

**DISCUSSION GROUP 1**  
**on**  
**TURBOMACHINERY OPERATION AND MAINTENANCE**

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**Charles R. (Charlie) Rutan, Coordinator**, is Senior Engineering Advisor, Specialty Engineering, with Lyondell Chemical Company, in Alvin, Texas. His expertise is in the field of rotating equipment, hot tapping/plugging, and special problem resolution. He has three patents and has consulted on turbomachinery, hot tapping, and plugging problems all over the world in chemical, petrochemical, power generation, and polymer facilities.

Mr. Rutan received his B.S. degree (Mechanical Engineering, 1973) from Texas Tech University. He is a member of the Advisory Committee of the Turbomachinery Symposium, and has published and/or presented many articles.

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**Rainer Kurz, Coordinator**, is Manager of Systems Analysis and Field Testing for Solar Turbines, Incorporated, in San Diego, California. His organization is responsible for predicting gas compressor and gas turbine performance, for conducting application studies, and for field performance tests on gas compressor and generator packages.

Dr. Kurz attended the University of the Federal Armed Forces in Hamburg, Germany, where he received the degree of a Dipl.-Ing. in 1984 and the degree of a Dr.-Ing. in 1991. He has authored numerous publications in the field of turbomachinery and fluid dynamics, is an ASME Fellow, and a member of the Turbomachinery Symposium Advisory Committee.

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**Mark Cooper** is a Principal Machinery Engineer with Lyondell Chemical Company, in the Central Machinery and Reliability Engineering Department, in Channelview, Texas. He has been involved for the past 14 years with machinery reliability, root cause failure analysis, and machinery design improvements for polymer, chemical, and olefins units within Lyondell Chemical Company.

Mr. Cooper received a B.S. degree (Mechanical Engineering) from Lamar University in (1991).

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**Darren P. Hebert** is a Senior Staff Engineer for the Shell Deer Park Refining Services Company, in Deer Park, Texas. He has 18 years of experience in the oil and petrochemical industry and has been involved with rotating equipment for the last 14 years. Mr. Hebert is presently assigned as the Rotating Equipment Team Leader for Major Projects/Engineering and Construction. In this role, he provides guidance to the organization regarding the specification, selection, and installation of rotating equipment.

Mr. Hebert received a B.S. degree (Mechanical Engineering, 1988) from Lamar University.

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**Roland Kaiser** joined Solar Turbines Incorporated, in San Diego, California, in November 2000. After getting acquainted with the design philosophy of Solar's compressor designs, he joined the Systems Analysis Group, where he is now supporting sales with compressor and gas turbine solutions. In 1994, he took on a Senior Design Engineer-Analyst position with Sulzer Bingham Pumps, in Portland, Oregon, which included design responsibilities for new products. In 1990, he joined the Mechanical Development Group of Sulzer Pumps Headquarters. He joined the Acoustic & Vibration Department of Sulzer Innotec in 1987, and took on activities in the areas of active noise suppression and vibration analysis and testing.

Mr. Kaiser graduated from Engineering College (HTL) in Winterthur, Switzerland, with a Diploma in Mechanical Engineering.

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**Jose (Joe) Moreno** is employed by Equistar Chemicals as a member of their Corporate Specialty Engineering Group in Channelview, Texas. He is a Principal Engineer with direct responsibility for the critical rotating machinery at the Channelview, LaPorte, Bayport, and Beaumont facilities in Texas. He has served in several technical support and advisory roles including specification, testing, and installation of critical machinery, shop and field repairs, equipment disassembly, overhaul and startup, failure analysis, and providing technical evaluations during due diligence reviews.

Mr. Moreno has a B.S. degree (Mechanical Engineering, 1989) from Texas A&M University and is a member of ASME.

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**Kris Olasin** is with Motiva Enterprises LLC, in Convent, Louisiana.

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## DISCUSSION GROUP 2

on

## VIBRATION MONITORING

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**Michael J. Drosjack, Coordinator**, is a Senior Principal in 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.

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**John R. (Johnny) Dugas, Jr., Coordinator**, 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.

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**Daniel G. (Dan) Hale** is a PPM Technician for the DuPont Ethylene Plant, Sabine River Works, in Orange, Texas. He is responsible for the periodic vibration monitoring in the ethylene cracking unit, tending the equipment, troubleshooting, making recommendations, and writing job orders. Mr. Hale has had four years in the electric motor overhaul and repair business, 22 years of millwright experience, and 13 years full-time vibration monitoring and diagnostics.

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**L.E. (Ed) Watson** is a consultant with E.I. DuPont de Nemours & Company, Inc., located in Houston, Texas. He works in the DuPont Engineering Technologies Division of DuPont Engineering. His responsibilities include the specification and repair of turbomachinery and other rotating equipment, vibration and stress analysis, predictive maintenance and equipment reliability improvement, process equipment application, and general engineering consulting on machinery and processes. Mr. Watson has been with DuPont for almost 27 years and works on capital projects and engineering support of plant operations. He previously worked as a designer for Lufkin Industries and as a production engineer with Humble Oil.

Mr. Watson has a B.S. degree from Lamar University and an M.S. degree from The University of Texas at Austin (both in Mechanical Engineering). He is active in the Vibration Institute and is a past chairman of both the Triplex Chapter and Houston Chapter of the Vibration Institute.

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## DISCUSSION GROUP 3

on

### MACHINERY PURCHASING

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**Terryl Matthews, Coordinator**, is a Principal Rotating Equipment Specialist with Bechtel Corporation, in Houston, Texas. He retired in 2003 from Dow Chemical, Design and Construction, after 30 years. His responsibilities include specifications, technical support, mechanical and performance testing, consulting, rerating, and field assistance in the area of rotating equipment.

