

Turbomachinery Symposium Advisory Committee



Dara W. Childs has been Director of the Turbomachinery Laboratory since 1984 and holds the Leland T. Jordan Chair in Mechanical Engineering at Texas A&M University. He received B.S. and M.S. degrees (Civil Engineering, 1961, 1962) from Oklahoma State University, and his Ph.D. (Engineering Mechanics, 1968) from the University of Texas. He was named an ASME Fellow in 1990, and received ASME's Henry R. Worthington Medal in 1991.

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

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



Kazim Akhtar is the Department Manager for Mechanical Engineering of ABB Lummus Global, in Houston, Texas. His department is involved in the specification, design, selection, shop test acceptance, and startup coordination of rotating and static equipment for major refinery, petrochemical, and oil and gas projects.

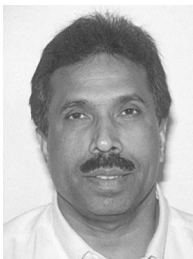
Mr. Akhtar received a B.S. degree (Mechanical Engineering) from Texas A&M University and an M.S. degree (Industrial Engineering, Management) from the University of Houston. He is an active member of API, AICHE, ASME, a registered Professional Engineer in the State of Texas, and a member of the Turbomachinery Symposium Advisory Committee.

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



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

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



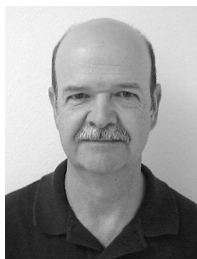
Gampa I. Bhat is Chief Machinery Engineer for ExxonMobil Chemical Company, in Baytown, Texas. As Lead Specialist, he acts as the focal point for the ExxonMobil Chemical Worldwide Machinery Network and is involved with the development of machinery strategies for new and upgrade projects. He is also involved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

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



Meherwan P. Boyce is Managing Partner of The Boyce Consultancy, in Houston, Texas. He has 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.



Steven Brewton 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.



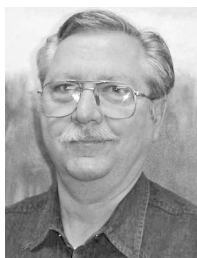
Paul C. Brown is the Director of Marketing within the Engineered Products Business Unit of the Elliott Company, located in Jeannette, Pennsylvania. A graduate Mechanical Engineer with more than 25 years of involvement in the project management, application, sales, and marketing of rotating machinery, 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.



John B. Cary 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.



Clifford P. (Cliff) Cook 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.



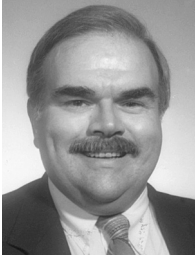
Roy E. Craddock III is a Senior Staff Machinery Engineer and Maintenance Technical Services Leader for Dow Chemical Company Texas City Operations, in Texas City, Texas. He is responsible for leading the diagnostic and maintenance activities for all critical equipment within Texas City Operations. Previously, 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.



Thomas R. (Tom) Davidson 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.



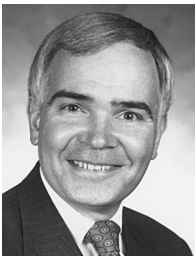
Michael J. Drosjack is a Senior Principal in the Rotating Equipment Engineering Department at Shell Global Solutions (US) Inc., in Houston, Texas. He is responsible for providing technical support for rotating and reciprocating machinery to Shell and Shell affiliated companies, worldwide, as well as 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.



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

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



William E. (Bill) Forsthoffer spent six years at the Delaval Turbine Company, as Manager of Compressor Project Engineering, where he designed and tested centrifugal pumps and compressors, gears, steam turbines, and rotary (screw) pumps. Mr. Forsthoffer then joined the Mobil Research and Development Corporation. For five years, he directed the application, selection, design, testing, site precommissioning, and startup of the Yanbu Petrochemical complex in Yanbu, Saudi Arabia. Following that, he returned to MRDC and established a technical service program for Mobil affiliates to provide application, troubleshooting, and training services for rotating equipment. He left Mobil in 1990 to found his own company, Forsthoffer Associates, Inc., to provide training, critical equipment selection, and troubleshooting services to the refining, petrochemical, utility, and gas transmission industries.

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



Erwin A. Gaskamp is a 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.

