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### **CENTRIFUGAL PUMP OPERATION, MAINTENANCE, AND RELIABILITY**



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

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



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

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



**Kenneth R. (Ken) Burkhardt** is a Pump Consultant with the DuPont Company, in Wilmington, Delaware, where he provides pump, mechanical seal, and pumping system technical support throughout DuPont. Prior to his current position, Mr. Burkhardt held manufacturing site positions of Site Maintenance Technology Leader, Mechanical/Reliability Team Leader, Site Rotating Equipment Engineer, Maintenance Engineer, and Project Engineer.

Mr. Burkhardt serves as Vice Chair of ASME Standards Committee B73 (Chemical Standard Pumps). He graduated from Virginia Polytechnic Institute with a BSME degree (1981). Mr. Burkhardt is a member of ASME and is a registered Professional Engineer in the State of Alabama.



**Watson Tomlinson** is presently a Pump Improvement Engineer in the Flow Solutions Division of Flowserve, in Mt. Holly, North Carolina. He joined Flowserve/IDP in the fall of 1999 after more than 17 years with Duke Power Company. His present responsibilities include engineering field support for problem pumps at commercial facilities in the southeast United States and nuclear facilities throughout the U.S. Prior to IDP, Mr. Tomlinson was responsible for coordinating the nuclear pump program for Duke Power Company. His experience also included maintenance and troubleshooting of rotating equipment, where he worked in both nuclear and fossil stations.

Mr. Tomlinson has a B.S. degree (Mechanical Engineering, 1982) from North Carolina State University and is a registered Professional Engineer in the State of North Carolina.

**Bruce Weathersby** is Rotating Equipment Reliability Leader for INVISTA in the United States and Canada, located in Salisbury, North Carolina. He has 30 years of experience in the rotating equipment fields of maintenance, reliability, and vibration analysis in the chemical, pharmaceutical, and textile industries.

Mr. Weathersby is a 1974 BSME graduate of Lamar University, and he currently serves as a member of the Board of Directors for the Vibration Institute.

## DISCUSSION GROUP 2 on MECHANICAL SEALS



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

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

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

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





**Henri V. Azibert** is the Chief Engineer of the Fluid Sealing Division of the A.W. Chesterton Company, in Stoneham, Massachusetts. He is responsible for the design and development of mechanical seals and related products. He has 22 patents granted on mechanical seal designs and improvements. He has lectured extensively to maintenance engineers all over the world.

Mr. Azibert received a B.A. degree (Political Science) from the University of Massachusetts, a Jurisprudence Doctor degree from Boston College, and an M.S. degree (Mechanical Engineering) from Northeastern University. Mr. Azibert maintains his standing in the Massachusetts Bar. He is a member of STLE, a member of the API 682 Task force, and the Chairman of the Standardization Task Group for the Fluid Sealing Association.

# DISCUSSION GROUP 3 on BEARINGS AND LUBRICATION



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

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

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

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



**Charles A. Cappellino** is an Engineering Project Manager for the Industrial Products Group of Goulds Pumps, ITT Fluid Technology, in Seneca Falls, New York. He has been employed there for 17 years. He is currently responsible for the development of new product for the industrial chemical process market. He has written numerous articles relating to pump design and application.

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



**Joseph R. Cervassi** is a Staff Engineer with Exxon Chemical Company, in Baytown, Texas. He is presently assigned to Major Projects where he is involved in specification and NPQC of both general and special purpose machinery. Until recently, he was the Section Supervisor of the Machinery Section in Exxon's Baytown Olefins plant. Since joining Exxon in 1978, he has had several assignments in engineering with Exxon Enterprise, Exxon Chemical Bayway, and Aramco. Prior to joining Exxon, he worked for Drew Chemical Company on industrial water and fuel additives.

Mr. Cervassi received his B.A. degree (Chemistry) from Boston University, and an M.S. degree (Chemical Engineering) from New Jersey Institute of Technology.

