

STEPHEN M. KOHAN, Ph.D.

Chemical Engineer

Dr. Stephen Kohan has over 30 years of experience in industrial applications of chemistry and chemical engineering, catalytic processes, plant testing, fluid mechanics, risk analysis, mathematical modeling, accident and incident investigations, and litigation support for refineries and chemical plants.

SPECIALIZED PROFESSIONAL COMPETENCE

- Catalytic technologies
- Chemical process modeling
- Transport phenomena
- Energy and petroleum technologies
- Heat transfer and combustion
- Fluid mechanics
- Chemical analyses
- Chemical equilibrium modeling
- Technical risk analyses
- Computer simulations
- Fossil fuel conversion technologies
- Reliability and maintainability analysis
- Experiment design and implementation
- Consulting and expert testimony

EQUIPMENT

- Catalytic cracking units (fluid & fixed bed)
- Industrial boilers
- Pressure vessels
- Heat exchangers
- Industrial furnaces
- Hydroprocessing units
- Delayed cokers
- Crude and vacuum distillation units
- Coal gasification & liquefaction
- Hydrogen plants
- Process piping
- Cooling towers
- Sulfur recovery
- Ammonia plants
- Gas purification
- Pumps and valves

INDUSTRIES

- Petrochemical
- Chemical
- Offshore oil and gas recovery
- Power generation and cogeneration
- Petroleum refining
- Liquefied natural gas (LNG)
- Natural gas
- Synthetic fuels

RECENT WORK

- Remaining life estimates of refinery pressure vessels, heat exchangers, tanks, process piping and motors.
- Reliability and maintainability (RAM) estimates of flue gas desulfurization units, low-conversion refinery, and electric distribution systems.
- Investigation of environmental damage around chemical plant site and bulk station site of plaintiff oil company regarding insurance coverage issues for insurer defendants.
- Field and laboratory assessment of mercury contamination issues in a natural gas processing plant in the United Kingdom.
- Technical and market monitoring of a project to develop a whole-crude-fired radial turbine for cogeneration service.
- Investigation of deactivation of catalyst for steam methane reforming unit.
- Investigation of the catalyst poisoning of a catalytic oxidation unit.
- Audit of inspection practices of a refinery.

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)
- Senior Engineer, Mobil Research and Development Corporation
- Research Engineer, Chevron Research Company
- Manager, Energy R&D Planning, SRI International
- Project Manager, Electric Power Research Institute

- Member
 - American Chemical Society
 - American Institute of Chemical Engineers

SELECTED REPORTS, PUBLICATIONS, AND INVITED LECTURES

EPRI R&D on Biomass Thermal Gasification for Power Generation, Paper Presented at Energy from Biomass and Wastes VIII, sponsored by the Institute of Gas Technology, Hotel Royal Plaza, Lake Buena Vista, Florida (January/February 1984).

Prospects for and Performance of Wood Gasifiers, Energy Processing/Canada (with E.D. Oliver) (November/December 1983).

Basic Principals of Thermochemical Conversion, in Biomass Conversion Processes for Energy and Fuels (1981).

Recovery of Hydrocarbon-Like Compounds and Sugars from Euphorbia Lathyris, Paper Presented at the AIChE 89th National Meeting, Portland, Oregon (with D.J. Wilhelm) (August 1980).

Production of Liquid Fuels and Chemicals by Thermal Conversion of Biomass Feedstocks, Paper Presented at the 72nd AIChE Annual Meeting, San Francisco, California (with R.L. Dickenson) (November 1979).

Production of Methanol from Wood, Paper Presented at the Third International Symposium, Alcohol Fuels Technology, Asilomar, California (May 1979).

Comparative Economic Analysis of Chemicals and Synthetic Fuels from Biomass, Paper Presented Before the Division of Petroleum Chemistry, American Chemical Society-Chemical Society of Japan Joint Chemical Congress, Honolulu, Hawaii (with F.A. Schooley, R.L. Dickenson, and J.L. Jones) (April 1979).

ERDA, Placer Amex and Nissho-Iwai Sponsor SRI Study of Alaskan Coals, World Coal, 3, 6, p. 38ff (June 1977).

Clean Energy from Alaskan Coals, in Synthetic Fuels Processing: Comparative Economics (1977).

ADDITIONAL INFORMATION

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