

Blown Film Extrusion Seminar

In association with Rauwendaal Extrusion Engineering, Inc.



This 3-day program provides a broad overview of blown film extrusion, including materials, hardware, and processing methods. The DRJ Blown Film Lab is a versatile training and R&D environment, which houses a 3 layer and mono-layer blown film line used for hands-on workshops during the seminar, accompanied by a variety of state-of-the-art quality assurance equipment. Upon completion, attendees will be able to:

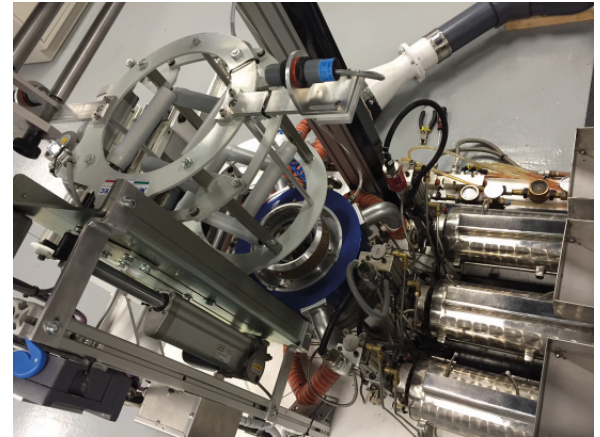
- Describe how all parts of an extrusion line interact with plastic material
- Identify various polymer materials used to produce blown film and discuss film properties
- Discuss in detail the hardware specific to blown film processing
- Describe how bubble geometry creates the molecular structure that influences film properties
- Troubleshoot both extruder and film problems



Spacious, fully stocked lab ideal for training on the basics of blown film extrusion and beyond

Hands-on Workshops

Each workshop is done from these four perspectives: Resin Handling, Machine Startup/Running, Web Handling and QC Film Testing. Each day increases the operational task difficulty for a 3-layer machine. Air Ring adjustment and QC testing tasks are part of every workshop.



- Day 1: Blown Film Safety, Machine Orientation, Setup/Operation for a monolayer structure with 2 components
- Day 2: Oscillating Nip Setup and Benefits, Handling Job Transitions, and the "Thinnest Film" Competition
- Day 3: Running and transitioning coex structures including property testing of two structures with swapped core and skin layers

What the attendees will learn:

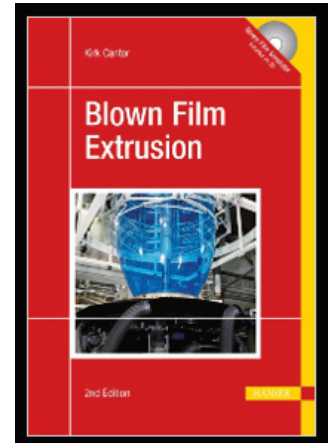
- Hardware systems on an extruder and the functions that the extruder performs on the plastic material
- Various polymers used to produce blown film, including the rheological and solid state properties of these polymeric materials
- Upstream and downstream hardware specific to blown film extrusion
- Bubble geometry and the process parameters used to create specific bubble shapes
- Control systems, both manual and automated, for maintaining product targets
- Process/structure/property relationships in blown film: how bubble geometry affects molecular structure and film properties
- Basic blown film coextrusion principles
- How to solve both extruder and film problems

Accompanying Blown Film Extrusion Book

As a companion to this seminar, the book “Blown Film Extrusion” is included for attendees.

From hardware and materials through processing and properties, this book presents a broad coverage of blown film extrusion and ensures a useful balance of theory and practice. This book explains certain effects in the blown film process so readers are better able to troubleshoot and improve their operations.

Companion Software: The Blown Film Extrusion Simulator enhances the learning process. This software was developed to teach blown film extrusion equipment operation and processing principles.



Who should attend:

- Operators
- Set-up technicians
- Process engineers
- Quality control personnel
- Floor supervisors
- Plant managers
- Film Purchasers

Seminars are available 1-2 times per year taught by industry specialists. All of our seminars include lunch each day which takes place in our outdoor break area shown below. We also have a challenging professionally built putting green for attendees to use (equipment provided) during lunch!



Putting green for attendees during lunch break.



Outdoor break area is a relaxing space for lunch or coffee breaks

Meet the instructor

Kirk Cantor, Ph.D.

Professor, Plastics & Polymer Technology Education
D., Polymer Science, The Pennsylvania State University
S., Polymer Science, The Pennsylvania State University
S., Aerospace Engineering, University of Maryland

Academic Experience

- Pennsylvania College of Technology, Plastics and Polymer Engineering Technology, 1990-present
- Penn College Now Instructor, 2005-present
- Over 50 company and industry seminars