Mr. Matthews holds a B.S. degree (Mechanical Engineering, 1972) from the University of Houston. Author of six technical papers, he is a member of ASME, the Ethylene Producers Conference Rotating Machinery Subcommittee, and the ASME International Gas Turbine Institutes Industrial and Cogeneration Committee. He is a former member of the API Committee on Refinery Equipment and sponsor for SOME, served on API Task Forces 613 and 677, is a former member of ASME B73 Committee, and is a registered Professional Engineer in the State of Texas.

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**Paul C. Brown, Coordinator**, is the Director of Marketing within the Engineered Products Business Unit of the Elliott Company, located in Jeannette, Pennsylvania. A graduate Mechanical Engineer with more than 25 years of involvement in the project management, application, sales, and marketing of rotating machinery, he joined the Elliott Company in 1987 and has been in his current position since Spring 2004. Mr. Brown's duties include managing support of turbomachinery sales of new apparatus and rerates for the petrochemical, oil refinery, liquified natural gas, and the upstream oil and gas markets, worldwide. Other responsibilities include market forecasting, strategic planning, and providing direction for research and development efforts.

Prior to his current position, Mr. Brown served for 10 years as the European, Middle East, Africa manager of field sales for the Industrial Products Business Unit of the Elliott Company, located in Basingstoke Hampshire, United Kingdom.

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**John A. Brossack** is with ExxonMobil Global Services (Procurement) in the Manufacturing and Sourcing-Major Capital Projects group, in Houston, Texas. His responsibilities include oversight and coordination of the procurement activities for ExxonMobil and EPC contractors on selected major capital projects in the Downstream business line. Mr. Brossack has 30 years of both field and home office procurement experience in the engineering and construction industry. Previously, he was the Senior Purchasing Supervisor in the Mechanical Multi-Project Acquisition Group with Bechtel, where he was responsible for the purchase of turbomachinery and direct fired equipment. Mr. Brossack was also with the construction group of Foster Wheeler Corporation, in the Field Procurement and Materials Management department. He has managed procurement activities for gas turbines and compressors for a wide range of petrochemical and pipeline projects.

Mr. Brossack has a B.S. degree (Business Administration, 1972) from Tri-State College.

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**Richard A. (Rich) Lewis** is a Mechanical Associate at Dow Chemical in Houston, Texas. He has over 30 years' experience in rotating equipment, and has spent the last 13 years with Dow Chemical in the rotating equipment area. He works with compressors, turbines, pumps, agitators, gears, centrifuges, extruders, and other critical and noncritical rotating equipment. Before joining Dow Chemical, he was Test Engineer, Senior Compressor Application Engineer, and Manager of Zone Engineering with Elliott Company.

Mr. Lewis received a BSME from Penn State University, and is a registered Professional Engineer in the State of Texas. He is a member of the ASME B73 committee, PIP Machinery Function Team, API Mechanical Steering Team, API Subcommittee on Mechanical Equipment, and has served on API Task Forces 619, 674, and 617, where he has served as both a manufacturer's representative and as a user. He is currently Chairman of the API 614 Task Force.

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**Brian J. Setzenfand** is Manager of Apparatus Marketing with Elliott Company, located in Jeannette, Pennsylvania. In his current role, he is responsible for turbomachinery sales within the petrochemical, oil refinery, liquefied natural gas, and industrial markets. Mr. Setzenfand is also responsible for market forecasting and strategic planning activities for Elliott Company's Engineered Products Business Unit. Prior to his current role, he has held various positions in centrifugal compressor application engineering, steam turbine application engineering, and marketing since joining the company in 1990.

Mr. Setzenfand has a B.S. degree (Mechanical Engineering) from the University of Pittsburgh and has an M.B.A. degree from Duquesne University.

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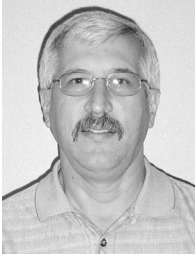


**W.J.H. (Bill) Somerville** is Director, Supply Chain Management, Suncor Energy Services Inc., in Calgary, Alberta, Canada. He has 24 years' experience in design, procurement, construction, commissioning, and project management of natural gas compressor station and pipeline facilities, and implementation of strategic procurement and supplier quality/improvement programs. He has worked for numerous companies, including NOVA Corporation, TransCanada Pipelines, PMMS Asia/Pacific-Air New Zealand, Alliance Pipeline, and Shell Petroleum Development Company of Nigeria.

During his career, Mr. Somerville has had the following responsibilities: project management, design and installation/commissioning supervision, strategic procurement, supervision of materials procurement/contracting teams, mechanical design and multidiscipline project teams, as well as preliminary and detailed mechanical station design. He has extensive experience with the specification, evaluation, award, installation, and commissioning of turbomachinery.

Mr. Somerville graduated with a B.A.Sc. degree (Mechanical Engineering, 1982) from the University of Waterloo, and is a registered Professional Engineer in the Province of Alberta.

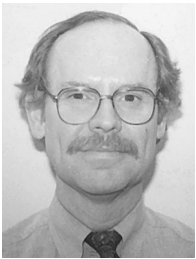
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**Mike Thuillez** currently holds the position of Region Sales Manager for GE Energy Oil & Gas, in Houston, Texas. He has more than 25 years of turbomachinery experience in the oil and gas industry working in the areas of field service, product design, marketing, and sales.

