



SUPERABRASIVES

CBN AND DIAMOND PRODUCTS



SuperAbrasives.com 248.348.7670

VITRIFIED CBN for CAMSHAFT and CRANKSHAFT GRINDING

For over 30 years, SuperAbrasives has focused on providing our customers with top quality, high performance products all while delivering a high level of responsiveness and customer service. We pride ourselves on our Continuous Improvement Program and effectively providing our customers with the most cost-efficient solutions for the job.

What can we do for your business? Help bring your grinding processes to the next level while lowering your grinding costs!



CBN VITRIFIED PRODUCTS

High Concentration CBN wheels for Camshaft and Crankshaft Grinding

Vitrified CBN wheels for camshaft and crankshaft grinding are a specialty at SuperAbrasives. We have developed numerous bond systems designed for these high precision applications and have options to fit you're cam or crank application. Ask about our newest bond technology - it produces superior results!

- Produce Surface Finish as low as 0.25Ra
- Increase parts per dress
- High In-Feed Rates up to 1.25 Q Prime
- Grind both Steel and Cast Iron with the same spec
- Both Rough and Finish Grind
- Adaptable in Wheel Sets and Multi-Layer Depths

Ask about our experience with these cam and crank applications...

- Lobe
- Journal
- Bearings
- Fuel Pump Drives
- Pin Bearing
- Main Bearing
- Thrust Face
- Post Wall
- Flange End

TECHNICAL SUPPORT AND CUSTOM SERVICES

Application Support for Camshaft and Crankshaft Grinding

At SuperAbrasives we also provide application support to our customers by working with you to optimize your grinding process. We use the following steps to walk through your applications to achieve the success you require.

- Application Evaluation
- Application Analysis
- Application Recommendations
- Product Development
- Product Implementation



Ask us about the techniques we use for each step along the way

If you would like to learn more please call our Application Specialists at 248-348-7670 or email us at sales@superabrasives.com.

CAMSHAFT JOURNAL GRINDING CASE STUDY

This customer needed a solution to improve tool life while reducing down production time due to wheel changes. What we developed was a 5 wheel assembly that maintained the performance characteristics required of each individual wheel and provided the processes to meet the overall objective.

CAMSHAFT JOURNAL GRINDING APPLICATION:

Machine: KOYO Centerless Machine

Wheel Size: 23.486 – 24" x 0.987 – 1.6"
5 Wheel Assembly

Part: 5 Journal Camshaft

Material: Cast Iron 150-200 HRB

Wheel Cutting Speed: 42 m/s

Stock: 0.250mm over Diameter

Coolant: Synthetic

Finish Requirement: 0.3 – 0.5 Ra

Tool Life of Incumbent Wheel (OEM Installed Conventional Abrasive):

Parts per Dress: 30ppd for the Grinding Wheels and 90ppd for the Regulating Wheels

Total Feed Depth during Dress: 0.025mm

Cycle Time: 19 seconds

Total Parts per Wheel Set: 100,000 parts

CPU: \$0.025

Wheel Changes: 10 annually

Tool Life of SuperAbrasives Wheel:

Parts per Dress: 1,000ppd for the Grinding Wheels and 500ppd for the Regulating Wheels

Truing/Dressing Process: Feed rate increments = 0.002mm x 2 passes

Cycle Time: 17 seconds

Total Parts per Wheel Set: 1,000,000 parts (ONE MILLION parts)

CPU: \$0.014

Wheel Changes: 1 annually

Summary and Added Application Benefits:

- Increased Production
- Reduced Dressing Time by 2 hours per Day
- 44% Reduction in CPU



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