



ALUMINUM
EXTRUDERS
COUNCIL

OPEN
to
Nonmembers!

Register by
OCT. 13TH
for Best
Savings!
(See registration form.)

Process Optimization Workshop & Advanced Die Clinic

Advance Your Understanding of the Aluminum Extrusion Process

November 3 – 6, 2025



Marriott DFW Airport South

Fort Worth, Texas

members.AEC.org/2025-POW-ADC

Process Optimization Workshop & Advanced Die Clinic

NOVEMBER 3 – 6, 2025 • Fort Worth, Texas



Visit members.aec.org/2025-POW-ADC for schedule and program details and updates as they become available!

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The Aluminum Extruders Council will be presenting an opportunity to combine **two** important workshops to advance the understanding of the aluminum extrusion process with the co-located Process Optimization Workshop (POW) and the Advanced Die Clinic in Fort Worth, Texas!

The two programs provide a clear, multidimensional understanding of how to optimize the entire extrusion process. Combined with more advanced die technology concepts, the curriculum yields valuable technical and operational improvements significantly impacting the bottom-line. The program will provide tools and strategies to drive improvement, prioritize goals, and execute plans effectively.

The combined program emphasizes how process and die functions interconnect, promoting greater collaboration between teams and driving **measurable improvements in production efficiency, quality, and overall performance.** Key topic overlap between the two programs provides the opportunity to understand how each aspect affects the other, fostering cooperation between die and process teams to generate value and a **tremendous return on investment** for owners.

Why Attend Both?

- Save money, time and travel
- Get a comprehensive understanding of the extrusion process and how to optimize operations
- Discover how to make data work for you
- Determine root causes of extrusion and die issues
- Get a deeper, more technical understanding of die and overall extrusion operations
- Learn how to identify and troubleshoot problems *plus much more!*

Who Should Attend?

Anyone who wants a better understanding of how to optimize the extrusion process and die operations will find this co-located program valuable, including:

- Process Engineers and Technicians
- Presidents and Owners
- General Managers
- Chief Executive Officers
- Extrusion Managers
- Die Managers and Experienced Technicians
- Operations Managers
- Plant Managers
- Technical Directors
- Quality Managers
- Product Development Managers
- Sales Managers, and more!

Hotel Information



AEC 2025 Press Optimization Workshop and Advanced Die Clinic
Marriott DFW Airport South Hotel

4151 Centreport Drive
Fort Worth, TX 76155

Online Reservations:
members.aec.org/2025-POW-ADC

Phone reservations:
817.358.1700

(Please mention the AEC POW and Advanced Die Clinic to receive the special rate and book in our block.)

The Aluminum Extruders Council has reserved a block of rooms for AEC members for this event at the special rate of **\$190 per night** (plus taxes and fees) until **October 13, 2025**. After that date, rooms may not be available and will

be filled as available at the prevailing rate, which may be significantly higher. Book your room as soon as possible to ensure you receive the special rate in the AEC block.

Transportation information:

A complimentary airport shuttle is available. Parking is free.

Process Optimization Workshop

NOV. 3 – 5 (Mon.–Wed.) • Fort Worth, Texas

Visit members.aec.org/2025-POW-ADC for schedule and program details and updates as they become available!

The Process Optimization Workshop has been restructured and improved to provide a deeper and more comprehensive examination of the extrusion process, equipment, and methods for optimizing the extrusion process, incorporating key die topics.

This program is critical for those more interested in understanding the process and techniques to apply “on-the-floor” for optimization and troubleshooting purposes. This unique workshop will focus on “how it all fits” – marrying scientific concepts with practical interpretation to achieve optimum results.

Attendees will gain knowledge, practical tools and frameworks to take back to their companies to:

- Develop actionable solutions
- Pursue continuous improvement, and
- Implement sustainable performance gains.

Process Optimization Workshop Topics

The following concepts and topics will be delivered by extrusion industry veterans with decades of experience discovering solutions for optimizing the extrusion process from a variety of perspectives.