Mr. Thuillez has a B.S. degree (Mechanical Engineering) from Clarkson College of Technology, and is a registered Professional Engineer in the State of Texas.

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**E.V. (Van) Wilkinson** is an Engineering Advisor with Shell Chemical Company, in Houston, Texas. He is currently assigned to the Engineering Equipment Department of Plant Engineering and Construction. In this assignment, he is responsible for specification, evaluation, and systems integration of rotating equipment for new processing plants. He also provides field installation, commissioning, and startup support for this new machinery.

Mr. Wilkinson has a B.S. degree (1973) and an M.S. degree (1975) in Mechanical Engineering from the University of Florida. While in college, he was a member of Pi Tau Sigma and Tau Beta Pi professional fraternities. Mr. Wilkinson is a registered Professional Engineer in the State of Texas.

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**DISCUSSION GROUP 4**  
**on**  
**OVERSPEED TRIP SYSTEMS**

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**S. Paul Mohan, Coordinator**, 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 grassroots 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, 1970) 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.

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**Bruce Bayless, Coordinator**, is with Valero Energy Corporation, in San Antonio, Texas.

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**Donald R. (Don) Leger** is the General Manager of DRS Power Technology, Inc., in Fitchburg, Massachusetts, which designs and manufactures rotating equipment. Prior to this position, he was the Marketing Director and General Manager of the Chicopee facility for TurboCare.

Mr. Leger had 25 years of service with General Electric Company, in Fitchburg, Massachusetts. His responsibilities covered mechanical drive steam turbines, feed pump turbines, and industrial turbine generator sets. He has 30 years of experience in steam turbine design, manufacturing, and project management. During his career, he has authored many papers on steam turbine applications and design and has presented at technical seminars throughout the world. Mr. Leger also served on the API 612 and ISO Working Group for special purpose steam turbines. He is a past member of the Turbomachinery Symposium Advisory Committee.

Mr. Leger has a B.S. degree (Mechanical Engineering) from Northeastern University.

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## DISCUSSION GROUP 5

on

### HOT GAS EXPANDERS

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**Michael J. Drosjack, Coordinator**, is a Senior Principal in 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.

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**Lil Kassie, Coordinator**, is presently Rotating Equipment Advisor for BP refining. He is located at BP's Whiting, Indiana, refinery where he has worked for 24 years. He has held positions as Rotating Equipment Specialist, Superintendent of the Rotating Equipment and Reliability Engineering Group, and Senior Rotating Equipment Consultant. In his present position, Mr. Kassie is responsible for providing machinery expertise, sharing and implementing equipment practices, and development coaching for improving equipment reliability and plant availability throughout BP. Prior to his tenure at BP, Mr. Kassie worked as Rotating Equipment Superintendent for Energy Cooperative Inc. and as a Field Service Engineer for Ingersoll Rand. He has presented technical papers at various rotating equipment conferences including the Turbomachinery Symposium and Rotating Machinery Users Council.

Mr. Kassie holds B.S. and M.S. degrees (Mechanical Engineering) from the University of Wisconsin.

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**Joe Brittain** is President and Chief Engineer of Brittain Consulting, P.C., in Naperville, Illinois. The company provides petrochemical industry consulting services designed to improve rotating equipment reliability via root cause failure analysis and innovative solutions. Mr. Brittain has a rotating equipment background in the chemical and refining industries spanning more than 35 years in design, maintenance, and project management. He retired from BP Amoco in 2000 where he was a Reliability Supervisor and Senior Consultant. Prior to that, he was with Dravo Engineers & Constructors and BFGoodrich Chemical.

Mr. Brittain is a member of ASME, STLE, and has served on the Task Force of numerous API Standards. He received his BSME from the University of Kentucky (1966), and is a registered Professional Engineer in the States of Kentucky and Illinois and Certified Lubrication Specialist. Mr. Brittain has developed and instituted numerous training programs in maintenance procedures and techniques for rotating machinery.

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**Ben Carbonetto** is the Bladed Products & Controls Engineering Manager responsible for the design, construction, and testing of FCC hot gas expanders, axial compressors, steam turbines, and gas turbines at GE Energy, in Bethlehem, Pennsylvania. He has been involved in the design, troubleshooting, operation, and failure investigation of hot gas expanders.

Mr. Carbonetto received a B.S. degree (Mechanical Engineering, 1995) from Drexel University and is a member of ASME.

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**Charles H. (Chuck) Kostors** is a consultant on rotating equipment with a specialty of FCC expanders. Previously he was a Senior Consulting Engineer with Elliott Turbomachinery Company. He was responsible for design aspects on turbine expanders, which encompassed the aerodynamic and mechanical design for the "dirty flue gas" environment of the fluid catalytic cracking process. Mr. Kostors has 40 years of design and troubleshooting experience with hot gas expanders. He has experience in all phases of turbomachinery design. Prior to joining Elliott, Mr. Kostors was involved in performance testing for a major utility, and was responsible for maintaining boilers, coal handling equipment, pumps, steam turbines, generators, and switch gear for the plant.

Mr. Kostors has a B.S. degree (Mechanical Engineering) from Carnegie-Mellon University. He has authored several technical papers and holds two patents. He is a Life Member of ASME and a member of PTC-6 Committee on Steam Turbines.

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**Robert M. Kranz** is a Rotating Equipment Engineer for Phillips 66 Alliance Refinery, in Belle Chase, Louisiana. His primary duties are to develop and execute improvements to the refinery's rotating equipment. He has been with the refinery for 15 years. During that time, some of his other duties included project engineering, inspection, and maintenance supervision.

