

# Design of Food Extrusion Dies

THAILAND | 20 - 21 JULY 2023

Program may be subject to minor changes. Some topics may be substituted depending on the interests of participants.

## DAY ONE

Thursday, 20 July 2023

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8:15	Introduction
8:25	Basic Extrusion Principles
9:15	An Introduction to Rheology
10:00	<b>Morning Break</b>
10:15	Understanding Viscoelasticity
11:00	Tutorial #1 – Elastic Effects
11:10	Basic Principles of Die Design
11:40	Derivation of the Die Conductance Equation
12:15	<b>Lunch</b>
13:00	Tutorial #2 – Basic, Quick Die Calcs & Tutorial #3 – Equivalent Dies
13:30	Extrusion Die Capacity Models
14:00	Tutorial #4 – Machining Accuracy & Tutorial #5 – KT vs. Area
14:30	The Entrance Correction
15:00	<b>Afternoon Break</b>
15:15	Tutorial #6 – Entrance Effects & Tutorial #7 – Bagley Correction
15:45	Die Plate Wear & its Influence on Product Quality
16:30	<b>Close Day One</b>

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## DAY TWO

Friday, 21 July 2023

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8:15	Review & Questions from Day One
8:30	Tutorial #8 – Cone Angle Effect
8:45	Classification of Dies
9:15	Dies with Non-Uniform Geometry
10:00	<b>Morning Break</b>
10:15	Tutorial #9 – Flow Balancing & Tutorial #10 – Product Curvature
10:45	Design of Primary Dies
11:15	Tutorial #10 – Design & Operation of a Primary Die
11:45	Tutorial #11 – Conductance Matching (Multiple Shapes)
12:15	<b>Lunch</b>
13:00	Co-Extrusion Technology
13:45	Die Design Procedure
14:15	The Design of Dies for High Moisture Extrusion Cooking
15:00	<b>Afternoon Break</b>
15:15	Product Cutting Systems
15:45	Tutorial #12 – Application of the Resistance Factor Method
16:00	Post-Extrusion Processing & some Specialty Dies
16:30	<b>Close of Course</b>