

## DISCUSSION GROUP T05 TURBOMACHINERY OPERATIONAL MAINTENANCE

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**Rainer Kurz** is Manager of Systems Analysis and Field Testing for Solar Turbines Inc., in San Diego, California. His organization is responsible for conducting application studies, gas compressor and gas turbine performance predictions, and site performance testing. He joined Solar Turbines Incorporated in 1993, and has authored more than 70 publications in the field of turbomachinery. Dr. Kurz attended the University of the German Armed Forces, in Hamburg, Germany, where he received the degree of a Dipl.-Ing., and, in 1991, the degree of a Dr.-Ing. He was elected as an ASME Fellow in 2003.

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**Joe Moreno** manages the Maintenance and Reliability Departments at LyondellBasell's Channelview, Texas facility. These departments provide skilled craft and engineering resources for the site. He graduated from Texas A&M University in 1989 with a B.S. degree in Mechanical Engineering and has worked in the petrochemical industry his entire career with a focus on maintenance and reliability of rotating equipment. Joe 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 start up, failure analysis, and providing technical evaluations during due diligence reviews.

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**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.

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**Bryan Barrington** is a 1994 graduate of Texas A&M University and currently works as a Principal Machinery Engineer in LyondellBasell's corporate engineering group. He is responsible for turbomachinery at locations along the Texas Gulf Coast.