Mr. Kranz obtained his B.S. degree (Mechanical Engineering, 1986) from the University of New Orleans. He is a registered Professional Engineer in the State of Louisiana.

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**George Seamon** is a Principal Design Engineer for Dresser-Rand Company, in Olean, New York. For the last 18 years, he has been responsible for the aerodynamic and mechanical design and development of hot gas expanders for FCC and nitric acid service. Prior to that, he spent six years on the design of gas turbines and four years on the design of the GHH type hot gas expander. Before joining Dresser-Rand, Mr. Seamon worked for 10 years with General Electric and Pratt & Whitney on heat transfer, aerodynamic, and mechanical design of the turbine section of jet engines.

Mr. Seamon graduated with a BSME/AE degree from Northwestern University (1967).

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## DISCUSSION GROUP 6

on

## DRY GAS SEALS

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**Peter C. Rasmussen, Coordinator**, 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.

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**Bernard Quiox, Coordinator**, is with TOTAL, in Pau, France.

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**Joe Delrahim** is Marketing Segment Manager of Dry-Running Gas Seals with John Crane Inc., in Morton Grove, Illinois. Of his 18 years with John Crane, he spent 13 as an Engineer or Engineering Supervisor, in charge of designing dry-running gas sealing technology.

Mr. Delrahim holds a B.S. degree (Mechanical Engineering) from the University of Oklahoma, and an MBA from the Lake Forest Graduate School of Management, Illinois.

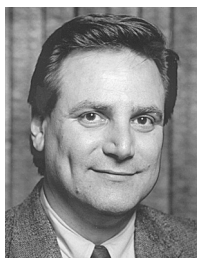
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**John G. Marta** is a Senior Compressor Seal Specialist with the Flow Solutions Division of the Flowserve Corporation, located in Littleton, Colorado. He is responsible for specifying compressor seal designs and support systems, and provides related field service for turbomachinery applications. First joining the heritage company of BW/IP International, Inc., Seal Division in 1988, Mr. Marta has held various positions within Flowserve including Applications Engineer; National Flue Gas Desulfurization Systems Coordinator; Sales Engineer; and Manager, Product Marketing, with responsibilities for application and design of low emission mechanical seal technology to meet stringent clean air regulations in the chemical, paper, petrochemical, power, and refining industries.

Mr. Marta holds a B.S. degree (Mechanical Engineering) from Colorado State University. He is a member of SME and an Associate member of ASME.

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**Christopher B. (Chris) Stewart** is the Manager of Custom Products and Replication for the TurboCare, Houston facility. In this capacity, he is responsible for all activities related to the engineering, design, manufacture, and quality of TurboCare's line of custom bearings, couplings, seals, and direct replacement parts. Mr. Stewart has been involved in the turbomachinery industry for more than 20 years. He has held engineering management positions at Waukesha Bearings and Centritech/CentriMarc, as well as directing the R&D activities for Waukesha Bearings. Prior to joining TurboCare, he was president of Stewart Engineering Services, providing engineering consulting and field support for the U.S. Navy and bearing manufacturing firms.

Mr. Stewart received a BSME from the University of Texas at Austin (1980). He is a member of STLE, ASME, and the Vibration Institute, and is a registered Professional Engineer in the States of Texas and Wisconsin.

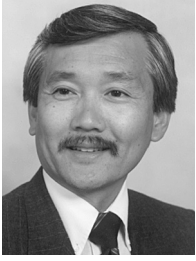
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**Richard W. (Rich) Wilson** is a Rotating Equipment Reliability Engineer for Premcor's Delaware City refinery, and has served as a Senior Rotating Equipment Engineer since 1985. He is involved with all facets of rotating equipment in the plant including design, installation, operation, maintenance, and diagnostic evaluation of all refinery machinery. Since being assigned to the rotating equipment engineering group in 1979, Mr. Wilson has been involved with many equipment reliability improvements such as dry gas seal conversions, electronic governor upgrades, and tilt pad bearing retrofits. Mr. Wilson participated on a dry gas seal panel at University of Virginia's "Romag 91" Conference for Dry Gas Seals in March 1991, and presented a paper on dry gas seals at Saudi Refining's Rotating Equipment Technical Exchange meeting in October 1992.

Mr. Wilson has a B.S. degree (Mechanical Engineering) from University of Delaware. He is a member of ASME and the Delaware Valley Chapter of the Vibration Institute.

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**George Young** is a Senior Maintenance Engineer with Valero, in Long Beach, California. He has more than twenty years experience with rotating equipment. His responsibilities since joining Valero in 1981 have been as Senior Project Engineer specifying and installing reciprocating compressors, and rerating axial compressor and hot gas expander systems.

Mr. Young holds a BSME from San Diego State University and is a past president of the Pacific Energy Association. He is a member of the API Subcommittee on Mechanical Equipment.

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**DISCUSSION GROUP 7**  
**on**  
**GAS TURBINE AND COMBINED CYCLES**

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**Meherwan P. Boyce, Coordinator**, is Managing Partner of The Boyce Consultancy, in Houston, Texas. He has 35+ years of experience in the turbomachinery field, with 25 years in the design of compressors and turbines. 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*, *Cogeneration & Combined Cycle Power Plants*, and *Centrifugal Compressors, A Basic Guide*. He has taught over 100 short courses globally attended by over 3000 students representing 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.

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**Scott C. McQueen, Coordinator**, is Manager of Turbines and Central Shop Division at TexasGenco, in Houston, Texas. He has 18 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 for TexasGenco Power Operations. He is also responsible for the TexasGenco 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.