- **Safety Best Practices**
- **Standards, Tolerancing, and Market-specific Requirements**
- **Extrusion Billet Production** – Mining, Smelting and Remelting, Casting raw materials, equipment and processes, Alloys and Tempers.
- **Die Use “Overview”** (delivered by Advanced Die Clinic instructors)
- **Process Conditions & Optimization Overview** – Customer and Extruder expectations; following well-established, holistic, documented processes, procedures and practices enabling consistent operational shape control and material performance.
- **Tools** – Understanding unit pressure, billet length and temperature affects on container friction and deformation; key elements to achieve stable and reliable properties; limit diagrams, pressure and speed curves; quench curves, Suppliers/Extruder/Customer Partnerships, and much more.
- **Thermomechanical Processing and Temperature Measurement**
- **Artificial Aging**
- **Upset and Metal Flow**
- **Systems Discussions** – Log, Die, Press, Handling, Lubrication, Aging, Basket automation, and packaging.
- **Data** – Structure and using data to make decisions.

AEC reserves the right to alter the program and substitute speakers as needed.

PROGRAM EVENT Overview At a Glance

MONDAY, NOVEMBER 3

- 1:00 p.m. – 5:00 p.m. **Registration Opens**
- 5:30 p.m. – 7:00 p.m. **Welcome Happy Hour & Tabletop Displays**
Dinner on your own

TUESDAY, NOVEMBER 4

- 7:00 a.m. – 8:00 a.m. **Breakfast**
- 7:00 a.m. – 5:00 p.m. **Registration Opens**
- 8:00 a.m. – Noon **Process Optimization Workshop – DAY 1**
- Noon – 1:00 p.m. **Lunch**
- 1:00 p.m. – 4:30 p.m. **Process Optimization Workshop (continued)**
- 5:00 p.m. – 6:30 p.m. **Reception with Tabletops**
Dinner on your own

WEDNESDAY, NOVEMBER 5

- 6:30 a.m. – 7:45 a.m. **Breakfast**
- 6:30 a.m. – 4:30 p.m. **Registration Opens**
- 7:45 a.m. – Noon **Process Optimization Workshop – DAY 2**
- Noon – 1:00 p.m. **Lunch**
- 1:00 p.m. – 4:30 p.m. **Advanced Die Clinic – DAY 1**
- 4:30 p.m. – 6:00 p.m. **Happy Hour Reception**
Dinner on your own

THURSDAY, NOVEMBER 6

- 7:00 a.m. – 8:00 a.m. **Breakfast**
- 7:00 a.m. – 10:00 a.m. **Registration Opens**
- 8:00 a.m. – Noon **Advanced Die Clinic – DAY 2 Breakout Sessions**
- Noon – 1:00 p.m. **Lunch**
- 1:00 p.m. – 3:45 p.m. **Advanced Die Clinic Breakout Sessions (continued)**
- 4:00 p.m. – 5:00 p.m. **Advanced Die Clinic General Session**
- 5:00 p.m. **Clinic Adjourns**

AEC Advanced Die Clinic

Nov. 5 – 6 (Wed.–Thurs.) • Fort Worth, Texas

Visit members.aec.org/2025-POW-ADC
for schedule and program details and
updates as they become available!

The Advanced Die Clinic will be co-located with the Process Optimization Workshop and will take a deeper, more technical dive into the topics presented at the Die Performance Improvement Clinic and addresses more advanced concepts for professionals with some experience in the Die Shop.

The Advanced Die Clinic combines expert knowledge and experience with classroom learning... and there's plenty of time to talk one-on-one with industry experts. Pick up valuable tips and techniques from the very best source: your peers.

- Presenter Expertise
- Classroom Setting Workshops
- Participant Knowledge-Sharing and Interaction

This is a highly interactive educational experience that gives back an invaluable return on investment for member companies.

Who Should Attend?

