

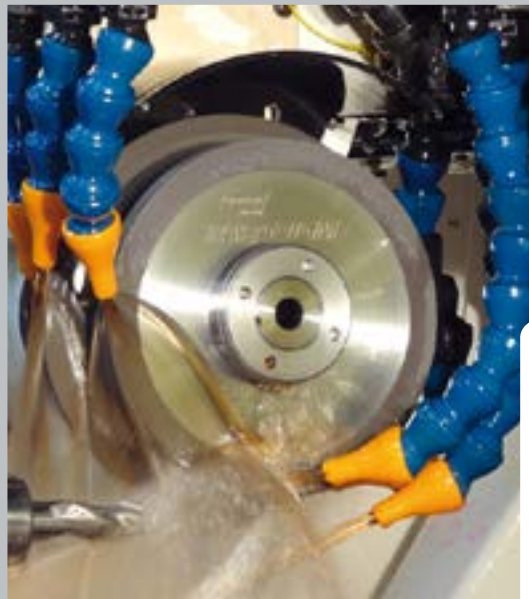
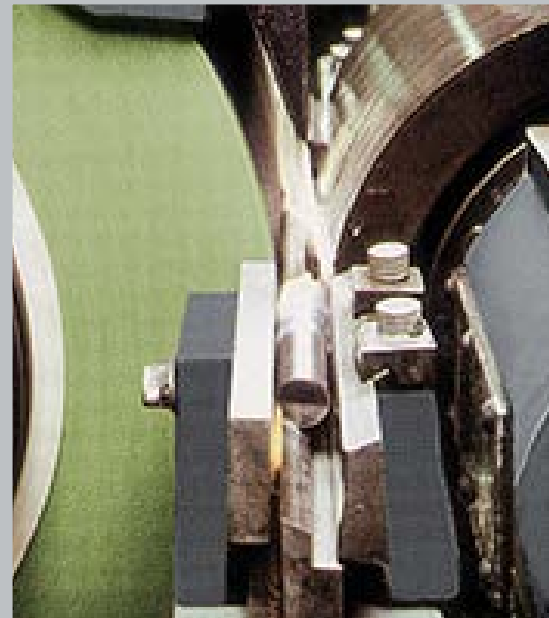
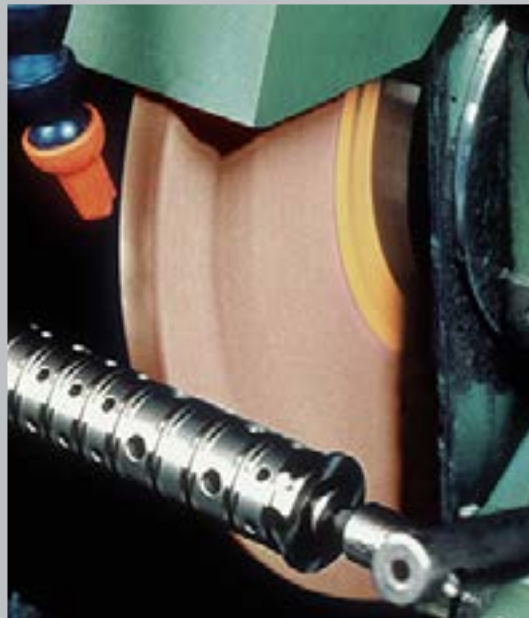
# PRECISION CUSTOMER SEMINAR

**2021 SEMINAR  
DATES:**

**OCTOBER 19-22  
NOVEMBER 9-12**

*WORCESTER AND  
NORTHBOROUGH, MASSACHUSETTS*

**GRINDING AND FINISHING  
YOUR WAY TO SUCCESS**



  
**SAINT-GOBAIN**

# PRECISION CUSTOMER SEMINAR SPONSORS

Corporate Application  
Engineering and  
Sales Training  
and Development

## **KEN SAUCIER**

Senior Manager,  
Application Engineering  
**(508) 667-8640**

## **JOE MIELINSKI**

Manager, Sales Training  
**(508) 667-7955**

## **BARBARA NICHOLS**

Senior Training Specialist  
**(508) 795-5336**

## LEARNING OBJECTIVES

The objective of this seminar is to give our customers an in-depth look at the many facets of precision grinding, primarily with conventional vitrified and superabrasive products. Our intention is to enable the participant to get the most productivity out of their grinding process. To accomplish this, we will cover abrasive parameters from the basic to the advanced.

## TIME REQUIRED

3-1/2 days

## WHO SHOULD ATTEND

The curriculum is designed for engineering, plant and purchasing personnel as well as experienced lead operators who have a working knowledge of abrasives in production grinding.

