

# Sheet Extrusion Technology



Paulson's fully interactive training program explains the relationship between machine controls, plastic behavior and the sheet extrusion process in full motion video, text, audio and graphic animation.

A comprehensive seven lesson CD training program designed specifically for the training needs of the sheet extrusion plant. Designed to be used in conjunction with our nine lesson single screw extrusion program. Personnel from machine operators through process engineers will find valuable information to help make their work and the sheet extrusion process more efficient.

Recommended For: Set-up Personnel, Machine Operators, Production Supervisors, Process Engineers, Extrusion Technicians

## Sheet Extrusion Technology Lessons

- 1**  
Lesson 1: *The Sheet Extrusion Line: Parts and Operation*  
An overview of the machinery that makes up the sheet line and how it operates. Topics include roll stand designs and operation, design and operation of the chill rolls, types of gauging systems, static discharge systems, design and operation of trimmers, pull rolls, winders and cutters.
- 2**  
Lesson 2: *Sheet Extrusion Dies*  
This lesson discusses the various sheet die design advantages and disadvantages and their construction including the manifold design, heaters, restrictor bars, deckle bars, and types of die lips including fixed lip, adjustable lip and flexible lip.
- 3**  
Lesson 3: *Controlling Plastic Flow in the Die*  
Teaches the design and operation of the T-type, the Coathanger, and the Curved Manifold sheet die designs, as well as how the restrictor bar and the die gap adjustment are used to control plastic flow through the sheet die. Feed block and co-extrusion dies are also discussed.
- 4**  
Lesson 4: *Plastic Behavior in the Sheet Extrusion Line*  
Topics include plastic behavior as it affects finished sheet quality as the plastic travels from the sheet die through the downstream sheet line. Molecular orientation, die swell, the effects of roll speed and roll cooling, how cooling affects semi-crystalline plastics, uniaxial and biaxial orientation and annealing are all discussed. The lesson also discusses the fundamentals of process control of the sheet line.
- 5**  
Lesson 5: *Pre-Start, Start-up, and Steady State Operating Procedures*  
Takes the student through the process of starting up the sheet extrusion line safely and efficiently, starting from a power-off, cold extruder. The goal is to achieve steady state operations, monitoring machine settings and product properties, as quickly and efficiently as possible.
- 6**  
Lesson 6: *Safety and Shutdown Procedures*  
Demonstrates how to safely shut down the sheet extrusion line at the end of a production run. This lesson also discusses safety principles, including proper personnel apparel and recommended operating procedures around the machinery, in the sheet extrusion plant.
- 7**  
Lesson 7: *Troubleshooting the Sheet Extrusion Line*  
This lesson demonstrates and provides techniques for solving many common problems when operating the sheet extrusion line. Both product defects and their cause as related to machine control settings and process variations are discussed. Each problem is analyzed in a systematic manner and solutions are presented.



## PAULSON'S INTERACTIVE LEARNING SYSTEM

- ◆ **More Effective Training:** Get a 40% increase in knowledge retention and comprehension using interactive technology.
- ◆ **Scheduling Flexibility:** Training is available to all shifts, 24 hours a day without affecting production.
- ◆ **Automatic Record Keeping:** You can test and track employee progress automatically.
- ◆ **No Instructor Required:** Fully interactive format provides either a self-paced, one-on-one or classroom learning environment.



- ◆ **Reduced Training Costs:** Train on company time without loss of production. No dedicated instructor, no overtime and no overhead add up to large savings.
- ◆ **Increased Motivation:** Immediate feedback and personal involvement are key factors in training effectiveness.
- ◆ **Complete Curriculum:** The interactive library provides a complete career path curriculum for all employees.

To sign up for a  
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system demonstration  
in your plant,  
call  
1-800-826-1901.