Robert F. (Bob) Heyl is a Staff Consultant in ChevronTexaco's Energy, Research, and Technology Company, in Bellaire, Texas. He is also team leader of the ChevronTexaco Machinery and Mechanical Systems Technology Rapid Execution network, and he is leader of the Mechanical Equipment Round Table attended by ChevronTexaco mechanical equipment personnel from around the world. Mr. Heyl has been with Texaco and ChevronTexaco for 32 years and is responsible for the design and troubleshooting of mechanical equipment internationally. His responsibilities include equipment application, specification, selection, installation, troubleshooting, and the development and promotion of new technologies throughout the company.

Mr. Heyl has a B.S. degree (Engineering Science) from Hofstra University and attended Columbia University. He is a Steering Committee member of the API Subcommittee on Mechanical Equipment, and is Chairman of API 674 Task Force and API 676 Task Force. He has also participated on API 682, API 614, and API 610.



Lil Kassie is presently Rotating Equipment Advisor for BP refining. He is located at BPs 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.



Rainer Kurz 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.



Mark J. Kuzdzal is the manager of Core Technologies at Dresser-Rand Company, Olean Operations, in Olean, New York. He is responsible for overseeing rotordynamics, materials, welding, solid mechanics, and acoustics disciplines. He has been with the company since 1988. Mr. Kuzdzal's areas of expertise are rotordynamics, bearing performance, field vibration issue resolution, and product/process development. He has coauthored six technical papers and holds two U.S. Patents.

Mr. Kuzdzal has a B.S. degree (Mechanical Engineering, 1988) from the State University of New York at Buffalo.



Terryl Matthews 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.



Scott C. McQueen 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.



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



Steven (Steve) O'Toole 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 Liquefaction 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.



Hiroaki Ohsaki is General Manager for the Turbomachinery Engineering Department of Mitsubishi Heavy Industries, Hiroshima Machinery Works, in Hiroshima, Japan. His department is involved in the marketing, R&D (providing direction), designing of centrifugal compressors, integrally geared compressors, mechanical drive steam turbines, and mechanical drive gas turbines for the petrochemical, oil refinery, and the upstream oil and gas markets. He joined Mitsubishi Heavy Industries in 1975.

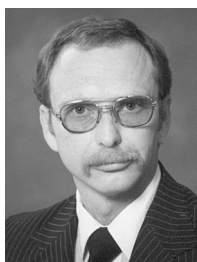
Mr. Ohsaki received a B.S. and M.S. degree (Mechanical Engineering) from Osaka University.

Bernard Quoix is with TOTAL, in Pau, France.



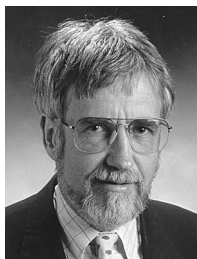
Peter C. Rasmussen is a Supervisor in the Gas & Facilities Division of ExxonMobil Upstream Research Company, in Houston, Texas. He is responsible for developing applications in the LNG and gas area as well as machinery support to the upstream companies. He began his career in machinery with General Electric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

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



Charles R. (Charlie) Rutan is 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.



Anthony J. (Tony) Smalley recently retired from Southwest Research Institute, where he held the position of Institute engineer. Now an independent consultant, he has more than 30 years of experience in machinery dynamics and performance. Dr. Smalley has made technical contributions in the control of vibrations, the analysis of bearings, the design of foundations, machinery condition monitoring, and diagnostics. He has worked on machinery and plants used by gas transmission, oil and gas production, petrochemical, and power industries to enhance reliability and cost-effective operation.

Dr. Smalley received a B.Sc. degree (Mechanical Engineering, 1963) and a Ph.D. degree (Mechanical Engineering, 1966) from the University of Nottingham in England. He is a Fellow of ASME and Secretary of the IFToMM Rotordynamics committee. He has published more than 100 technical papers and articles.



Donald R. Smith 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.

Stanley Stevenson is with Siemens Demag Delaval Turbomachinery, Inc., in Trenton, New Jersey.



Carroll (Chet) Stroh 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.



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

Prior to joining Texas A&M (1978), Dr. Vance held positions at Armco Steel, Texaco Research, and Tracor, Inc., and developed a Rotordynamics Laboratory at the University of Florida. He is currently conducting research on rotordynamics, damper seals, and bearing dampers. He has published a book, *Rotordynamics of Turbomachinery* (John Wiley, 1988), and more than 50 technical articles and reports. Dr. Vance is consultant to industry and government and has held numerous summer appointments. He organized an annual short course (1981-2004) for industry at Texas A&M on "Rotordynamics of Turbomachinery." He is co-inventor of several TAMU patents for pocket damper seals. Dr. Vance is a member of ASME and ASEE, and is a registered Professional Engineer in the State of Texas.



Hans Weyermann 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.

Corresponding Member

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