If you are a seasoned professional and involved in extrusion die and related operations, you will want to attend this essential Advanced Clinic where you can brush up on your skills, expand your knowledge, learn new techniques, and connect with fellow die personnel to “talk shop”. This Advanced Die Clinic is particularly appropriate for those with moderate experience, including:

- Die Makers
- Die Shop Supervisors
- Die Correctors
- Managers
- Press Operators
- Engineers
- Process Engineers
- Extrusion Supervisors
- Die Designers
- Sales Personnel & more!

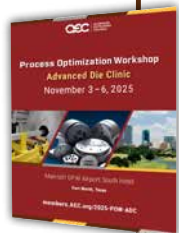
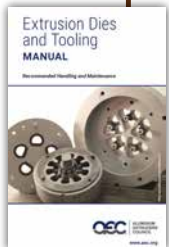
General Sessions

Two General Sessions – one at the start of the Die Clinic and one to close out the Die Clinic – provide even more essential information to take with you. From Safety in the Die Shop and the State of the Art on Metal Flow and the Impact it has on Extrusion Dies to the Importance of Temperature and Press, the General Sessions include information every Extrusion Die and Process professional needs to know.

BONUS!

Each Die Clinic attendee receives a copy of the **Extrusion Dies & Tooling Manual**, **Die Problem Checklist**, **3-D printed mini die**, and the **Die Clinic Workbook**:

- AEC's **Extrusion Dies and Tooling Manual** is a handy reference guide and training tool for anyone in the field of die correction and maintenance.
- **3-D printed porthole extrusion mini-die**. The die is a scaled down version of a two-piece, single-hole, four-port structural pipe profile. These miniatures are an excellent training tool for participants to pass on technology learned with their extrusion die repair team back home.
- **Die Problem Checklist Poster** is a handy chart from the AEC's *Extrusion Dies and Tooling Manual*
- The **AEC Advanced Die Clinic Workbook** includes handouts used during the sessions for reference, and pages for note-taking.



The HEART of the Die Clinic

In addition to plenary sessions and many opportunities to talk with peers, the Die Clinic offers FIVE separate In-Depth Workshops focusing on a different set of issues—the kinds of issues facing Extrusion Die Technicians every day. Solutions are sought and discussed among the group. These breakouts are the “heart” of the Clinic and offer an extremely unique and valuable learning experience. Participants will rotate in small groups through each of the five sessions so that everyone attends each workshop.

Wednesday, November 5

FIVE In-Depth Workshops

WORKSHOP # 1

Evolution of Die Making and the Impact on Die Correction; Die Simulation

The fundamentals of how metal flows through the various cavities in dies (ports, feeder plates, baff rings, feeder pockets and bearings) will be presented together with the forces involved in driving/resisting that metal flow. The impact of each design element on the balance of forces and its impact on the total force needed to extrude metal through the die will be introduced, leading to a discussion on how to optimize each element for various types of profiles. Practical elements of design (section lay out, number of cavities and number of ports) on the handling of the extrusions on the run-out table and subsequent processing will also be discussed. Finally, simulation for die design and best practices will be reviewed.

Workshop Leaders: **Richard Dickson**, CASTOOL Tooling Systems;
Matt Wille, Alexandria Industries



– continued

AEC reserves the right to alter the program and substitute speakers as needed.

ADVANCED DIE CLINIC Schedule at a Glance

This is a preliminary schedule of topics to be covered.

WEDNESDAY, NOVEMBER 5

6:30 a.m. – 4:30 p.m. **Registration Open**

Noon – 12:45 p.m. **Lunch**

1:00 p.m. – 2:45 p.m. **GENERAL SESSION**

– Safety in the Die Shop;

Carl Holderbaum, Bonnell Aluminum

– State of the Art of Knowledge of Metal Flow and the Impact on Extrusion Dies;

Jerome Fourmann, Rio Tinto;

Richard Dickson, CASTOOL Tooling Solutions

2:45p.m. – 3:00 p.m. **Break**

3:00 p.m. – 4:30 p.m. **BREAKOUT SESSION**

4:30 p.m. – 6:00 p.m. **Happy Hour Reception**
Dinner on your own.

