor at Chevron Phillips Chemical Company, Cedar Bayou Plant, in Baytown, Texas. He was employed with Chevron since May 1980, primarily in the equipment inspection and machinery reliability fields. Mr. Beck served as the team leader of the Chevron Phillips Chemical Machinery Best Practice team and was one of the implementation coordinators for a companywide reliability software system. His previous Chevron assignments included work at the Pascagoula, Mississippi, refinery; the Belle Chasse, Louisiana, chemical plant; and the Maua, Brazil, chemical facility.

Mr. Beck completed his undergraduate studies at Mississippi State University (Education, 1979) and taught high school mathematics prior to his career with Chevron. He is the former chairperson of API 685 and is a current member of the Sealless Centrifugal Pump Task Force group.

Kenneth O. (Ken) Beckman is Chief Engineer of the Power Transmission Division of Lufkin Industries, Inc., in Lufkin, Texas. Since college graduation he has been in gear engineering with Lufkin Industries. He previously served as a Design Engineer in high-speed gearing, and in 1985 he was promoted to Chief Engineer responsible for the engineering on all gears including low-speed through high-speed, marine, and repair. Mr. Beckman has spent a considerable portion of his time working with users and service departments to solve gearing problems. The Quality Assurance Department and the Test Stand area were added to his responsibilities in 1998.

Mr. Beckman received a B.S. degree (Mechanical Engineering, 1972) from Montana State University. He is an active member of AGMA and API. He is currently on the Advisory Board for the University of Louisiana at Lafayette.

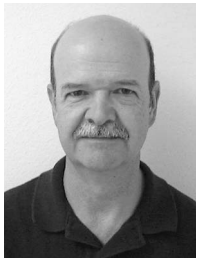


Gampa I. Bhat is Chief Machinery Engineer for ExxonMobil Chemical Company, in Baytown, Texas. As Lead Specialist, he acts as the focal point for the ExxonMobil Chemical Worldwide Machinery Network and is involved with the development of machinery strategies for new and upgrade projects. He is also involved in the selection, operation, maintenance, and troubleshooting of machinery systems. Before joining ExxonMobil, he worked as a Machinery Application Engineer for Union Carbide Corporation, in Charleston, West Virginia.

Mr. Bhat received his B.S. degree (Mechanical Engineering) from Karnataka University in India, and an M.S. degree from West Virginia College of Graduate Studies. He is a member of ASME.

Meherwan P. Boyce is Managing Partner of The Boyce Consultancy, in Houston, Texas. He has 40 years of experience in the turbomachinery field. His industrial experience covers 25 years from design of compressors and turbines to Chairman and CEO of Boyce Engineering International. His 15 years in academia include being Professor of Mechanical Engineering at Texas A&M University, and Founder of the Turbomachinery Laboratories and the Turbomachinery Symposium. Dr. Boyce has authored more than 100 technical publications and several books, including *Gas Turbine Engineering Handbook*. He has taught over 100 short courses globally attended by over 3000 students representing over 400 companies, and is a Consultant to the aerospace, petrochemical, and utility industries.

Dr. Boyce received a B.S. and M.S. degree (Mechanical Engineering) from the South Dakota School of Mines and Technology and the State University of New York, respectively, and a Ph.D. degree (1969) from the University of Oklahoma.



Steven Brewton is Manager of Mechanical Equipment for TXU Energy, in Dallas, Texas. He is responsible for the repair of major equipment that ships offsite for repair, and for the mechanical technical recommendations on fossil power plant equipment. He has worked for TXU Energy for 23 years and has held various positions including Manager of Equipment Repair, Manager of Maintenance Services, and Senior Engineer. He previously worked as a Plant Manager for the City of Bryan, Texas, and for Westinghouse Electric Corporation as a Field Service Engineer. As a Field Service Engineer, he worked with inspection, repair, and installation of steam turbines, mainly in Texas.

