

**STEPHEN M. KOHAN, Ph.D.**  
**Chemical Engineer**

**SPECIALIZED PROFESSIONAL COMPETENCE**

Technical specialties include chemical equilibrium modeling, technical risk analyses, chemical process modeling, combustion, transport phenomena, energy and petroleum technologies, fluid mechanics, and heat transfer. Experience includes operating plant performance testing; applications of decision analysis to R&D program planning; technical and economic modeling of fossil fuel conversion technologies; technical risk analysis; experimental design and implementation for chemical processing technologies and for aerospace technologies; and computer applications to design and performance testing.

Recent work includes application of advanced electric utility technologies to solve power plant problems in steam path erosion in turbines and pipes, in air quality control ( $\text{NO}_x$ ), in improved condenser deaeration, and in boiler feedwater chemistry. Other work involved the preparation of performance testing procedures for boilers and cooling towers. Other recent experience includes an evaluation of electromagnetic filtration to remove exfoliated particles from the main steam path of a utility power plant; an analysis of indigenous fossil resources for an electric utility; and the application of electronic data interchange (EDI) for future submissions of data to the United States Environmental Protection Agency (EPA) by the regulated community, including an analysis of hardware and software options, data confidentiality and integrity, data certification, and coordination with other federal agencies and voluntary organizations (e.g., ANSI X12 and UN/EDIFACT). Recent experience includes the technical and market monitoring of a project to develop a whole-crude-fired radial turbine for cogeneration applications. The turbine and an associated burner offered superior environmental emissions characteristics (low  $\text{NO}_x$ ).

**EDUCATION AND PROFESSIONAL BACKGROUND**

- B.S. (Chemical Engineering), Columbia University (1963)
- M.S. (Chemical Engineering), Columbia University (1965)
- Ph.D. (Chemical Engineering), Stanford University (1969)
- Member, American Institute of Chemical Engineers
- Member, American Chemical Society

## **SELECTED REPORTS, PUBLICATIONS, AND INVITED LECTURES**

*Review of Expert Reports and Opinions Concerning an Explosion and Fire Aboard the MAERSK TOKYO on February 4, 1999, with S. Torbov and K. Clark, APTECH Report AES 03075112-4-1 (July 2003).*

*Reply Report Concerning the Engineering Design, Construction, and Operational Difficulties of the KFx Fuel Partners, L.P., Coal Beneficiation Plant at Gillette Wyoming, with C. Greene, APTECH Report AES 99123863-4-2 (July 2001).*

*Report & Analysis of the Engineering Design, Construction and Operational Difficulties of the KFx Fuel Partners, L.P., Coal Beneficiation Plant at Gillette WY, with C. Greene, APTECH Report AES 99123863-4-1 (June 2001).*

*Expert Report on the January 8, 1998, Fire at the Lonza, Inc. Fire Chemical Processing Plant, with K. Clark, APTECH Report AES 01034317-4-1 (June 2001).*

*Estimated Long-Term Costs for Providing Engineering Oil-Fired Backup at the Potrero Power Plant, with S. Nelson, APTECH Report AES 99113836-2-1 (March 2000).*

*Engineering Investigations and Analysis of the Incident at Sunray Energy, Inc., APTECH Report AES 99033655-4-1 (May 1999).*

*Reliability and Maintainability Analysis for the Suncor Energy, Inc. Millennium Project, with G. Grimsrud, APTECH Report AES 98043365-23-1 (February 1999).*

*Probability of a Total Power Blackout at the Upgrading Plant of Suncor Energy, Inc., APTECH Report AES 97073124-3-1 (October 1997).*

*Remaining Life Estimates of Motors 6KM-2A and 6KM-2B, APTECH Report AES 97032984-3-1 (April 1997).*

*Availability Analysis of Texaco, Inc.'s Petronius Platform, with J. Witt, APTECH Report AES 96052763-3-1 (November 1996).*

*Closeout of 1994 Audit of Upgrading Piping Inspection Program, APTECH Report AES 96032690-3-1 (July 1996).*

*Review Report on NO<sub>x</sub> Abatement for Boilers 31F-01, 31F-02 and 31F-03 in Utilities, with S. Torbov, APTECH Report AES 96012634-2-1 (February 1996).*

## **ADDITIONAL INFORMATION**

For more information regarding APTECH's personnel and services, please contact our Corporate Headquarters in Sunnyvale, California (USA) at 408/745-7000 or visit our website ([www.aptecheng.com](http://www.aptecheng.com)).