THURSDAY, NOVEMBER 6

7:00 a.m. – 7:45 a.m. **Breakfast**

7:00 a.m. – 10:00 a.m. **Registration Open**

8:00 a.m. – 9:30 a.m. **BREAKOUT SESSION**

9:30 a.m. – 9:45 a.m. **Break**

9:45 a.m. – 11:15 a.m. **BREAKOUT SESSION**

11:30 a.m. – 12:30 p.m. **Lunch**

12:30 p.m. – 2:00 p.m. **BREAKOUT SESSION**

2:00 p.m. – 2:15 p.m. **Break**

2:15 p.m. – 3:45 p.m. **BREAKOUT SESSION**

4:00 p.m. – 5:00 p.m. **GENERAL SESSION**

– The Importance of Temperature and Pressure;

Richard Dickson, CASTOOL Tooling Solutions;

Jerome Fourmann, Rio Tinto

5:00 p.m. **Clinic Adjourns**

- continued

Thursday, November 6

WORKSHOP #2

Die Shop Technology Moving Forward

Having an effective die program requires detailed planning for each profile produced in our factories. From the quoting process to the maturation of the product, each step along the production trail must be carefully planned, implemented, and continuously improved. Training methods, the use of automation in capturing feedback from the press, proper nitride parameters and long term care of dies will be discussed. Steel selection for specific applications a review of recent developments and case studies in flow simulation will be covered. Key press components and the proper care and recommended preventive maintenance for each will be reviewed.

Workshop Leaders:

Steve Siedlecki, Belco Industries;

Bob Sulisz, EXCO Tooling Solutions;

Joe Holdwich, EXCO Tooling Solutions

WORKSHOP #3

Advanced Die Manufacturing

Manufacturing: what is the "TODAY" and "FUTURE" standard and how does your tooling flow through the shop? This session will explore how a difficult die can be modeled for ease of manufacturing. Die materials, a brief summary of steel types and their characteristics, and why and when it makes sense to utilize a special tool steel will be covered. The pros and cons, limitations and cost factors of various surface treatment of extrusion tooling will be discussed. There are multiple level steps taken to build your tooling - before, during and after. The many metrics we measure in each step of the organization, maintaining a constant flow of work will be discussed.

Workshop Leader:

Dave Mrdjenovic, Youngstown-Phoenix Aluminum Extrusion Dies;

Colson Ballard, Tower Extrusions

WORKSHOP #4

Die Use

Tooling Design, Manufacturing, Maintenance and Optimization (covered in separate Advanced Die Clinic segments) have dramatic effects on the resulting profile, metallurgical performance and condition of the tooling. It is important to understand **what affects the tooling and what the tooling affects** throughout the overall extrusion process. This workshop will cover extrusion tooling from the point it leaves the die shop/storage area, through handling, heating and extruding through the tools. Extrusion topics will include from the press through the lead-out table and quench to the puller. Excellent tooling and extrusion processes produce profiles with the required shape control and metallurgical performance.

Workshop Leaders:

John Funai, Kaiser Aluminum;

Dan Dunn, CASTOOL Tooling Systems

Carl Holderbaum, Bonnell Aluminum

WORKSHOP #5

Process Conditions & Optimization

In this workshop, you will learn the best choice of alloy for application and design. What does your customer really need? Benchmarking, thermal management, and press conditions will be covered. Learn how and when to optimize yield, cycle, TWA, die service life, hit top pressure on break-through extrusion limit diagram, and more. Extrudability, understanding data and current conditions and shape optimization will also be covered. Develop a greater understanding of pressure curve and die and tooling deflection. Learn effective methods of working with your sales people and engineers on alloy choice and shape consideration, and develop a plan for feedback for next stage of optimization and meeting quoted rate.