Mr. Brewton has a B.S. degree (Mechanical Engineering, 1972) from New Mexico State University. He is a member of ASME and is a registered Professional Engineer in the State of Texas.

John B. Cary is Vice President of Advanced Reliability Technologies, LLC, in Benicia, California. He consults on the development and application of streamlined reliability centered maintenance strategies. He has over 24 years of experience in the hydrocarbon processing and petrochemical industries, responsible for reliability improvement programs.

Mr. Cary was previously with Tosco Refining Company. He was instrumental in the development and implementation of a comprehensive computerized maintenance management system, and led development of the first computer-based data collection system for pipe thickness corrosion monitoring.

Mr. Cary is a 1974 graduate of Columbia College and received his B.S. degree from the University of San Francisco. He has authored and presented several technical papers. He is a member of the Turbomachinery Symposium Advisory Committee and the Vibration Institute.

Clifford P. (Cliff) Cook is with Texaco, Inc., in Bellaire, Texas. He is Chairman of the API RP 687 Task Force on Repair of Special Purpose Rotors. He is a Texaco Fellow, registered Professional Engineer in the State of Texas, Chairman of the API Subcommittee on Mechanical Equipment, and a member of the Texas A&M Turbomachinery Symposium Advisory Committee. Mr. Cook is a member of API 617 (compressors), 613 (SP gears), 677 (GP gears), 616 (gas turbines), and past member of API 684 (rotordynamics tutorial), 610 (pumps), 618 (reciprocating compressors) task forces.

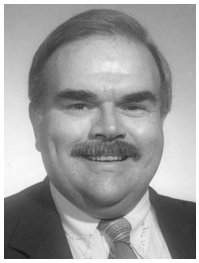
Mr. Cook has a B.S. degree from the U.S. Merchant Marine Academy, Kings Point, and an M.S. degree (Mechanical Engineering) from Lehigh University.

Roy E. Craddock III is a Senior Staff Machinery Engineer and the Maintenance Technical Services Leader for the Dow Chemical Company Texas City Operations, in Texas City, Texas. He is responsible for leading the diagnostic and maintenance activities for all critical equipment within Texas City Operations. Previously, Mr. Craddock was with Union Carbide Corporation's Central Engineering Division for 20 years, where his responsibilities included equipment specification and selection, installation, commissioning, and startup of critical equipment. He was also responsible for providing troubleshooting assistance to manufacturing locations and their process technology licensees.

Mr. Craddock has a B.S. degree (Mechanical Engineering) from West Virginia Institute of Technology, and is a registered Professional Engineer in the State of West Virginia. He is a Steering Committee member of the API Subcommittee on Mechanical Equipment and is the Chairman of the API RP-686 Task Force on Recommended Practices for Machinery Installation and Installation Design.

Thomas R. (Tom) Davidson is Area Maintenance Section Leader for Celanese Chemicals at their Clear Lake, Texas, facility. He joined Celanese in 1978. Through the efforts of his team of three area Team Leaders and two Planners, he is responsible for managing the overall maintenance activities for four production units and the plant utilities area. Prior to assuming his current position, he was Senior Rotating Equipment Engineer in the Clear Lake Plant, Maintenance Engineering Group.

Mr. Davidson received a B.S. degree (Mechanical Engineering, 1978) from the University of Houston. He is a member of the Turbomachinery Symposium Advisory Committee, ASME, NSPE, IMI, and the Vibration Institute. Mr. Davidson is a licensed Professional Engineer in the State of Texas.

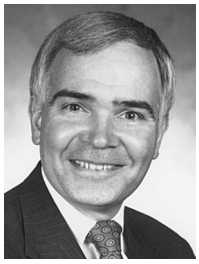


Michael J. Drosjack is member of the Rotating Equipment Engineering Department at Shell Global Solutions (US) Inc., in Houston, Texas. He is responsible for providing technical support for rotating and reciprocating machinery to Shell and Shell affiliated companies, worldwide, as well as commercial customers. Since joining Shell in 1975, he has had assignments on projects involving specification, evaluation, installation, and startup of machinery along with extensive field troubleshooting, particularly in the area of vibration measurement, vibration analysis, and rotordynamics.