## AGENDA

### **TUESDAY, October 19 and November 9**

- Grinding Theory and Bonded Abrasive Basics
- Plant Tours - Bonded Abrasives and Superabrasives Wheel Manufacturing
- Safety in Precision
- Superabrasive Basics (Diamond and cBN)
- Technical Approach to Grinding System
- Innovations in Grinding

### **WEDNESDAY, October 20 and November 10**

- Factors Affecting Grinding
- Common Machine Issues
- Truing & Dressing Basics
- Plant Tours - Bonded Abrasives and Superabrasive Wheel Manufacturing (groups switch from Tuesday)
- Coolant Application
- Material Properties

### **THURSDAY, October 21 and November 11**

- Breakout Sessions #1, #2 and #3 (refer to enrollment form and breakout topic descriptions)
- Ask the Expert Sessions and Norton-sponsored dinner at the Beechwood Hotel

### **FRIDAY, October 22 and November 12**

(1/2 day)

- Breakout Sessions #4 and #5 (refer to enrollment form and breakout topic descriptions)
- Seminar Wrap-up

# PRECISION CUSTOMER SEMINAR

## KEY CONTACT

### **BARBARA NICHOLS**

Senior Training Specialist  
Saint-Gobain Abrasives, Inc.  
barbara.e.nichols@saint-gobain.com  
**(508) 795-5336**

## **EXPENSES**

### **NORTON | SAINT-GOBAIN WILL PROVIDE**

- Continental breakfast Tuesday, full breakfast Wednesday-Friday, and afternoon refreshments
- Lunches (no lunch on Friday)
- Dinner Thursday evening at the Beechwood Hotel
- Reference materials and product literature covering all topics discussed

### **CUSTOMER EXPENSES**

- \$1,995/pp registration fee
- Transportation (air fare, car mileage, shared van service, car rental, taxi, etc.)
- Hotel (upon check-out)
- Meals on travel days and Tuesday and Wednesday dinners on own

### **ENROLLMENT/CONFIRMATION**

Upon receipt of your enrollment form and registration fee, a confirmation letter will be sent to you.

**Since enrollment is based on availability, please do not make your transportation and hotel reservations until you receive your confirmation letter.**

*Class size is limited to 36 participants. Registration is first come, first served. We reserve the right to substitute a presenter(s) without notice.*

## **TRANSPORTATION**

You are responsible for making your own air and ground transportation reservations. We will provide transportation to and from the hotel and seminar location each day except Friday.

## **HOTEL**

You are responsible for making your own hotel reservations. We have reserved a block of rooms at the Beechwood Hotel in Worcester, MA at our VIP rate of \$135/night plus tax. You will receive further details in your confirmation letter.

## **CANCELLATION POLICY**

You must cancel within 30 days for a refund.

# PRECISION CUSTOMER SEMINAR ENROLLMENT FORM

**OCTOBER 19-22 AND  
NOVEMBER 9-12, 2021**

*Worcester and Northborough, Massachusetts*

## REGISTRATION FEE

**\$1,995/** *Per Person*

Send form to:

**Barbara Nichols**

Senior Training Specialist

Saint-Gobain Abrasives, Inc.

1 New Bond St. - M/S 301-225, Worcester, MA 01615

Phone: **(508) 795-5336**

E-mail: **barbara.e.nichols@saint-gobain.com**

Choose One: **October 19-22** **November 9-12**  
**charge:** Visa Mastercard American Express OR **P.O. #:** \_\_\_\_\_

CARD NO. \_\_\_\_\_ EXPIRATION DATE \_\_\_\_\_

PRINT NAME AS IT APPEARS ON CARD \_\_\_\_\_

NAME \_\_\_\_\_ JOB TITLE \_\_\_\_\_

COMPANY \_\_\_\_\_

STREET \_\_\_\_\_ CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP CODE \_\_\_\_\_

PHONE \_\_\_\_\_ EXT \_\_\_\_\_ E-MAIL ADDRESS \_\_\_\_\_

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NORTON SALESPERSON \_\_\_\_\_ T-SHIRT SIZE (CHECK ABOVE) \_\_\_\_\_

NAME TAG PREFERENCE (EX.: JOE SMITH) \_\_\_\_\_

**please list any dietary restrictions or food allergies.**

## BREAKOUT SESSIONS

Please choose your top five (5) topics out of the nine (9) being offered from the list below. Click the down arrow to NUMBER your 5 choices (1 = most important; 5 = least important).

Refer to the "Breakout Topic Descriptions" on the following pages.