Don Doan is with TXU Energy, in Glen Rose, Texas.



**Donald C. (Don) Ehlert** has been employed with Lubrication Systems Company, in Houston, Texas, for the past 25 years. His present position is that of Sales Manager. Mr. Ehlert has been involved with lubrication equipment and system technology for a total of 34 years. His present responsibilities include product sales in North America, along with being a key account manager to several major clients.

Mr. Ehlert has field maintenance and system installation experience that spans a large number of industries. He has served as a technical sales representative and has system experience that includes troubleshooting of aviation flight control systems for the U.S. Navy, research and development of oil field land and subsea wellhead controls, and blowout preventer systems.

Mr. Ehlert has authored several articles on the practical use and justification of lubrication systems, and presides over training classes and lubrication workshops for end users.

Mr. Ehlert has authored several articles on the practical use and justification of lubrication systems, and presides over training classes and lubrication workshops for end users.

Lance Erickson is with Infineum USA, LP, in Linden, New Jersey.

Steven W. Young is with MRC Bearing Services, in Kulpsville, Pennsylvania.

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## **COUPLINGS, ALIGNMENT, AND PIPESTRAIN**



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

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



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

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



**David W. (Dave) Diehl** manages training and marketing at COADE Engineering Software, in Houston, Texas. Prior to joining COADE in 1986, he developed his skills in pipe stress analysis by providing technical support to users of AUTOFLEX and DYNAFLEX. At COADE, Mr. Diehl brings his 25 years of experience in pipe stress analysis by training CAESAR II users around the world and specifying and testing program improvements to COADE's piping and pressure vessel analysis programs. He authored an article entitled "Improve Pump Load Evaluation," published in the April 1998 issue of *Hydrocarbon Processing*.

Mr. Diehl is a registered Professional Engineer in the State of Texas, sits on the Board of Directors of the Society of Piping Engineers and Designers (SPED), and is a member of ASME B31.3 Subgroup on Activities.



**Jon R. Mancuso** is Director of Engineering with Kop-Flex Inc., Emerson Power Transmission Corporation, in Baltimore, Maryland. He has more than 30 years' experience in the coupling field and is author of many papers on couplings for various publications, societies, and symposia. Mr. Mancuso is also author of a book on couplings, *Coupling and Joints: Design, Selection, & Application*, and editor and author of several chapters in *Mechanical Power Transmission Components Handbook.* He has been involved with many design, research projects relating to couplings, and is coinventor of several patents with couplings and clutches.

Mr. Mancuso graduated from Gannon University with a B.S. degree (Mechanical Engineering), and has an M.S. degree (Engineering Science) from Pennsylvania State University. He is chairing the ASME Committee on Couplings and Clutches. In addition, he is a member of the AGMA Coupling Committee and also serves on the API Committee on Couplings for Special Purpose Applications.



**Christopher P. (Chris) Rackham** is Coupling Product Manager for Flexibox, Inc., in Houston, Texas, and formerly was Engineering Manager. He has been with Flexibox, Inc., since receiving a B.S. degree in Engineering from Pennsylvania State University (1979). Prior to his current position, he served as Design Engineer and Application Engineer. His responsibilities include design specifications, application reviews, quality assurance, and field support for power transmission couplings, mechanical seals, and ancillary equipment.

Mr. Rackham has served on the API Manufacturers Subcommittee on Couplings (671) and consultant to API Manufacturers Subcommittee on Mechanical Seals (610).

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## VERTICAL PUMP PROBLEMS AND SOLUTIONS



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

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



**Patrick J. Gonzales** is presently Senior Vibration Specialist for the Pump Division of Flowserve Corporation, in Vernon, California. He is responsible for establishing generic rotordynamic and structural signatures for new designs, and for furnishing technical assistance in diagnosing rotating equipment vibration problems.