Dr. Drosjack received his B.S. degree (Mechanical Engineering, 1970) from Carnegie-Mellon University, and his M.S. (1971) and Ph.D. (1974) degrees (Mechanical Engineering) from The Ohio State University. He is a member of ASME, the Vibration Institute, the Machinery Subcommittee of the Ethylene Products Committee, participates in API task forces, and has been a speaker and panelist for NPRA. He has been a Turbomachinery Symposium Advisory Committee member since 1986.

John R. (Johnny) Dugas, Jr., is Senior Technical Associate in the P&IP Department of E.I. duPont de Nemours and Company, Inc., in Orange, Texas. Since 1980, he has been assigned to the Technical Department of the ethylene manufacturing facility where he is involved in repair, troubleshooting, redesign, and specification of turbomachinery and other process equipment.

He has worked at DuPont since graduating from the University of Southwestern Louisiana with a B.S. degree (Mechanical Engineering, 1973). Previous activities with DuPont dealt with maintenance and construction of mechanical equipment including assignments with DuPont's Construction and Field Service Divisions. He is a registered Professional Engineer in the State of Texas.



William E. (Bill) Forsthoffer spent six years at the Delaval Turbine Company, as Manager of Compressor Project Engineering, where he designed and tested centrifugal pumps and compressors, gears, steam turbines, and rotary (screw) pumps.

Mr. Forsthoffer then joined the Mobil Research and Development Corporation. For five years, he directed the application, selection, design, testing, site precommissioning, and startup of the Yanbu Petrochemical complex in Yanbu, Saudi Arabia. Following that, he returned to MRDC and established a technical service program for Mobil affiliates to provide application, troubleshooting, and training services for rotating equipment. He left Mobil in 1990 to found his own company, Forsthoffer Associates, Inc., to provide training, critical equipment selection, and troubleshooting services to the refining, petrochemical, utility, and gas transmission industries.

Mr. Forsthoffer is a graduate of Bellarmine College with a B.A. degree (Mathematics) and from the University of Detroit with a B.S. degree (Mechanical Engineering).

Erwin A. Gaskamp is a Rotating Equipment Specialist with Bechtel Corporation in Houston, Texas. His present work involves application analysis, specification, selection, post order engineering coordination, and acceptance testing for rotating equipment on various projects. He has been involved with rotating equipment for more than 30 years, and has been with Bechtel Corporation since 1981. He has worked on more than 21 projects in the refining, petrochemical, chemical, mining, and cogeneration industries. He has had direct responsibility for application of large compressors, steam turbines, expanders, gas turbines, motors, and generators on projects around the world. He previously worked for M.W. Kellogg Company and Monsanto Company.

Mr. Gaskamp holds a Mechanical Engineering degree from Texas A&M University and is a member of the Turbomachinery Symposium Advisory Committee.

Merwin W. Jones is Senior Engineering Consultant for Thermal Cycles at Mirant Corporation in Aquasco, Maryland. In this position, he provides a variety of internal consulting services to the engineering and maintenance staffs at the company's facilities. Mr. Jones advises these groups on a wide range of issues related to the efficiency, reliability, and maintenance of equipment and systems within the power conversion areas of the power plants.

Since joining Mirant (formerly PEPCO) in 1972, he has been involved with modification or replacement of most equipment in the condensate, extraction, feedwater, cooling water, and turbine systems. He has written papers for the Electric Power Research Institute, the Edison Electric Institute, ASME, the Turbomachinery Symposium, and others.

Mr. Jones is a graduate of the Virginia Polytechnic Institute and State University with a B.S. degree (Mechanical Engineering). He is a member of ASME and is a registered Professional Engineer.

