Sheet Extrusion Seminar, May 21-22. 2012

Introduction
• Basic extruder components
• Screw, barrel, and feed system
• Grooved feed extruders
• High speed extruders
• Screw drive systems
• Breaker plate and screens
• Gear pumps
• Heating and cooling
• Instrumentation and control

Important polymer properties
• Melt flow properties
• Thermal properties
• Viscous heat generation
• Optimizing process conditions
• How to set process conditions
• Orientation: what is it?
• How to control orientation

Requirements for efficient extrusion
• Efficient machinery
• Efficient operation
• Efficient changeover
• Maintenance
• Resin quality
• Training
• Statistical process control
• Design of experiments
• Data acquisition system
• Instrumentation and control

Functional aspects
• Solids conveying
• Plasticating
• Melt conveying
• Mixing
• Energy efficiency

Screw Design
• Standard extruder screw
• Barrier type extruder screws
• Multi-stage screws for venting
• Mixing screws

From head to sheet die
• The head adaptor
• The screen changer
• The choke valve
• The gear pump
• The feed block

The flat sheet die
• Various die configurations
• Deckling options
• Die adjustments
• Auto die lip adjusters

The cooling roll stack
• Roll stack configurations
• Roll face and diameter
• Cooling roll construction
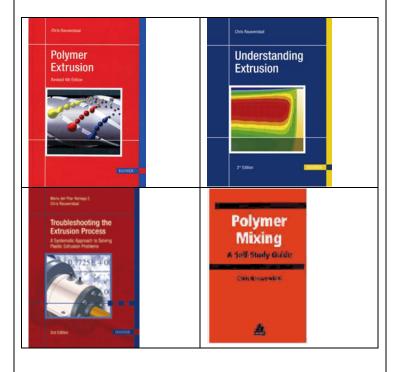• Roll stack actuators and controls

Downstream equipment
• Pull roll (haul-off) unit
• Cooling rack and other cooling methods
• Sheet slitters
• Gauge scanners and monitoring systems
• Sheet coating options
• Lamination for decoration and barriers
• Sheet accumulators
• The winding system
• Extrusion control systems
• Safety
• Start-up and shut down procedures
• Pre-start setup procedures and checks
• Maintaining steady state conditions
• Stringing up the roll stand the correct way
• Process parameters
• Maintenance

Troubleshooting sheet extrusion problems
• Requirements for efficient troubleshooting
• Troubleshooting tools and techniques
• Surging
• High melt temperature
• Sheet defects
• Case studies

Books authored by Chris Rauwendaal and available with registration of any seminar at discount:

• Polymer Extrusion
• Understanding Extrusion
• Troubleshooting the Extrusion Process
• SPC in Injection Molding and Extrusion
• Polymer Mixing
• Mixing in Polymer Processing

Books are offered at a discount only if ordered with a seminar and will be delivered at the seminar.

The course fees are:	Prior to April 20	April 21-May 4	After May 4
Blown Film Troubleshooting:	$795.00	$850.00	$950.00
Sheet Extrusion:	$795.00	$850.00	$950.00
Foam Extrusion:	$1095.00	$1145.00	$1245.00
If taking 2 courses:	-$100.00	-$100.00	-$100.00
3rd attendee discount (5%):			
Understanding Book ($60.00)			
Troubleshooting Book ($105.00)			
Polymer Extrusion ($105.00)			
Polymer Mixing ($70.00)			
SPC in Injection Molding and Extrusion ($105.00)			
Thermoplastic Foam Extrusion ($70.00)			
A Practical Guide to Blown Film Troubleshooting ($125.00)			
Total:			

A 5% discount will be given for the 3rd and up attendees from the same company. The course fees include lunch for each day and the handout material.

Cancellations: A refund, less $100.00 cancellation fee, will be made if the registration is cancelled in writing by or on April 20, 2012. REE Inc. reserves the right to cancel one or more seminars or substitute instructors. Should this occur the attendees will be notified. We do not rake any responsibility for penalty fees or any other cost that may be incurred due to cancellation. We recommend that you book travel with refundable fares. Registrants who fail to attend are liable for the fees of the course registered for.

Fax registration to: 530-269-1084 or register online at www.rauwendaal.com

Name:	
Title:	
Company:	
Billing Address:	

City:		State:	
Country:		Zip:	

Phone:	
Fax:	
E-Mail:	

Charge:	Visa ☐	Mastercard ☐	American Express ☐

PO# or CC#		Exp.:	CVC:

Rauwendaal ©
Extrusion Engineering, Inc.
10556 Combie Rd # 6677. Auburn, CA 95602-8908