Mr. Gonzales has been associated with the Pump Division for 38 years in the areas of design, testing, and field problems involving vibration, fluid pulsation, and noise. He was directly involved in the development of the Byron Jackson feedpump expert diagnostic software program, which diagnoses vibration and flow related problems on horizontal type feed pumps.

Mr. Gonzales graduated from East Los Angeles College with an Engineering degree (1966).



**Ronald D. (Ron) Rutter** is Project Engineer with Kansas City Power and Light Company, in Kansas City, Missouri. He started with Kansas City Power and Light in 1979 as an Engineer at a power plant. He continued to work in equipment reliability until his transfer to Corporate Engineering in 1985. Mr. Rutter's responsibilities include a broad spectrum of equipment and systems design, but he still maintains a specialty in pumps and sealing devices.

Mr. Rutter began his career in 1974 with Union Carbide, Chemicals and Plastics Division, in Institute, West Virginia. He started as an Engineer in the Maintenance Department, and eventually specialized in pump and mechanical seal reliability improvement.

Mr. Rutter is the company contact on wind energy generation and is an active member in the American Wind Energy Association.

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### PUMP VIBRATION MONITORING AND ANALYSIS



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

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

**Paul Boyadjis** is a Senior Staff Engineer of the rotating machinery consulting and troubleshooting company, Mechanical Solutions, Inc., in Parsippany, New Jersey. During his 20 year career, he has specialized in advanced solids modeling techniques as well as vibration and structural analysis of turbomachinery using advanced finite element analysis methods. Prior to joining MSI in 2002, he was previously lead analytical engineer in the Corporate Research and Development Group for Flowserve Corporation, formerly Ingersoll-Dresser Pump Company. While there, Mr. Boyadjis wrote many of the structural and vibration analysis procedures for the Government Marine Business unit of IDP. He also developed and perfected FEA methods for accurately predicting natural frequencies in vertical pumps. He is currently an associate editor of the *Tribilogy and Lubrication Technology* magazine.

Mr. Boyadjis received his BSME (1984) and MSME (1998) degrees from Lehigh University.



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Mr. Gonzales graduated from East Los Angeles College with an Engineering degree (1966).



Jerome A. (Jerry) Lorenc is Senior Research Engineer in the Industrial Pump Group of ITT Industries, in Seneca Falls, New York. He has been with ITT since 1976, serving as Instrumentation Engineer, Supervisor of the R&D Lab, and his present position. His responsibilities include design of pump test facilities, managing new technology projects, and engineering assistance to sales and field service. Mr. Lorenc has been involved in vibration, pressure pulsation, and condition analysis of pumps for the past 28 years. He has published five papers and has several centrifugal pump related U.S. patents.

Mr. Lorenc received a B.S. degree (Aircraft Maintenance Engineering, 1970) from Parks College of Saint Louis University, completed a full year of graduate work in Mechanical Engineering at Rochester Institute of Technology (1976), and is certified Vibration Specialist IV (1996). He is a member of ISA and the Vibration Institute.

## DISCUSSION GROUP 7 on SEALLESS PUMPS



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

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



Julien LeBleu, Jr., Coordinator, is the Principal Engineer for Rotating Equipment for Lyondell Chemical, in Lake Charles, Louisiana. He is responsible for all rotating equipment in the Lake Charles facility and has more than 30 years of experience in the field of rotating equipment. He has worked for General Electric Company as a technical director for the installation and maintenance of large steam turbine and generator sets. Mr. LeBleu is a licensed aircraft mechanic and has worked on both reciprocating and jet aircraft engines. He is a member of the International Pump Users Advisory Committee, has authored several articles, and has lectured at Pump Symposia. Mr. LeBleu received his B.S. degree from the University of Florida (1974).