Terryl Matthews is a Senior Mechanical Engineering Associate with The Dow Chemical Company, Design and Construction, Houston, Texas. His responsibilities since joining Dow (1973), include specifications, technical support, mechanical and performance testing, consulting, and field assistance in the area of rotating equipment for Dow Chemical worldwide.

Mr. Matthews holds a B.S. degree (Mechanical Engineering, 1972) from the University of Houston. He is a member of ASME, a member of the ASME International Gas Turbine Institute's Industrial and Cogeneration Committee, a member of the API Committee on Refinery Equipment, and is a registered Professional Engineer in the State of Texas.

Scott C. McQueen is Manager of Turbines and Central Shop Division at Reliant Energy, in Houston, Texas. He has 15 years of experience with maintenance and repair of large turbines. Currently, he is responsible for all maintenance activities associated with steam turbines and combustion turbines on Reliant Energy's regulated side. He is also responsible for Reliant Energy's EDC Central Repair Shop. Over the years, Mr. McQueen has contributed a number of papers to various utility organizations including EPRI, the ASME IJPGC, Westinghouse Users Group Conference, and others. He is also a member of the EPRI utility advisory committee for steam turbine outage interval extension.

Mr. McQueen is a 1985 graduate of The University of Texas at El Paso with a B.S. degree in Mechanical Engineering.

S. Paul Mohan is a Principal Engineer at Williams Gas Pipelines-TRANSCO, in Houston, Texas. He is responsible for projects aimed at improving reliability, operability, and maintainability of pipeline compressor stations. Previously, at Dresser Clark, he was involved in extensive rotordynamics work and conducted tests on new bearing and seal designs for high pressure barrel compressors. For the next six years, he was with Exxon Chemical Company. He provided consulting assistance on equipment troubleshooting, vibration monitoring, and retrofit projects. He participated in the startup of Exxon's largest olefin plant. In 1982, he joined Transco and participated in the commissioning of the Great Plains Gasification Project.

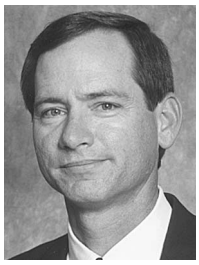
Mr. Mohan received his B.S. degree (Mechanical Engineering) from I.I.T. Madras, India, and an M.S. degree (Mechanical Engineering, 1972) from the University of Virginia. He has written several technical papers and is a member of ASME and the Vibration Institute.

Steven (Steve) O'Toole is Mechanical Integrity Consultant for Dynegy Midstream Services, the natural gas processing and marketing division of Dynegy, Inc., in Houston, Texas. His responsibilities include providing staff level technical support for natural gas processing facilities in mechanical design and reliability issues, and troubleshooting mechanical equipment. Mr. O'Toole is an advisor with the Maintenance Improvement Process and Root Cause Failure Analysis Program to identify high impact equipment and improve equipment reliability. He leads a team to incorporate a new computer maintenance management system throughout the company. Previous experience includes project engineering for Gulf Oil Company Solvent Refined Coal Liquifaction Pilot Plant, and Mechanical Design and Reliability Engineer for Warren Petroleum Company.

Mr. O'Toole has a BSME from the University of North Dakota, School of Engineering and Mines. He is a registered Professional Engineer and a member of ASME, the American Welding Society, and the National Association of Corrosion Engineers.

Robert X. Perez is a Rotating Equipment Staff Engineer in the Reliability Excellence group of Celanese Chemicals, in Bishop, Texas. He is a member of ASME, Vibration Institute, International Council for Machinery Lubrication, MLT Subcommittee, and the Texas A&M Turbomachinery Symposium Advisory Committee.

Mr. Perez has a BSME degree from Texas A&M University at College Station, and an MSME degree from the University of Texas at Austin. He is a registered Professional Engineer in the State of Texas.

