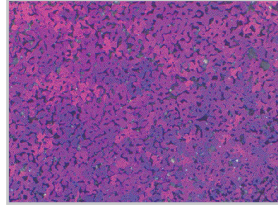


1. 시편 종류

- 테프론 코팅 철계 소결재료 (Teflon Coated Sintered Steel)



Powder Metal Zirconium

2. 시편 절단 및 성형 공정

Table 1. Cutting Parameters

| PowerCut 10x™ | |
|---------------|-------------------------|
| Coolant | Lubri-Cut Cutting Fluid |
| Wheel Type | Aluminum Oxide |
| Wheel Bond | Resin |
| Size | 8" |
| Wheel RPM | 4000 |
| Feed Rate | 2.54 mm/min |

Table 2. Cold Mounting Parameters

| EpoxySet | |
|--|---------------|
| Mold Size | 1.25" (32 mm) |
| Mix Ratio (weight) Resin : Hardener | 100 : 12 |
| Cure Time | 8 Hours |

3. 연삭 및 연마 공정

Table 3. MetPrep3™/PH-3™ Gridding/Polishing Procedure

| Step | 1 | 2 | 3 | 4 | 5 | 6 | |
|-------------|-------------------------------|------------------|------------------|-------------------|--------------------|-------------------------|-------------------------|
| Consumables | Abrasive Size (P-Grading) | 180 Grit (P-180) | 320 Grit (P-400) | 600 Grit (P-1200) | 1200 Grit (P-4000) | 6 μm | 1 μm |
| | Type | Silicon Carbide | Silicon Carbide | Silicon Carbide | Silicon Carbide | Polycrystalline Diamond | Polycrystalline Diamond |
| | Carrier | Abrasive Disc | Abrasive Disc | Abrasive Disc | Abrasive Disc | Glycol Suspension | Glycol Suspension |
| | Polishing Cloth | - | - | - | - | Gold Label | Kempad |
| | Coolant | Water | Water | Water | Water | GreenLube | GreenLube |
| Settings | Platen Speed(RPM) / Direction | 300 Comp | 300 Comp | 300 Comp | 150 Comp | 150 Contra | 150 Contra |
| | Sample Speed (RPM) | 150 | 150 | 150 | 150 | 150 | 150 |
| | Force (lbf/N) † | 5/22 | 5/22 | 5/22 | 5/22 | 5/22 | 5/22 |
| | Time (min) | 1* | 1 | 1 | 1 | 2 | 2 |

* 시편이 평탄 할 때까지 작업

† 1.25" (32밀리몰드) 사용 시: 만일 총 표면면적이 변하는 경우는, 적용하는 압력을 일정하게 유지하기 위해 Force를 조절해 주어야 함.

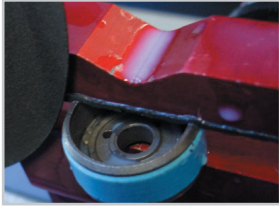
Comp 플레이트, 시편홀더 동일회전 방향

Contra 플레이트, 시편홀더 반대회전 방향

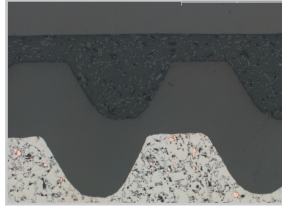
Table 4. AD-5™ Dispensing Parameters

| | |
|--------------|--------------------------------|
| Step | 5&6 |
| Type | Diamond Suspension & GreenLube |
| Pulses/Min | 6 |
| Pulse Length | 0.5 sec |
| Water Flush | Off |

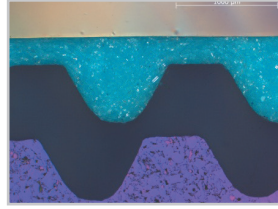
4. 결과 사진



Teflon coated steel disc



Teflon coated steel disc, as-polished, 50x, Brightfield



Teflon coated steel disc, as-polished, 50x, Polarized Light

5. 사용 소모품 소개

- #80-11710 8" Resin Bonded Aluminum Oxide Blade
- #80-10130 Lubri-Cut
- #145-20000 EpoxySet Kit
- #197-10005 1¼" 2-Part Mounting Cups
- #50-10055 180 Grit Silicon Carbide Abrasive Disc
- #50-10065 320 Grit Silicon Carbide Abrasive Disc
- #50-10075 600 Grit Silicon Carbide Abrasive Disc
- #50-10077 1200 Grit Silicon Carbide Abrasive Disc
- #90-30025 6 µm Polycrystalline Diamond Suspension
- #90-30015 1 µm Polycrystalline Diamond Suspension
- #90-209000 GreenLube™ Polishing Lubricant
- #90-700-210 Gold Label Rigid Back Disc
- #90-500-005 Kempad Polishing Cloth
- #148-10000 Micro Organic Soap
- #200-20000 Aero-Duster Compressed Air
- #95-10230 GP Cleaning Solution

** 소모품 샘플은 무료로 제공해 드리고 있습니다

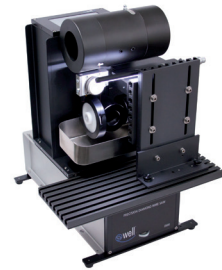
6. 참조자료

분류 목록 명 : 소결

1. 테프론 코팅 철계 소결재료
2. 기어 (철계소결)
3. 철계소결
4. 소결제품
5. SUS 및 SUS/Bronze 합금 소결재료 (420SS&Bronze 3D Printing 재료)
6. 테프론코팅 철계소결재료
7. Mg WE43 (Y & Nd enriched)
8. Single Crystal Calcite Thinning
9. 세라믹 & 배기가스 촉매 분말