Mr. McQueen is a 1985 graduate of The University of Texas at El Paso with a B.S. degree in Mechanical Engineering. He is Chairman of EPRI Program 65 Large Steam Turbines and Generators, and member of the EPRI Turbine Generator Users Group.

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**DISCUSSION GROUP 8**  
**on**  
**COUPLINGS AND ALIGNMENT**

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**Terryl Matthews, Coordinator**, is a Principal Rotating Equipment Specialist with Bechtel Corporation, in Houston, Texas. He retired in 2003 from Dow Chemical, Design and Construction, after 30 years. His responsibilities include specifications, technical support, mechanical and performance testing, consulting, rerating, and field assistance in the area of rotating equipment.

Mr. Matthews holds a B.S. degree (Mechanical Engineering, 1972) from the University of Houston. Author of six technical papers, he is a member of ASME, the Ethylene Producers Conference Rotating Machinery Subcommittee, and the ASME International Gas Turbine Institutes Industrial and Cogeneration Committee. He is a former member of the API Committee on Refinery Equipment and sponsor for SOME, served on API Task Forces 613 and 677, is a former member of ASME B73 Committee, and is a registered Professional Engineer in the State of Texas.

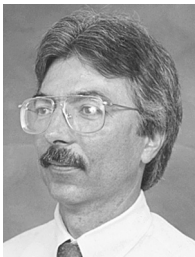
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**Thomas R. (Tom) Davidson, Coordinator**, is Reliability Manager for BOC Gases at their Clear Lake, Texas, facility. He is responsible for managing all maintenance and reliability activities for the site. He has more than 25 years of experience in the petrochemical industry, in the field of equipment reliability and maintenance management.

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

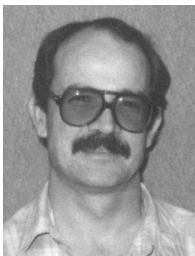
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**Joseph P. (Joe) Corcoran** is Manager of High Performance Engineering for Kop-Flex, Inc., a division of Emerson Power Transmission (EPT), in Baltimore, Maryland. He is responsible for an engineering group that selects and designs couplings and processes orders and inquiries for high performance couplings, mainly for turbomachinery. In addition, Mr. Corcoran has marketing and field service responsibilities. Previous to his 18 years at Kop-Flex, he was an operations engineer responsible for two 80 ton per day Union Carbide-Linde oxygen plants for the City of Baltimore. He has authored and coauthored many articles and papers dealing with high performance coupling and torque meter applications.

Mr. Corcoran has a B.S. degree (Mechanical Engineering) from the University of Maryland. He is a member of ASME, the Vibration Institute, the Third and Fourth Edition Task Forces for API 671, and the Work Group responsible for the corresponding ISO 10441 coupling specification.

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**David E. Littlefield** is a Senior Design Associate with Dow Chemical U.S.A. in Freeport, Texas. He joined Dow's Engineering and Construction Services Division in 1979, working primarily in the Rotating Equipment Group. He transferred to Texas Operations in 1983, where he has worked in the Mechanical Technology Group, troubleshooting and specifying rotating and general mechanical equipment.

Mr. Littlefield is a 1979 B.S. (Mechanical Engineering) graduate of Texas A&M University. He is a member of ASME and is a registered Professional Engineer in the State of Texas.

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**Gary Moritz** is with Bechtel Corporation, in Houston, Texas. He has 36 years of experience on a wide variety of petrochemical engineering and construction projects. He has completed engineering and the design of many gas turbine-driven compressor packages for both offshore platforms and onshore installation. Mr. Moritz has experience in complete refurbishing and upgrading of gas turbines, reengineering and refurbishing of large compressors, and inspection and overhauls of large rotating machinery. He also has experience in CO<sub>2</sub> recovery, injection plants, seawater injection plants, product pipeline upgrades, and LNG plants.

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**Todd Stevens** is a Principal Machinery Engineer for Equistar Chemicals, in Deer Park, Texas. His responsibilities include unit reliability programs development. Mr. Stevens is involved in equipment troubleshooting, repair, PM planning, turnaround planning, and project development and implementation.

Mr. Stevens received his B.S. degree (Mechanical Engineering, 1989) from Texas A&M University. He is a member of the Houston Chapter of the Vibration Institute and ASME.

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**DISCUSSION GROUP 9**  
**on**  
**PERFORMANCE TESTING**

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**Meherwan P. Boyce, Coordinator**, is Managing Partner of The Boyce Consultancy, in Houston, Texas. He has 35+ years of experience in the turbomachinery field, with 25 years in the design of compressors and turbines. 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*, *Cogeneration & Combined Cycle Power Plants*, and *Centrifugal Compressors, A Basic Guide*. He has taught over 100 short courses globally attended by over 3000 students representing 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.

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**Erwin A. Gaskamp, Coordinator**, is a Consultant for ExxonMobil Development Corporation, in Houston, Texas. He has been involved with rotating equipment for more than 32 years. 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 Bechtel Corporation, M.W. Kellogg Company, and Monsanto Company.

Mr. Gaskamp holds a Mechanical Engineering degree from Texas A&M University. He is a member of the API Task Force for Standard 541 (induction motors) and is a member of ASME. He has been a member of the Turbomachinery Symposium Advisory Committee since 1988.

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**Rainer Kurz, Coordinator**, is Manager of Systems Analysis and Field Testing for Solar Turbines, Incorporated, in San Diego, California. His organization is responsible for predicting gas compressor and gas turbine performance, for conducting application studies, and for field performance tests on gas compressor and generator packages.