# DISCUSSION GROUP 8 on PIPELINE APPLICATIONS



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

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

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### POSITIVE DISPLACEMENT PUMPS—MAINTENANCE, OPERATION, RELIABILITY



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

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



**James R. (Jim) Brennan** is Projects Manager for IMO Pump, in Monroe, North Carolina. His responsibilities include worldwide marketing and technical support for pumping applications. He has more than 30 years of service with IMO Industries. Engineering manager for five years, Mr. Brennan has spoken at a number of conferences worldwide and has published more than three dozen technical articles and papers.

Mr. Brennan is a 1973 graduate of Drexel University in Philadelphia and a member of the Society of Petroleum Engineers.

**Paul Rose** is presently the International Sales and Tech Services Manager, for Warren Rupp, Inc., out of Mansfield, Ohio. He has been employed at Warren Rupp for the last six years in a variety of positions relating to product design, applications, and sales. He has experience designing and installing waterflood projects for the oil field, and was responsible for significant design improvements in a high-speed mixer design used in the wastewater treatment industry. Mr. Rose has been involved in the application and sales of a variety of pump designs including canned motor, gear, self-priming centrifugal, mag drive, and progressing cavity prior to his present position. He has presented papers relating to the proper application of progressing cavity drilling motors and the potential for air operated double diaphragm pumps in the chemical process industry.

Mr. Rose has an A.S. degree from Temple Junior College and a B.S. degree (Petroleum Engineering) from Texas A&M University.



**Andrew Shelton** is Engineering Manager for the Myers/Aplex Industrial Pump Division, part of the Pentair Pump Group, in Ashland, Ohio. He is responsible for the new product design and existing product upgrades for both the Myers and Aplex brand of reciprocating pumps.

Mr. Shelton has a B.S. degree (Mechanical Engineering, 1991) from Texas A&M University.

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### **IMPROVING MEAN TIME BETWEEN PUMP FAILURES**



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

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



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

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



**Morgan M.** (Morg) Bruck currently works for Marathon Ashland Petroleum in the Engineering Standards and Technical Support group that supports Marathon Ashland Pipeline and Marathon Ashland Petroleum's Light Products and Asphalt Terminals. He has worked with the specification, installation, and maintenance of rotating equipment as an engineer since January 1970. Mr. Bruck has had responsibility for the specification, installation, and maintenance of rotating equipment since 1985. He is also a member of the committees for API Standards 610, 674, and 676.

**Kevin W. Fontenot** is currently the Root Cause Analysis Leader at BP's Texas City Refinery. He began his career with Amoco at the Texas City Refinery in 1985 as a field machinist in the maintenance department. He accepted the position of Rotating Equipment Specialist at the Texas City Refinery in the Rotating Equipment Group. While in that group, Mr. Fontenot was certified as a Level 3 Vibration Analyst. In 1996, he transferred to the Texas City Amoco Chemical facility as the Maintenance Supervisor for the Aromatics Division. In 2001, Mr. Fontenot accepted the position of Turnaround Execution Coordinator for all turnarounds within the Aromatic's division at the Texas City Chemical facility. In 2003, he was promoted to his current role.

Mr. Fontenot graduated with an Associates Degree (Industrial Machine Technology, 1986) from San Jacinto College.

# DISCUSSION GROUP 11 on SEAL USER/MANUFACTURER ALLIANCES



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

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

# DISCUSSION GROUP 12 on MIXERS AND AGITATORS



Julien LeBleu, Jr., Coordinator, is the Principal Engineer for Rotating Equipment for Lyondell Chemical, in Lake Charles, Louisiana. He is responsible for all rotating equipment in the Lake Charles facility and has more than 30 years of experience in the field of rotating equipment. He has worked for General Electric Company as a technical director for the installation and maintenance of large steam turbine and generator sets. Mr. LeBleu is a licensed aircraft mechanic and has worked on both reciprocating and jet aircraft engines. He is a member of the International Pump Users Advisory Committee, has authored several articles, and has lectured at Pump Symposia. Mr. LeBleu received his B.S. degree from the University of Florida (1974).