Jeffrey L. Kosch

BACKGROUND SUMMARY:

More than thirty years of varied responsibilities including:

Work Process Technology	Quality, Six Sigma	High Shear Dispersion
Emulsion Polymers	Strong Ethic & Integrity	Milling applications
Mixing Technologies	Interpersonal Communication	Particle Size Technology
Fluid flow	Powder handling systems	Slurry systems
Drying equipment	Environmental Operations	Hazardous Chemicals
Explosive hazardous chemicals	Dynamics of Polymer Liquids	Sampling systems
Project Management	Automation	Detailed Process Design

AREAS OF ACCOMPLISHMENTS:

Conducted research on better solution to optimizing feed material to a reaction system. Researched options, interviewed, investigated, and selected the vendor and managed the implementation of a new process mixing design within a two-week time. The new process technology was quickly implemented into production facilities. The pilot plant operations were able to carry out experimentation that resulted in proper feed ratios, with a variety of chemicals. On-line viscosity process control feedback was one of many techniques that enhanced understanding.

Managed project for new platform involving starch co-polymer emulsions. Designed the system to obtain customer needs (process scalability, kinetics and chemistry studies), while minimizing cost. Worked with appropriate craftsmen to ensure safe and timely project installation. The products were manufactured for testing in a safe manner and allowed the project to proceed.

Performed as Project Representative responsible for designing, authorizing and installing a new venture pilot plant for composite molded articles meeting GMP principles. Worked with process engineers producing a detailed design and procuring appropriate equipment. The project provided a new marketing opportunity for The Dow Chemical Company. It was completed on time and patents were issued.

A number of projects involved the studying of the METHOCEL reaction processes and unit operations. During the course of these projects, experimental design was an important aspect. Attention to detail, hands on experience with many analytical instruments, persistence, and team efforts eventually led to much improved technology and understanding of the technology. The results were a number of Technology Center Awards for quality improvement, reactor optimization and millions of dollars in cost benefits.

An early career project, saved $10,000 annually by implementing energy-saving processes. Studied the air flows and steam heating systems and costs for use of low and high pressure steams. Designed a new plenum system, drew sketches for steel work, purchased new coils and necessary equipment, and managed implementation of the project. The system is still being used today, more than 30 years later.

PROFESSIONAL WORK EXPERIENCE:

Midland Engineering, Ltd. 2005 – Present

Self-Employed -- RETAP (Retired Engineers Technical Assistance Program for the State of Michigan); Analytical Analyses using a variety of ASTM methods 2003 - 2005

The Dow Chemical Company – Midland, Michigan 1972 – 2003

Research Leader – Senior Process Specialist – Emulsion Polymers
Responsible for building pilot plants and enhancing work process technology for the global business. Projects included improved automation, upgraded technologies, adding additional capacity, assisting in new product platforms, troubleshooting processes, etc.

Research Leader – Environmental
Responsible for procuring proper air permits and meeting State of Michigan regulations for many pilot and manufacturing plants. Also, responsible for compiling air modeling data and submitting reports to regulatory authorities.

Project/Research Leader – METHOCEL Department
Responsible for providing technical excellence and process research support to Dow's METHOCEL plant supporting 4,000 product applications globally.

Senior Product ion Engineer – Designed Polymers
Responsible as manufacturing representative for the Midland Latex Plant improving the plant via new and improved unit operations, capacity expansion, production optimization and automation of the entire plant.

Senior Production Engineer - SARAN Resins
Responsible for supervising personnel in the drying, storage and packaging of SARAN resins. Also, worked on projects that involved automation, capacity expansion, and design and introduction of new technologies.

EDUCATIONAL BACKGROUND:

Master's Degree – Chemical Engineering
Ohio State University
Columbus, Ohio

Bachelor of Science – Chemical Engineering
Ohio State University
Columbus, Ohio

Michigan Technological University
Houghton, Michigan

PATENTS:

Composite molding process technology

TECHNICAL TRAINING EXPERIENCE:

AICHE Process Design for Energy Conservation
Gas Fluidization
Project Management
Pneumatics Processes & Controls
Lubrication Fundamentals
AICHE Fire & Explosion Evaluation
AICHE Distillation Review
Chemical Engineering of Water
Air Pollution Control
Rheological Behavior of Polymeric Fluids with Laboratory Workshops (MIT)
Polymer Materials Science
AICHE On-Line Process Measurement
Introduction to Pulp & Paper Technology
Environmental Regulations
Introduction to Solids Flow
Pump Courses
MOD 5 Programming
TSCA Training
Overview of Metallic Materials
Flanged Connection Systems
Incineration Seminar by Smith Engineering
MSMS Catalog, Requisition, User List & Browse Courses
Introduction to Capital Estimating
Practical Statistics for Latex Research
Non-Reactive Relief Design
Engineering Technology System
Introduction to Phase I Engineering
Introduction to Polymer Colloids, Latexes & Emulsions – (MMI)
Solid Waste Management
Introduction to Hazard & Operability
AICHE Chemical Engineering Spreadsheets
Flammability and Explosion
Requirements of Review of Vendor Documentation for PCE
GPE Specs Training
User Interface for PPDS2 and AQUA2 DPS
Reactive Relief Design DPS
Standardized Cost Estimation System
Electrical Area Classification
DOWFAS Training
EMTS Training
Mixing Technology
Introduction to Global Project Methodology
Mixing Seminars – Silverson, Rushton & CD6 Turbine, and Gas Liquid Mixing
Small Projects Process

TECHNICAL TRAINING EXPERIENCE continue

Create Value Added Work Order
Work Order Originator
Seminars: Ingold pH and O2 measurement – Klinger Gasket Technology
Advances in Emulsion Polymerization and Latex Technology – (Lehigh Univ.)
Statistical Data Exploration Course
Six Sigma Greenbelt Project Leader Training Course

PERSONAL TRAINING EXPERIENCE:

Towards Excellence
First Line Supervisor
Right Way to Manage
Module I – What's Possible
Creating High Performance Teams
Time Management
How to Work with People
Powerful Business Writing Skills
How to Manage Stress
Managing International Relations
Presentation Skills Development
Financial Planning
Seven Management Tools
Writing Skills
MSMS
Computer courses – MASS 11, 20-20, Vivid, Excel, TKSolver
Influencing Skills
Digital Command Language
Microsoft Project
Microsoft Access

PUBLICATIONS & PRESENTATIONS:

Thirty-Seven CRI Reports
Technical Memoranda
Presentation to Amatek Corporation – *Quality Control of Saran Resins*
Presentation to Asahi Dow – *Saran Resins Drying Operations*
Air Permits
Standard Operating Procedures & Manuals for many processes
Poster Presentations – Latex Pilot Plant Operations Improvements
Dow Chemical Mixing Manual "Rotor-Stator Mixing"

PROFESSIONAL AFFILIATIONS:

American Institute of Chemical Engineers