

## Post-Conference Event

International Training Program (TechnoBiz)

# Profile Extrusion

## Design and Advanced Processing

31 March 2010, Impiana KLCC Hotel, Kuala Lumpur, Malaysia

This training workshop is intended for engineers, die designers, Setup Technicians, Operational Personnel who want to learn the scientific aspects of Profile Extrusion. The objective of the program is to teach the participants how to setup a Profile extrusion process to replicate products from run to run, the key aspects of safe operation of the line both upstream and downstream and key operating variables. The participants will learn the basic and intermediate aspects of Die Design and Sizing. An emphasis on key processing variables will lead to Advanced Processing Techniques enabling the participants to apply these to the everyday extrusion process. An open forum at the end of the Troubleshooting Session will enable participants to bring their daily processing problems and receive direction for solutions.

### Program Outline

#### 1. Introduction

- Product Design
- Part Design Considerations
- Thermoplastics ( Commodity)
- Thermoplastics (Engineering Grades)

#### 2. Equipment

- Extruder Components
- Extruder Requirements
- Importance of Controls
- Monitoring Devices

#### 3. Profile Die Design

- Types of Dies
- Materials for construction
- Drawdown & Land Length
- Land Length Ratios

#### 4. Tooling Development

- \* Balancing Velocities
- \* Modifying Techniques
- \* Processing Conditions
- \* Tooling maintenance

#### 5. Sizing

- \* Free Sizing
- \* Calibration
- \* Location of Vacuum/ cooling
- \* Drawdown ratios

#### 6. Troubleshooting

- \* Dissect the Extrusion Process
- \* Use of Statistics to validate Process
- \* Root Cause Analysis
- \* Open Forum for Extrusion Problems

#### Program Instructor Daniel Cykana

**Daniel Cykana**- Chief Consultant for Extrusion Solutions, LLC. Daniel Cykana has devoted his career of 45 years in the plastics extrusion industry. Previously with Bemis Mfg. Co for 31 years as Director of Engineering for the ATG (Advanced Technology Group) At Bemis Mfg. he mentored the Engineering Staff in Product Design, Die Design, Process Improvements and Extrusion Optimization. Daniel has co-authored 16 patents relating to plastics in both utility and products. Daniel has been involved with the Society of Plastics Engineers for the past 30 years, serving as Extrusion Board of Directors for 14 years, Chair, Technical Program Chair, and International Chair. Recently he competed a 3 year term of Vice President of the Executive Committee for the SPE. He has written numerous articles on Plastics Processing and is co-author for the SPE's [Guide on Extrusion Technology & Troubleshooting](#). Daniel has given lectures around the world sharing a scientific approach to Profile Extrusion combined with empirical data.

#### Who should attend this seminar?

process engineers, setup technicians, manufacturing engineers, operational personnel involved in the Profile Extrusion operations; engineers responsible for the design of the extrusion process complex, die design and troubleshooting; technical service personnel from resin suppliers that need to solve extrusion problems and optimization of Profile Extrusion Process; extrusion sales personnel that need to sell Profile Extrusion products

**Registration Fee / Person:**  
350 US\$ (before 15 February 2010)  
400 US\$ (before 15 March 2010)  
550 US\$ (after 15 March 2010)

Registration fee includes training documentation and refreshments on the training day with lunch. Payment is required with registration.

Program agenda: 09:00-17:00

Language: English