



R&B 보유 미세조직 자료

본자료는 아래 NIST Advanced Manufacturing Series 100-3 분류를 기본으로 정리

'Microstructure Analysis for Additive Manufacturing: A Review of Existing Standards'

붉은 음영 - R&B 정리 자료

| No | Microstructural features | Relevant Standards |
|----|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Crystal structure - lattice parameters | No standards found |
| 2 | Grain size and grain boundaries | ASTM E112, ASTM E930, ASTM E1181, ASTM E1382, ASTM E2627, ISO 643, ISO 2624, ISO 4499-2, ISO 14250 |
| 3 | Orientation effects - texture | ASTM E82 |
| 4 | Material phases – volume fraction of phase | ASTM E562, ASTM E975, ASTM E1245, ASTM E1268, ISO 9042 |
| 5 | Material phases – precipitates and inclusions | ASTM E45, ASTM E1245, ASTM E2142, ASTM E2283, ISO 4967 |
| 6 | Voids, microcracks and delamination | ASTM E3, ASTM E165, ASTM E543, ASTM E1208, ASTM E1209, ASTM E 1210, ASTM E1219, ASTM E1220, ASTM E1418, ASTM E2297, ISO 4505, ISO 4494-4, ASTM E768 |
| 7 | Sample Preparation | ASTM E1920, ASTM E2015, ASTM E1558 |
| 8 | Etching | ASTM E407, ASTM E381, ASTM E340, ASTM E1180 |
| 9 | Etc | ASTM E1077, ASTM E1351, ASTM E2014, ASTM E883, ASTM E7 |

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| No | Classification | Description |
|----|----------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Document | Auto Polishing Mechanism의 장 단점 |
| 2 | Document | Color Etchant 한글 |
| 3 | Document | Etchant List |
| 4 | Document | Introduction to Quantitative Metallography |
| 5 | Document | Met seminar 자료 |
| 6 | Document | Replica application |
| 7 | Document | Soft metal 시편준비공정 |
| 8 | Document | TN12 rev.1 Principles and Practice for Metallography final |
| 9 | Document | 미세조직 관찰 및 시편준비 |
| 10 | Document | 연마제 크기 mesh, micron |
| 11 | Document | 재료의 조직검사법 |
| 12 | Document | 표면복제기법 |
| 13 | Paper | A New Route to Process Diamond Wires 한글 |
| 14 | Paper | An Investigation into a Low Insulation Resistance Failure of Multilayer Ceramic Capacitors 한글 |
| 15 | Paper | Effect of diamond wire saw marks on solar cell performance 한글 |
| 16 | Paper | Fabrication and performance evaluation for resin-bonded diamond wire saw 한글 |
| 17 | Paper | Localization of Dielectric Breakdown Defects in Multilayer Ceramic Capacitors Using 3D X-ray Imaging 한글 |
| 18 | Paper | Metal Contamination of Silicon Wafers in Diamond Wire Sawing Processes Depending on the Sawing Parameters 한글 |
| 19 | Paper | MICROSECTION EXAMINATION PREPARATION AND EVALUATION OF CAPACITORS FIXED CERAMIC LEADED AND CHIPS 한글 |
| 20 | Paper | Study on Manufacturing Technology of Resin Bonded Diamond Wire Saw 한글 |
| 21 | Paper | Study on the Microstructure and Mechanical Properties of 17-4 PH Stainless Steel depending on Heat Treatment and Aging Time 한글 |
| 22 | Paper | Microstructure Analysis for Additive Manufacturing: A Review of Existing Standards |

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| No | Classification | Description |
|----|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| 22 | Standard | ASTM E1077 Estimating the Depth of Decarburization of Steel Specimens 한글 |
| 23 | Standard | ASTM E112 96 Determining Average Grain Size 한글 |
| 24 | Standard | ASTM E1180 Preparing Sulfur Prints for Macrostructural Examination 한글 |
| 25 | Standard | ASTM E1181 Characterizing Duplex Grain Sizes 한글 |
| 26 | Standard | ASTM E1245 03 Determining the Inclusion or Second Phase Constituent Content of Metals 한글 |
| 27 | Standard | ASTM E1351 Production and Evaluation of Field Metallographic Replicas 한글 |
| 28 | Standard | ASTM E1382 Determining Average Grain Size 한글 |
| 29 | Standard | ASTM E1558 Electrolytic Polishing of Metallographic Specimens 한글 |
| 30 | Standard | ASTM E2014 Standard Guide on Metallographic Laboratory Safety 한글 |
| 31 | Standard | ASTM E2015 Preparation of Plastics and Polymeric Specimens for Microstructural Examination 한글 |
| 32 | Standard | ASTM E3 Preparation of Metallographic Specimens 한글 |
| 33 | Standard | ASTM E340 Macro etching Metals and Alloys 한글 |
| 34 | Standard | ASTM E381 Macroetch Testing Steel Bars, Billets, Blooms, and Forgings 한글 |
| 35 | Standard | ASTM E407 Micro etching Metals and Alloys 한글 |
| 36 | Standard | ASTM E45 Standard Test Methods for Determining the Inclusion Content of Steel 한글 |
| 37 | Standard | ASTM E562 08 Determining Volume Fraction by Systematic Manual Point Count 한글 |
| 38 | Standard | ASTM E768 Preparing and Evaluating Specimens for Automatic Inclusion Assessment of Steel 한글 |
| 39 | Standard | ASTM E883 Reflected Light Photomicrography 한글 |
| 40 | Standard | ASTM E930 Estimating the Largest Grain Observed in a Metallographic Section (ALA Grain Size) 한글 |
| 41 | Standard | ISO 4967 Steel — Determination of content of nonmetallic inclusions — Micrographic method using standard diagrams 한글 |
| 42 | Standard | ISO 643 Steels — Micrographic determination of the apparent grain size 한글 |
| 43 | Standard | ASTM E1920-03 Metallographic Preparation of Thermal Sprayed Coatings |
| 44 | Standard | ASTM E1268 Assessing the Degree of Banding or Orientation of Microstructures |
| 45 | Standard | ASTM E2142 Rating and Classifying Inclusions in Steel Using the Scanning Electron Microscope |
| 46 | Standard | ASTM E2283 Extreme Value Analysis of Nonmetallic Inclusions in Steel and Other Microstructural Features |
| 47 | Standard | ASTM E2627 Determining Average Grain Size Using Electron Backscatter Diffraction Fully Recrystallized Polycrystalline Materials |
| 48 | Standard | ASTM E82 Determining the Orientation of a Metal Crystal |
| 49 | Standard | ASTM E975 X-Ray Determination of Retained Austenite in Steel with Near Random Crystallographic Orientation |