Moldex3D
MOLDING INNOVATION

Latest Development in Long / Short Fiber Reinforced Plastics Applications, Processing Techniques and Simulation Technology

Limited Seats. Register Now!

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Course Introduction

Update your design and manufacturing options in fiber reinforced plastics with a condensed review of fiber orientation theory, material selections and process advancements. Polymer processing expert will give insight on latest fiber reinforced plastics developments, their expected benefits and future applications. Short and even long fibers have already been widely used in automotive, consumer and industrial applications. Adding glass or carbon fibers into plastic materials reinforces the mechanical and thermal properties. The maximum strength and the impact properties could be dramatically increased by raising the fiber length. However, these fiber-related improvements in property and shrinkage behavior heavily depend on the fiber orientation. In order to determine the performances of injection-molded parts and aid the design of the mold, part, and the selection of processing conditions, the fiber orientation must be accurately predicted.

Participants

Ideally suited for all those with a need to keep aware of latest advances in multi-material injection molding technologies and CAE software applications.

Course Information

Date：Please refer to official website

Organizer ：CoreTech System

Contact ：mkt@moldex3d.com

Time	Topic
60 min	Registration
	Long /short fiber applications in plastic processing
	Fiber reinforced part design and processing considerations
	Long /short fiber orientation theory and composite property models
	Fiber orientation and product mechanical property measurement techniques
	Using CAE analysis to predict the outcomes of product
	Case study : Meeting spec and strength requirement How to resolve unwanted warpage and weldline
20 min	Q & A

*The agenda is subject to changes.

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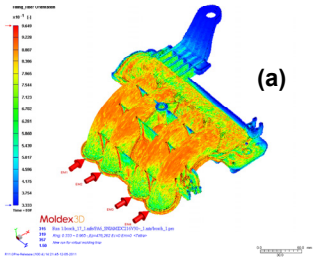
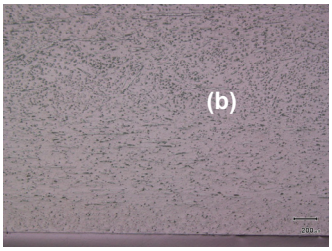
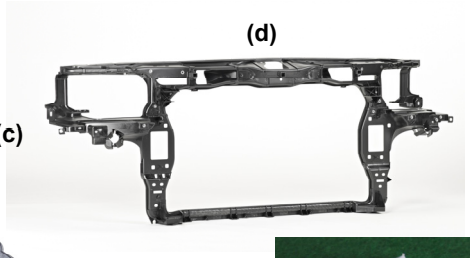
Course Content

We will begin with introduction and applications of long / short fiber-reinforced plastics in this seminar. We will then discuss the sources and strategies dealing with common defects unique to fiber products. The fundamental theory of fiber kinetics and micromechanical models will be covered along with fiber orientation measurement techniques. The attendees will also understand the importance of advanced CAE analysis technique can bring to every stage of product design and manufacturing process. At the end, we will learn from case studies on how to optimize the design of a long fiber-reinforced plastic product.







Goals

- Lean how to estimate fiber orientations to gain strategic benefits by adopting CAE incorporated design.
- Have an overview on the design work flow from part geometry all the way to dimension accuracy and mechanical properties.
- Speed up your fiber product development with a clearer view on most important design considerations and processing controls.

(a) Fiber orientation simulation results
(b) Fiber orientation from a product cross section
(c) Industrial part using long fiber plastics
(d) Front –end carriage using long fiber plastics

Instructor

Shih-Po Sun, Ph.D.

Current Position： Senior engineer in Technical Research Division of CoreTech System Co., Ltd.

Education：PhD in Polymer Science from the University of Connecticut

Research Areas：polymer rheology, processing, and properties, polymer composite, biomedical materials, degradable polymers, and plastics applications in industrial design

Dr. Sun has researched parenteral drug packaging in Eli Lilly and Company. He has also worked with Teleflex Medical to develop a fully absorbable bone graft composite. He is now a senior research engineer supporting the development of advanced injection molding CAE software and also in charge of material testing and measurement in Coretech System company.

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