

# John L. Petering, P.E.

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Registered professional engineer with outstanding capabilities to enhance and satisfy clients; possess excellent communication, organization, and creative engineering skills. Specialize in creating imaginative, innovative process additions that are easily adapted and operated by plant personnel. Apply state-of-the-art chemical engineering solutions to technical problems.

## TOAST™

Invented a patented (*patent #5, 545, 326, August 13, 1996*) method and apparatus for the treatment of concentrated wastewater. (*Evaluated by the University of Minnesota Biosystems and Agricultural Engineering Department and partially funded by the Minnesota Department of Agriculture and the EQIP Program.*)

## WATER AND AIR POLLUTION CONTROL R & D Management

**New Technology**—Developed R & D and plans for air pollution control using ammonia scrubbing. Created biological model for pure oxygen waste water treatment using activated bacteria and dried bacteria. Designed municipal waste water treatment plants using pure oxygen, including New Orleans, Muscatine, and Detroit.

## FOOD PROCESSING

### Process/Project Operations

**Vegetable Oil Refinery**—Expanded the refinery capacity from crude oil filtration, caustic refining, and hydrogenation and deodorization. Provided fatty acid recovery system plans. Evaluated cottonseed operations (*for World Environmental Council [USAID] at Alexandria Oil and Soap Company, Alexandria, Egypt, 1995*).

**Acidulation**—Provided aerobic reactor and waste water process to meet environmental specifications.

## OILSEED SOLVENT EXTRACTION/UTILITIES

Provided state-of-the-art improvements (including PLC) that reduced energy costs and hexane losses.

## EQUIPMENT FABRICATION

Design heat exchangers, distillation towers, mixers, and process vessels, and arrangements for manufacturing.

## MINERALS/COAL/SYNFUELS

Created and presented sales proposals for Traylor and Loesche heavy machinery crushers, ball mills.

## CRYOGENICS/INDUSTRIAL GASES

### Process Design Engineering

Converted air separation plants to computer control. Designed methanol synthesis and steam reformed hydrogen generators. Designed helium and hydrogen purification plants using ammonia and cryogenic processes. Designed liquid natural gas (LNG), base load and peak shaving plants. Patented liquid helium container (*patent # 3, 698,200, 1972*) for ocean transport and authored minor papers.

### Engineering Concepts (self-employed)

Clients include *World Environmental Council, Honeymead Products Company, Crown Iron Works, Food Sciences, Inc., Mid-States Mechanical, Inc., Judson Iron, General Resource Corporation, Inc., and Polybac, Inc.*

### Honeymead Products Company, Mankato, MN

*Principal Engineer*

Aided client to win quality award from Shed and Frito-Lay.

### GATX-Fuller Company, Bethlehem, PA

*Senior Sales Engineer*

Coal and limestone grinding.

### Air Products & Chemicals, Inc., Allentown, PA

*Assistant R & D Manager/Principal Engineer*

Initiated R & D for the Largo, Florida waste water treatment plant, winning 2nd place in the *Chemical Engineering Magazine Awards*.

### Esso Research and Engineering Company, Inc.

*Floram Park, NJ*

*LNG Task Force Process Engineer*

### American Cryogenics, Inc., Atlanta, GA

*Process Engineer*

## EDUCATION

**Lehigh University**—M.S. Chemical Engineering

**Georgia Institute of Technology**—BChE