NEW TechCut 5x™ Precision High Speed Saw



WELL 3500 Premium Diamond Wire Cutting System



VacuPrep™ Epoxy Impregnation System



MetPrep3™ / PH-3™ Grinding/ Polishing System, AD-5™ Automatic Fluid Dispenser

상세 기술자료, 소모품 샘플 및 기술상담이 필요하시면,
(주)진우테크 시편전처리 센터로 연락 주시기 바랍니다
email: info@chinwoo.co.kr 전화: 031-777-1277

1. 시편 종류

- 소결 부품



소결 부품

2. 시편 절단 및 성형 공정

Table 1. Cutting Parameters

| NEW TechCut 5x™ | |
|-----------------|-------------------------|
| Coolant | Lubri-Cut Cutting Fluid |
| Wheel Type | Diamond |
| Wheel Bond | Metal |
| Size | 8" |
| Wheel RPM | 3000 |
| Feed Rate | 2.5 mm/min |

Table 2. Cold Mounting Parameters

| EpoxySet | |
|--|---------------|
| Mold Size | 1.25" (32 mm) |
| Mix Ratio (weight) Resin : Hardener | 100:12 |
| Cure Time | 8Hours (25°C) |

3. 연삭 및 연마 공정

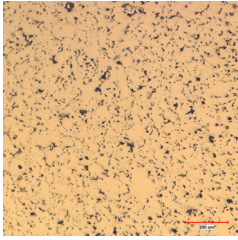
Table 3. Grinding/Polishing Procedure

| Step | Grinding | | | | Polishing | |
|-------------------------------|-----------------|------------------|------------------|-------------------|------------|------------|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| Abrasive | 320Grit (P-400) | 600Grit (P-1200) | 800Grit (P-2400) | 1200Grit (P-4000) | 3 μm | 0.05 μm |
| Type | SiC | SiC | SiC | SiC | Diamond | FinalPrep |
| Carrier | Abrasive Disc | Abrasive Disc | Abrasive Disc | Abrasive Disc | Suspension | Solution |
| Polishing Cloth | - | - | - | - | DiaMat | Chem-Pol |
| Coolant | Water | Water | Water | Water | - | - |
| Platen Speed(RPM) / Direction | 100/Comp | 100/Comp | 100/Comp | 100/Comp | 100/Contra | 100/Contra |
| Sample Speed (RPM) | 90 | 90 | 90 | 90 | 90 | 90 |
| Force (lbF) | 4 | 4 | 5 | 5 | 5 | 5 |
| Time (min) | Until Flat | 2'00" | 2'30" | 3'00" | 2'00" | 2'30" |

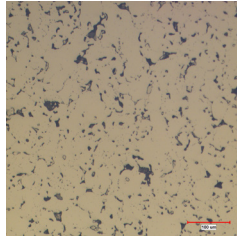
Table 4. AD-5™ Dispensing Parameters

| | |
|--------------|--------------------------------|
| Step | 5 |
| Type | Diamond Suspension & GreenLube |
| Pulses/Min | 6 |
| Pulse Length | 0.5sec |
| Water Flush | Off |

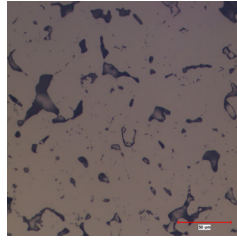
4. 결과 사진



x100



x200



x500

5. 사용 소모품 소개

- #60-20101 Diamond Metal Bond Low Concentration Blade
- #60-20105 Dressing Stick, Silicon Carbide
- #145-20000 EpoxySet Kit
- #197-10005 1.25" 2-Part Mounting Cups
- #150-10105 Black Glass-Filled Epoxy Powder
- #200-10006 PTFE Based Mold Release Spray
- #55-52002 PTFE Ferromagnetic Support Disc
- #50-11065 320 Grit Silicon Carbide Abrasive Disc
- #50-11075 600 Grit Silicon Carbide Abrasive Disc
- #50-11076 800 Grit Silicon Carbide Abrasive Disc
- #90-30020 3 μm Polycrystalline Diamond Suspension
- #180-25000 0.05 μm FinalPrep Alumina Solution
- #90-209000 GreenLube Polishing Lubricant
- #90-700-555 DiaMat Rigid Back Cloth
- #180-10758 Chem-Pol Rigid Back Cloth
- #148-10000 Micro Organic Soap

** 소모품 샘플은 무료로 제공해 드리고 있습니다

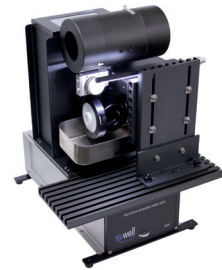
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NEW TechCut 5x™ Precision High Speed Saw



WELL 3500 Premium Diamond Wire Cutting System



TechPress3™ Hydraulic-Pneumatic Mounting Press / 1 1/4" Mold Assembly



DualPrep3™/PH-4™ Grinding/Polishing System, AD-5™ Automatic Fluid Dispenser

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