Dr. Kurz attended the University of the Federal Armed Forces in Hamburg, Germany, where he received the degree of a Dipl.-Ing. in 1984 and the degree of a Dr.-Ing. in 1991. He has authored numerous publications in the field of turbomachinery and fluid dynamics, is an ASME Fellow, and a member of the Turbomachinery Symposium Advisory Committee.

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## DISCUSSION GROUP 10

### on GEARS

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**Clifford P. (Cliff) Cook, Coordinator**, retired from ChevronTexaco and is President of CVC Engineering, in Houston, Texas. He provides turbomachinery consulting services to the process industries with 37 years' experience. He is a ChevronTexaco Fellow, Emeritus, and is Chairman Emeritus and past Vice Chairman of the API Subcommittee on Mechanical Equipment and member of its Steering Committee. He is Chairman of API RP 687 and API SOME Standard Paragraphs, and past Chairman of API 613 and 677. Mr. Cook is a member of API 617, 616, 614, and past member of API 610, 684 Tutorial, and 618. He also serves on the ANSI Technical Advisory Group to ISO Technical Committee 67 Subcommittee 6. He has been a member of the Texas A&M Turbomachinery Symposium Advisory Committee since 1993.

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.

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**Kenneth O. (Ken) Beckman, Coordinator**, 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.

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**Royce N. Brown** is Consultant and owner of RNB Engineering, in Houston, Texas. He retired from Dow Chemical in 1995 after 28+ years. His responsibilities included specifications, instrumentation, controls, and consulting and field assistance for large rotating equipment. He has written 30+ technical papers, including a contribution to the ASM Handbook, *Friction, Lubrication, and Wear Technology*, and a book, *Compressors, Selection and Sizing*. Mr. Brown is a fellow member of ISA and ASME, a member of SME, AIChE, the Vibration Institute, and an associate member of SAE. He is a member of the API Subcommittee on Mechanical Equipment, and Task Force Chairman of API 616, API 617, and API 684.

Mr. Brown is a registered Professional Engineer in the States of Texas, Michigan, Louisiana, Wisconsin, and California. He has a B.S. degree (Mechanical Engineering) from the University of Texas, and an M.S. degree (Mechanical Engineering) from the University of Wisconsin.

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## DISCUSSION GROUP 11

on

### RECIPROCATING COMPRESSORS

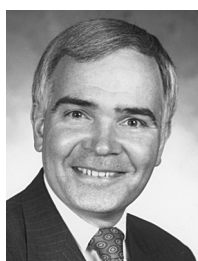
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**S. Paul Mohan, Coordinator**, is a Principal Engineer at Williams Gas Pipelines-TRANSCO, in Houston, Texas. He is responsible for projects aimed at improving reliability, operability, and maintainability of pipeline compressor stations. Previously, 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 grassroots 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, 1970) 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.

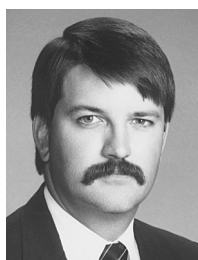
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**William E. (Bill) Forsthoffer, Coordinator**, spent six years at the Delaval Turbine Company, as Manager of Compressor Project Engineering, where he designed and tested centrifugal pumps and compressors, gears, steam turbines, and rotary (screw)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

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**Kenneth E. Atkins** is a Senior Staff Engineer with Engineering Dynamics Incorporated, in San Antonio, Texas. He has extensive experience in the design and troubleshooting of a variety of mechanical systems involving reciprocating machinery, structural, and piping vibration problems. Mr. Atkins was a Research Engineer with Southwest Research Institute (1978 to 1981) and a Machinery Engineer with Exxon Chemical Americas (1981 to 1982). In 1982, he cofounded Engineering Dynamics Incorporated. He has authored several technical papers in the areas of reciprocating machinery, piping, and structural dynamics. He has lectured frequently at the Texas A&M Turbomachinery and Pump Symposia with both tutorials and short courses.

Mr. Atkins received a B.S. degree (Engineering Science, 1978) from Trinity University. He is a member of ASME and a registered Professional Engineer in the State of Texas. He is also a sub-task force member for pulsation and vibration control for API Standards 618 and 674.

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**Bruce McCain** is Senior Engineering Advisor with Oxy Permian, in Brownfield, Texas. He provides worldwide technical support on both rotating and stationary equipment with a primary focus for the past several years on reciprocating equipment. He consults on many aspects of reciprocating compressor problems including foundation strengthening and grouting, bolting and torquing, installation and maintenance, vendor surveillance, pulsation and vibration, and forensics. Mr. McCain has worked for Amoco, Rohm and Haas, Altura, and Oxy. He has contributed to various trade publications and presented at ASME functions.

Mr. McCain has a B.S. degree (Mechanical Engineering, 1987) from Texas Tech University. He is a registered Professional Engineer in the State of Texas and a Certified API 510 Pressure Vessel Inspector. He is on the Steering Committee of the Plant Engineering and Maintenance Technical Chapter of the South Texas Section of ASME, West Texas Boiler Safety Association, and Texas Tech Academy of Mechanical Engineers.

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**DISCUSSION GROUP 12**  
**on**  
**LARGE STEAM TURBINES**

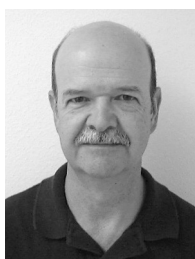
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**Scott C. McQueen, Coordinator**, is Manager of Turbines and Central Shop Division at TexasGenco, in Houston, Texas. He has 18 years of experience with maintenance and repair of large turbines. Currently, he is responsible for all maintenance activities associated with steam turbines and combustion turbines for TexasGenco Power Operations. He is also responsible for the TexasGenco 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.

