

## DISCUSSION GROUP T19 HOT-GAS EXPANDERS

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**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.

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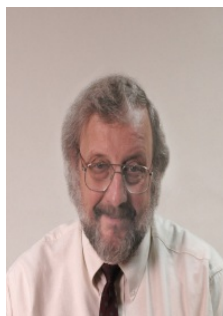
### **Robert Kranz**

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**Justin Kassie** is a rotating equipment engineer at BP's Carson Refinery with over 9 years experience. He holds a B.S. from Carnegie Mellon University in Pittsburgh, PA.

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**George Seamon** is a Principal Design Engineer, Expanders for Dresser-Rand Company, in Olean, New York. For the last 24 years, he has been responsible for the aerodynamic and mechanical design and development of hot gas expanders for FCC and nitric acid service. He also spends some time in the field diagnosing mechanical and performance problems. Prior to 1987, he spent six years on design of Dresser gas turbines and four years on the design of the GHH type hot gas expander. Before joining Dresser-Rand, George worked for 10 years with General Electric and Pratt & Whitney on heat transfer, aerodynamic, and mechanical design of the turbine section of jet engines. George graduated with a BSME/AE degree from Northwestern University (1967).

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**Don Shafer** has thirty five years of engineering and design team leader experience with thirty two years devoted to Turbo Machinery used in the Refining and Petro-Chemical Industry. Experienced in all phases of the design cycle, from concept to testing and installation of the machinery. Prior to joining RMS, held positions at Dresser-Rand, General Electric Oil & Gas, Conmec and Ingersoll Rand. As Senior Lead Design Engineer for FCC Expanders at GE Oil & Gas, Conmec and Dresser-Rand, responsibilities included execution of complete new Expander projects as well as re-rate / repair projects, Expander field installation, start-up and trouble shooting.

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