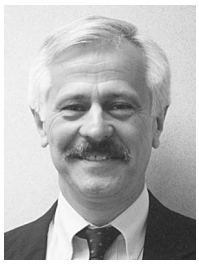


Peter C. Rasmussen is a Supervisor in the Gas & Facilities Division of ExxonMobil Upstream Research Company, in Houston, Texas. He is responsible for developing applications in the LNG and gas area as well as machinery support to the upstream companies. He began his career in machinery with General Electric as a Field Engineer installing and maintaining gas and steam turbines. Mr. Rasmussen joined Mobil in 1978 in the New Orleans E&P Operating Company as a Machinery Engineer and has since held several positions in engineering and operations. His work has included design, construction, and startup of offshore production platforms and LNG plants.

Mr. Rasmussen received his B.S. degree (Ocean Engineering, 1974) from Florida Atlantic University, Boca Raton. He is a registered Professional Engineer in the State of Texas, and is a member of the Turbomachinery Symposium Advisory Committee.

Charles R. (Charlie) Rutan is an Engineering Fellow for Lyondell/Equistar Chemicals, LP, at the Chocolate Bayou Chemical Complex, in Alvin, Texas. Initially, he was a Project Engineer for Monsanto Company, then moved into equipment specification, installation, startup, and problem solving. After Monsanto, Mr. Rutan worked for Conoco Chemicals, DuPont, and Cain Chemicals. He was a Mechanical Area Maintenance Manager at the Chocolate Bayou facility prior to being promoted to his present position.

Mr. Rutan received his B.S. degree from Texas Tech University (1973). He was appointed to the Texas Tech University Department of Mechanical Engineering Academy of Mechanical Engineers and is a member of the Turbomachinery Symposium Advisory Committee. He has been active in ASME, the Turbomachinery and the International Pump User's Symposia, the Southern Gas Compression Conference, the Hydraulic Institute, and AIChE.



Carroll (Chet) Stroh is Engineering Manager with TurboCare, Houston Facility, a division of Siemans Demag Delaval Turbomachinery Corporation. Mr. Stroh has over 30 years experience in the rotating equipment business. He started his career with Westinghouse Large Steam Turbine Division when it was located in Lester, Pennsylvania. While there, he was instrumental in bringing the results of their turbine research into the design process.

Mr. Stroh left Westinghouse to join DuPont and moved to their Beaumont, Texas plant, where he consulted on turbomachinery problems in plants throughout the Gulf coast. After five years in the field, he moved to Wilmington, Delaware to the DuPont Experimental Station where he developed his expertise in rotordynamics. Mr. Stroh spent the rest of his career with DuPont acting as a Consultant's Consultant and provided computer simulation of equipment to aid in the troubleshooting process.

Mr. Stroh has authored and coauthored several papers on rotordynamic behavior. He earned a B.S. degree, an M.S. degree, and did three years of post graduate work in Mechanical Engineering at the University of Pennsylvania. He also has a B.A. degree (Mathematics) from Lebanon Valley College. He is a member of Tau Beta Pi.

John M. Vance is Professor of Mechanical Engineering at Texas A&M University. He received his B.S. (Mechanical Engineering, 1960), M.S. (Mechanical Engineering, 1964), and Ph.D. (1967) degrees from the University of Texas.

Prior to joining Texas A&M (1978), Dr. Vance held positions at Armco Steel, Texaco Research, and Tracor, Inc., and developed a Rotordynamics Laboratory at the University of Florida. He is currently conducting research on rotordynamics, damper seals, and bearing dampers. He has published a book, *Rotordynamics of Turbomachinery* (John Wiley, 1988), and more than 50 technical articles and reports. Dr. Vance is consultant to industry and government and has held numerous summer appointments. He organized the annual short course for industry at Texas A&M on "Rotordynamics of Turbomachinery" and co-organized the biennial "Workshop on Rotordynamics Instability Problems in High Performance Turbomachinery." Dr. Vance is a member of ASME and ASEE, and is a registered Professional Engineer in the State of Texas.

Corresponding Members

Klaus F. Köncke
Siemens AG
Duisburg, Germany