Mr. McQueen is a 1985 graduate of The University of Texas at El Paso with a B.S. degree in Mechanical Engineering. He is Chairman of EPRI Program 65 Large Steam Turbines and Generators, and member of the EPRI Turbine Generator Users Group.

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**Steven Brewton, Coordinator**, is Manager of Mechanical Equipment for TXU Power, 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 26 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.

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**Donald R. (Don) Leger** is the General Manager of DRS Power Technology, Inc., in Fitchburg, Massachusetts, which designs and manufactures rotating equipment. Prior to this position, he was the Marketing Director and General Manager of the Chicopee facility for TurboCare.

Mr. Leger had 25 years of service with General Electric Company, in Fitchburg, Massachusetts. His responsibilities covered mechanical drive steam turbines, feed pump turbines, and industrial turbine generator sets. He has 30 years of experience in steam turbine design, manufacturing, and project management. During his career, he has authored many papers on steam turbine applications and design and has presented at technical seminars throughout the world. Mr. Leger also served on the API 612 and ISO Working Group for special purpose steam turbines. He is a past member of the Turbomachinery Symposium Advisory Committee.

Mr. Leger has a B.S. degree (Mechanical Engineering) from Northeastern University.

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**John Rankin** is Technical Service Manager with Seimens-Westinghouse, servicing TexasGenco, in Houston, Texas. He began working with Westinghouse Electric Corporation in 1980 in field service. He has an extensive background in field service and maintenance with steam turbine generators and auxiliaries.

Mr. Rankin has a B.S. degree (Mechanical Engineering) from the University of Texas at Austin.

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**DISCUSSION GROUP 13**  
**on**  
**MAINTENANCE MANAGEMENT**

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**John B. Cary, Coordinator**, is Vice President of Advanced Reliability Technologies, LLC, of Houston, Texas. He consults on the development and application of streamlined reliability centered maintenance strategies. He has over 30 years of experience in the hydrocarbon processing and petrochemical industries, responsible for creating and managing reliability improvement programs. Mr. Cary previously held reliability and maintenance positions 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 graduate of Columbia College and received his B.S. degree from the University of San Francisco. He has authored and presented several technical papers, and is a member of the Turbomachinery Symposium Advisory Committee.

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**Steven (Steve) O'Toole, Coordinator**, is Mechanical Integrity Consultant for Dynegy Midstream Services, the natural gas processing 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 administers the support and application of the Computer Maintenance Management System for the division. 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.

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**Mike E. Gray** is the Maintenance Reliability Advisor for Dynegy Midstream Services, the natural gas processing division of Dynegy, Inc., in Houston, Texas. His current responsibilities include facilities maintenance management enhancement and maintenance and operations optimization. This includes equipment prioritization, job plan development, planning/scheduling, and root cause failure analysis. His former work experiences include plant management, Maintenance Manager, Operations/Maintenance Supervisor, Equipment Analyst, and Mechanic.

Mr. Gray has an Associates degree (Mechanical Engineering Technology) from New Mexico State University. He has 30 years of experience in the natural gas gathering, processing, treating, and fractionation business.

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**Chris Marwood** is with Shell Oil Products US, in Anacortes, Washington.

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**Bruce Perry** is Vice President of Thomason Mechanical Corporation, in Rancho Dominguez, California. His duties include sales and marketing, contract negotiations, and development of corporate policies. He has been involved with the petrochemical and power industries since 1984, providing parts and services for rotating and reciprocating machinery installation, maintenance, and overhaul.

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**DISCUSSION GROUP 14**  
**on**  
**MAGNETIC BEARINGS**

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**Gampa I. Bhat, Coordinator**, 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.

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.

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**Hans Weyermann, Coordinator**, is a Principal Rotating Equipment Engineer in the PM&IE department of ConocoPhillips Upstream Technology Group. In his current position, he is providing support to all aspects of turbomachinery in existing business units, as well as grass roots capital projects. He is also responsible for following the machinery related areas of corporate initiatives within the ConocoPhillips Upstream Company.

Mr. Weyermann attended the College of Engineering in Brugg-Windisch, Switzerland. After receiving a B.S. degree (Mechanical Engineering), he joined Sulzer Escher Wyss Turbomachinery in Zurich, as an application/design engineer in the turbocompressor department. Prior to joining the Phillips Company, he was the supervisor of the Rotating Equipment department at Stone and Webster Engineering in Houston. Mr. Weyermann is a member of ASME, the API SOME, and has served on various API Task Forces.

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## DISCUSSION GROUP 15

on

### SCREW COMPRESSORS

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**Erwin A. Gaskamp, Coordinator**, is a Consultant for ExxonMobil Development Corporation, in Houston, Texas. He has been involved with rotating equipment for more than 32 years. 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 Bechtel Corporation, M.W. Kellogg Company, and Monsanto Company.

Mr. Gaskamp holds a Mechanical Engineering degree from Texas A&M University. He is a member of the API Task Force for Standard 541 (induction motors) and is a member of ASME. He has been a member of the Turbomachinery Symposium Advisory Committee since 1988.

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**Roy E. Craddock III, Coordinator**, is a Senior Staff Machinery Engineer and Maintenance Technical Services Leader for 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 States of West Virginia and Texas. 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.