Workshop Leaders:

Matt Morell, Pennex Aluminum;

Mike Looney, Pennex Aluminum

Paul Robbins, CASTOOL Tooling Systems

REGISTRATION FORM

Or Register Online: members.AEC.org/2025-POW-ADC

NOVEMBER 3 – 6, 2025 • MARRIOTT DFW AIRPORT SOUTH • FORT WORTH, TEXAS

Registration fees include all program sessions, workbook, bonus materials, selected meals and break refreshments. This form may be photocopied for additional people. Use one form for each person attending. Only those registered may attend. Registration is not complete until payment has been received.

Name/Title _____

Preferred First Name for Badge _____

Company _____

Company Address _____

City _____ State/Province _____

Zip/Postal Code _____ Country _____

Phone _____

Email _____

Check here if you have a disability or dietary restriction and require accommodation to fully participate. AEC will contact you.

REGISTRATION PRICING – To \$ave even more, register for both the Process Optimization Workshop and the Advanced Die Clinic and take \$50.00 off per person!

OPTIONS	Member		Non-Member		TOTAL
	by or on 10/13/25	after 10/13/25	by or on 10/13/25	after 10/13/25	
<i>U.S. Dollars only</i>					
Press Optimization Workshop (Monday – Wednesday)	<input type="checkbox"/> \$950	<input type="checkbox"/> \$1050	<input type="checkbox"/> \$1,250	<input type="checkbox"/> \$1,350	
Advanced Die Clinic (Wednesday – Thursday)	<input type="checkbox"/> \$950	<input type="checkbox"/> \$1050	<input type="checkbox"/> \$1,250	<input type="checkbox"/> \$1,350	
Team of 3+ per person **	<input type="checkbox"/> - \$50	<input type="checkbox"/> - \$50	<input type="checkbox"/> - \$50	<input type="checkbox"/> - \$50	
Total					
Combination Discount (total discount for attending both events.)	<input type="checkbox"/> - \$50	<input type="checkbox"/> - \$50	<input type="checkbox"/> - \$50	<input type="checkbox"/> - \$50	
GRAND TOTAL					

**The Team Discount of \$50 off per person is available to companies registering three (3) or more representatives to attend the Press Optimization Workshop, the Advanced Die Clinic or both if registered and paid together. If cancellation occurs and fewer than three people attend, the appropriate fee will be charged. Delegate substitutions may be made at any time up to the beginning of the event.

If you are registering a team online or attending both events – Prior to submitting payment – please contact Mandy Vazquez at mvazquez@tso.net for registration assistance.

PAYMENT METHOD

My check for \$_____ in net U.S. funds is enclosed as full payment of registration fees. *Make check payable to the Aluminum Extruders Council.*

Or charge my Credit Card for \$_____ VISA MasterCard AmEx Discover

Required Printed Name of Cardholder _____

Signature _____

Billing Address (if different than above) _____

For your data protection, this portion of the form will be destroyed after processing your credit card information.

Card Number _____

Expiration Date _____ V-code _____

(3- or 4-digit code on card)

Hotel Information

Marriott DFW Airport South Hotel

4151 Centreport Drive
Fort Worth, TX 76155

Phone Reservations:
817.358.1700

(Request the group rate for the Aluminum Extruders Council to get the special rate and book in our block.)

The hotel is holding a block of rooms at the special rate of **\$190 per night** plus taxes and fees until **October 13, 2025**. This event will be in demand and will sell out quickly. Make your room reservation as early as possible and to be sure you get a room and to get the special AEC rate.

Mail completed forms and payment to:



Aluminum Extruders Council (AEC)

1000 N. Rand Road, Suite 214
Wauconda, IL 60084 USA

Secure Fax: 847.526.3993

Registration cannot be processed until payment has been received.

Questions?

Contact Mandy Vazquez at mvazquez@tso.net or **847.416.7219**

NOTE: For your data protection, please do not email this form with credit card information. Please fax or mail completed form to AEC.

Cancellation: Registration fees will be refunded only if written notice is received at the AEC Executive Office **on or before October 20, 2025**. A 20% administrative fee will be deducted from the refund. Substitutions may be made at any time.

AEC.org

1000 N. Rand Road, Suite 214
Wauconda, IL 60084 USA

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