- |  |  |
|--|--|
| _____ Centerless   | _____ Internal (I.D.) <i>(includes demo)</i>                                   |
| _____ Creepfeed <i>(includes demo)</i>                                 | _____ Production Grinding with Superabrasives <i>(includes demo)</i>           |
| _____ Cylindrical (O.D.) <i>(includes demo)</i>                        | _____ Truing and Dress Theory and Applications "Dressing for Success"          |
| _____ Designing a Basic Cylindrical Grind Cycle <i>(includes demo)</i> | _____ Vibration Analysis <i>(understanding chatter)</i> <i>(includes demo)</i> |
| _____ Gear Grinding <i>(bevel &amp; parallel axis gears)</i>           |  |

**EMAIL COMPLETED FORM TO: BARBARA.E.NICHOLS@SAINT-GOBAIN.COM**

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# PRECISION CUSTOMER SEMINAR TRAINING AND DEVELOPMENT

**SEMINAR DATES:**  
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*Worcester and Northborough, Massachusetts*

## BREAKOUT TOPIC DESCRIPTIONS

### CENTERLESS

- Principles of centerless grinding; general overview
- Significant machine components and their functions
- Machine set-up using machine charts for specific throughput rates
- General coolant information
- General truing information
- Wheel specifications and selections
- Troubleshooting

**Brian Vanasse**  
*Corporate Application Engineer*  
**(508) 847-9120**

### CREEPFEED (includes demo)

Should you have components currently machined using milling or broaching, you may be interested in learning how Creepfeed Grinding can replace these processes while significantly reducing overall machining costs. We will touch on:

- Creepfeed definition
- Machine
- Workpiece
- Coolant system
- Wheel selection
- Dressing
- Grinding parameters
- Understand the outputs
- Troubleshooting

**Andrew Biro**  
*Senior Corporate Application Engineer*  
**(508) 471-6769**

### CYLINDRICAL (O.D.) (includes demo)

- Principles of cylindrical grinding; general overview
- Design a grind cycle for both plunge and traverse grinding
- Formulas and suggested rates for grinding, including wheel speed, part speed and grinding rates
- Wheel specification selection and nomenclature
- Review actual application examples
- Troubleshooting

**Josh Fairley,**  
*Product Engineer, BA*  
**(508) 353-8757**

### DESIGNING A BASIC CYLINDRICAL GRIND CYCLE (includes demo)

This session is intended to provide background and practical information regarding cylindrical grind cycle design and includes:

- Key term introduction and definitions
- Importance of process measurement
- Procedural best practices
- Design a cylindrical grind cycle demo

**Robin Bright**  
*Manager, Advanced Application Engineering*  
**(419) 902-5136**

**Bill Pflager**  
*Senior Corporate Application Engineer*  
**(717) 504-3175**

### GEAR GRINDING (bevel & parallel axis gears)

- Bevel and spur gear grinding
- Continuous gear generation
- Single rib grinding
- Wheel technology
- Truing and dressing
- Grinding from solid

**Andrew Biro**  
*Senior Corporate Application Engineer*  
**(508) 471-6769**

### INTERNAL (I.D.) (includes demo)

- Wheel-to-work relationship
- Grind cycle design
  - Speeds
  - Feed rates
  - Dress parameters
  - Quill design
- Conventional and superabrasive products; what's best for your conditions
- Applications: how to use your wheel successfully
- Troubleshooting

**Arianna Smith**  
*Corporate Application Engineer*  
**(774) 312-3176**

The Norton logo consists of the word "NORTON" in a bold, white, sans-serif font, slanted upwards to the right, set against a blue parallelogram background.

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# PRECISION CUSTOMER SEMINAR TRAINING AND DEVELOPMENT

**SEMINAR DATES:**  
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## BREAKOUT TOPIC DESCRIPTIONS

### **PRODUCTION GRINDING WITH SUPERABRASIVES** (includes demo)

- Expected benefits using superabrasives
- Successful applications
- Requirements for using them
- Things to watch out for

**Alfredo Barragan**  
*Senior Corporate Application Engineer*  
(774) 262-6489

### **TRUING AND DRESS THEORY AND APPLICATIONS**

#### **“Dressing for Success”**

- Review Stationary Tool Basics
  - Availability, selection and usage
- Rotary Dressing Tools
  - Available technologies
  - Factors that affect roll life, part geometry and/or finish
  - Using rolls correctly/rotary tool operational factors
- Understanding Rotary Dress Parameters
  - Roll speed & direction, dress depth, traverse rate, overlap ratio
- Using Dress Parameters to Improve/Address:
  - Wheel performance
  - Part geometry/finish
- Dressing Spindles and Systems

**Dave Goetz**  
*Corporate Application Engineer*  
(519) 820-4551

### **VIBRATION ANALYSIS** (understanding chatter) (includes demo)

- Why vibration is an issue
- Types of vibration
- Vibration data formats
- Evaluating vibration severity
- Data collection and measurement parameters
- Predictive maintenance monitoring
- Fault identification and machinery diagnostics
- Resonance and vibration control
- Machine vibration demo

**John Hagan**  
*Senior Advanced Application Engineer*  
(508) 351-7296



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# PRECISION CUSTOMER SEMINAR



## GRINDING AND FINISHING YOUR WAY TO SUCCESS

**Form #7854** REV. 04/21

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