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**Donald R. Smith, Coordinator**, is a Senior Staff Engineer at Engineering Dynamics Inc. (EDI), in San Antonio, Texas. For the past 30 years, he has been active in the field engineering services, specializing in the analysis of vibration, pulsation, and noise problems with rotating and reciprocating equipment. He has authored and presented several technical papers. Prior to joining EDI, he worked at Southwest Research Institute for 15 years as a Senior Research Scientist, where he was also involved in troubleshooting and failure analysis of piping and machinery.

Mr. Smith received his B.S. degree (Physics, 1969) from Trinity University. He is a member of ASME and the Vibration Institute.

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**Kevin Kisor** is an Applications and Sales Engineer in MAN Turbo's Houston office. He has held various sales and application engineering positions with Sundyne, A-C Compressor, Nuovo Pignone, and GHH Borsig.

Mr. Kisor has a B.S. degree (Industrial Technology) from Ohio University.

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**Perry L. Robins** is a Senior Mechanical Engineer with The Dow Chemical Company, Dow Design and Construction Division, in Houston, Texas. His responsibilities since joining Dow (1992) have been mechanical lead for capital project teams, and, for the last two years, in the Rotating Equipment Group providing support for critical compressor and pump applications. Current duties include specifications, technical support, equipment testing, and field support.

Mr. Robins has a B.S. degree (Mechanical Engineering, 1991) from New Mexico State University.

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**DISCUSSION GROUP 16**  
**on**  
**POLYMER SEALS**

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**John R. (Johnny) Dugas, Jr., Coordinator**, 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.

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**Carroll (Chet) Stroh, Coordinator**, is Technical Group Leader with KnightHawk Engineering, in Houston, Texas, and has over 30 years' experience in the rotating equipment business. He began with Westinghouse Large Steam Turbine Division and was instrumental in bringing results of their turbine research into the design process. He joined DuPont, where he consulted on Gulf Coast plants' turbomachinery problems. Mr. Stroh moved to the DuPont Experimental Station, where he developed expertise in rotordynamics. He spent the rest of his DuPont career acting as a Consultant's Consultant and provided equipment computer simulation to aid in troubleshooting. After DuPont, he worked 10 years for TurboCare as their Engineering Manager in the turbomachinery repair business.

Mr. Stroh has authored and coauthored several rotordynamic behavior papers. He has B.S. and M.S. degrees and three years' postgraduate work (Mechanical Engineering) from the University of Pennsylvania. He also has a B.A. degree (Mathematics) from Lebanon Valley College.

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**Robert W. Parker** is a Maintenance Specialist with E.I. du Pont de Nemours & Company, Inc., in Orange, Texas. He has been with DuPont for more than 30 years with responsibility for maintenance, reliability, and troubleshooting of rotating equipment in the ethylene unit at Sabine River Works.

Mr. Parker attended Lamar University.

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**John K. Whalen** is Engineering Manager and President of TCE/Turbo Components and Engineering, Inc., in Houston, Texas. He spent seven years at Turbodyne Steam Turbines (Dresser-Rand) as a Product Engineer in the Large Turbine Engineering Department and as an Analytical Engineer in the Rotordynamics Group of the Advanced Engineering and Development Department. In 1988, Mr. Whalen accepted a position with Centritech, as the Assistant Chief Engineer, and in 1989, he was promoted to Manager of Engineering. In 1991, he left Centritech to help start TCE. At TCE, he is responsible for the engineering department and engineering for the product lines, which include babbitted journal and thrust bearings, labyrinth seals, and related engineering services.

Mr. Whalen received his B.S. degree (Mechanical Engineering, 1981) from the Rochester Institute of Technology. He is a member of ASME, STLE, and the Vibration Institute, and is a registered Professional Engineer in the State of Texas.

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**DISCUSSION GROUP 17**  
**on**  
**INTEGRALLY GEARED COMPRESSORS**

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**Roy E. Craddock III, Coordinator**, is a Senior Staff Machinery Engineer and Maintenance Technical Services Leader for 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 States of West Virginia and Texas. 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.

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**Kenneth O. (Ken) Beckman, Coordinator**, 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.

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**David J. (Dave) Abrahamian** is a principal Engineer for Cooper Compression at the Buffalo Plant located in Buffalo, New York. He has more than 25 years of experience in the turbomachinery field having responsibilities for the design and development of integrally geared centrifugal compressors.

Mr. Abrahamian received a B.S. degree (Mechanical Engineering) from Syracuse University.

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**Richard Caputo** is currently Market Manager for Siemens Demag Delaval Turbomachinery Inc., in Trenton, New Jersey. His responsibilities cover the air separation and general chemical market segments, which include promoting the sale of integrally geared compressor products. He has 15 years of experience in the turbomachinery industry as an Application Engineer, Marketing Engineer, Forward Engineering Manager, and Market Manager.

Mr. Caputo is a graduate of Rutgers University, College of Engineering.

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**Richard A. (Rich) Lewis** is a Mechanical Associate at Dow Chemical in Houston, Texas. He has over 30 years' experience in rotating equipment, and has spent the last 13 years with Dow Chemical in the rotating equipment area. He works with compressors, turbines, pumps, agitators, gears, centrifuges, extruders, and other critical and noncritical rotating equipment. Before joining Dow Chemical, he was Test Engineer, Senior Compressor Application Engineer, and Manager of Zone Engineering with Elliott Company.

Mr. Lewis received a BSME from Penn State University, and is a registered Professional Engineer in the State of Texas. He is a member of the ASME B73 committee, PIP Machinery Function Team, API Mechanical Steering Team, API Subcommittee on Mechanical Equipment, and has served on API Task Forces 619, 674, and 617, where he has served as both a manufacturer's representative and as a user. He is currently Chairman of the API 614 Task Force.

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