
An Intensive Short Course on

High-Pressure Tubular Ethylene Polymerization Technologies

Course Overview: This course is intended for engineers and research scientists who are actively involved in high-pressure LDPE technologies. The subject matter includes a balance of theory and hands-on our LDPE Tubular Simulator. A user-friendly, interactive software is used to demonstrate the design, operation and optimization of high-pressure tubular LDPE reactors.

The Course can be offered at our Premises in Thessaloniki or/and in-house at the industry's site. The course is generally given over a period of two or three days, and can be tailored to respond to the clients' needs and requirements. Course notes are handed to the participants free of charge.

The total charge for attending the Course depends on the number of participants. Contact us if you would like additional information or want to attend one of the several courses we offer in Polymer Reaction Engineering, e.g.,

- ✓ **Introduction to Polymer Reaction Engineering**
- ✓ **Particulate Polymerization Processes**
- ✓ **Thermodynamic Considerations of Polymerization Processes**
- ✓ **On-line and Off-line "Polymer Quality" Measurements, Process Optimization and Control of Polymerization Reactors**
- ✓ **Polyolefin Reaction Engineering, etc.**

A brief overview of the high-pressure LDPE course is given below.

Course Content

First Day

- 09:00 – 12:30
- Introduction to High Pressure LDPE Manufacturing
 - High-Pressure Free-Radical Ethylene Polymerization Kinetics
 - Molecular and End-Use Properties of LDPE and EVA
 - Free Radical Ethylene Copolymerization Kinetics
 - Thermodynamic and Transport Properties
 - Mathematical Modeling of LDPE Tubular Reactors
 - CAD/CAM of High-Pressure LDPE Reactors
 - Model Tuning and Parameter Estimation
 - Open-Loop Reactor Optimization
- 13:00 – 14:00** **Break**
- 14:00 – 17:00
- Software Demonstration

Second Day

- 09:00 – 12:00
- Software Training & Applications
 - Simulation Examples
- Discussion and Questions
- 12:00 – 13:00** **Break**
- 13:00 – 17:00
- Training on the LDPE Tub Simulator

Lecturer and Contact Person:

Professor Costas Kiparissides

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He is a recognized expert in modeling and optimization of polymerization reactors. He has published numerous papers on the subject and has been a consultant for major polyolefin industries world-wide.