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| **SUPPLIER DISCREPANCY ACTION REQUEST** | **(\*) SDAR NO.** |
| \*\*\* Boxes with “(\*)” to be completed by Howmet personnel – All other boxes to be completed by Supplier – Please PRINT or Type |
| Attention:  | Dept:  | Date:  |
| **Supplier Name:**  | **Address:**  | Fax:  |
| P.O. Number:  | P.O. Item Desc. | P.O. Item No. | Spec/ Rev | Lot No. | Lot Qty |
| Process Code | (\*) Plant Name | (\*) Supplier Number & Address Code | (\*) Reason Code |
| **Supplier Identified Serial Nos affected:** [ ]  Yes [ ]  No (If yes, please attach or list serial numbers) |
| **Supplier Description of Discrepancy:**       |
| **Supplier Requested Disposition:** [ ]  Supplier Continue Processing [ ]  Supplier Repair (Include Description)[ ]  Other Supplier Proposed Action (Include Description) |
| **Supplier Corrective Action and Effectivity Date** (if applicable):  |
|  |
| **HOWMET DISPOSITION** (\*) This section to be completed by Howmet Personnel |
| **Howmet Disposition for Supplier:**  [ ]  Supplier Continue Processing As Is [ ]  Supplier Repair per Howmet Instructions (Specify Instructions)  [ ]  Supplier Product Not Usable, Supplier Containment Required [ ]  Supplier Product Not Usable, Return to Howmet |
| **Howmet Internal Disposition:**  [ ]  Continue Processing As Is [ ]  Engineering Review Required [ ]  Not usable, Hold at Howmet receiving [ ]  Howmet Internal Documentation Required (Please Specify) [ ]  Other Howmet Internal Instructions (Please Specify)  |
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**Instructions to Suppliers**

 1. The supplier may submit a Supplier’s Discrepancy Action Request (SDAR) for the following conditions:

 a.) To request clarification on drawing, specifications or other purchase order documents.

 b.) When discrepant material cannot be reworked to the B/P configuration or specification requirements, but the supplier considers the product or material or usable or repairable in the discrepant condition.

 2. The supplier must complete in its entirety only the fields without asterisks “(\*)” on the SDAR form. The supplier must provide a detailed summary of the discrepancy(s) including the characteristic(s), feature(s), dimension(s), etc. In addition, please attach sketches, photographs, Lab. Reports, etc., as necessary, to ensure clarification and an expedient disposition.

 3. Enter the process code in the appropriate box to indicatewhere the nonconformance was generated:

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| --- | --- | --- | --- | --- | --- |
| P00 | Alloy Manufacturing | P14 | Eddy Current Inspection | P28 | Radiographic Inspection |
| P01 | Abrasive Blast | P15 | Forging | P29 | Raw Material Source |
| P02 | Abrasive Hone | P16 | FPI Inspection | P30 | Shot Peening (all types) |
| P03 | Acid Etch | P17 | Heat Treatment | P31 | Stripping |
| P04 | Airflow | P18 | HIP / CIP | P32 | Thermocouple Manufacture |
| P05 | Airfoil Repair | P19 | Hot Forming | P33 | Tooling Manufacture |
| P06 | Brazing (torch, furnace, etc.) | P20 | Laser Operations (all types) | P34 | Ultrasonic Inspection |
| P07 | Casting (all types) | P21 | Machining, Conventional | P35 | Vibratory finishing |
| P08 | Chemical Milling | P22 | Magnetic Particle Inspection | P36 | Welding (all types) |
| P09 | Chemical polishing | P23 | Mechanical Finishing | P37 | Other |
| P10 | Coatings (all types) | P24 | Metal Fabrication | P38 | Refractory Manufacture |
| P11 | Core Manufacturing | P25 | Pattern Assy./ Manufacture | P39 | Elemental Raw Materials |
| P12 | Dimensional Inspection | P26 | Plasma Spray |  |  |
| P13 | EDM | P27 | Plating (all types) |  |  |

 4. All SDARs must be submitted through your Howmet Procurement representative unless otherwise directed by the purchasing facility’s quality assurance representative. The shipment of affected discrepant material or product must be withheld at your facility pending receipt of the approved SDAR from Howmet.

 5. If material is urgently required or you are operating to a just-in-time schedule, the document and disposition may be expedited via fax. Please coordinate this activity through your Howmet Procurement representative.

⮚ 6. The supplier must attach one copy of the approved SDAR with each shipment of product or material covered by the SDAR. The shipping invoice and shipping documents including certificates (CofC’s, CofA’s, CofT’s) must reference the SDAR number, and each of the affected containers shall be adequately identified (marked) with the SDAR number. All discrepant material must be segregated from conforming material.

 Note: as a supplier to Howmet, you are responsible for control of discrepant/ nonconforming materials and products. Discrepant material shall not be shipped without an approved SDAR or authorization of the appropriate Howmet facility’s quality assurance representative. Discrepant materials or products shipped to an Howmet facility without proper authorization will adversely affect your supplier performance rating and could subsequently result in a severance of business relations.

**SDAR REASON CODES**

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| **REASON****CODE** | **DESCRIPTION** | **REASON****CODE** | **DESCRIPTION** |
|  |  |  |
|  | **DOCUMENT RELATED DEFICIENCIES** |  | **GENERAL DEFICIENCIES CONT’D** |
| 101 |  Supplier Certification Omitted |  | 229 | Unacceptable Cleanliness |
| 102 | Certification Data Incomplete |  | 230 | Surface Blemish/Visual Defects |
| 103 | Certification Data Incorrect |  | 231 | Poor Surface Finish |
| 104 | Issued Wrong Document |  | 232 | Dimensionally Out of Spec. |
| 105 | Invoice / Quantity Discrepancy  |  | 233 | Contour Out of Spec. |
| 106 | Shipping Documentation Omitted |  | 234 | Chipped |
| 107 | Inadequate Traceability |  | 235 | Bubbles |
|  |  |  | 236 | Bent/Warped/Distorted |
|  | **GENERAL DEFICIENCIES** |  | 237 | Broken |
| 201 | Wrong Material Received |  | 238 | Cracked |
| 202 | Misidentified  |  | 239 | Inclusion(s) |
| 203 | Unidentified Material  |  | 240 | Burrs/Sharp Edge(s) |
| 204 | Unapproved Material  |  | 241 | Incorrect Hardness (Brinell, Rockwell, etc.) |
| 205 | Inadequately Packaged |  | 242 | Out of Calibration |
| 206 | Incorrectly Packaged |  | 243 | Chatter (tool marks) |
| 207 | Identification/MarkingOmitted |  | 244 | Excess Material/Plus Metal/Fins |
| 208 | Incomplete/Illegible Identification/Marking |  | 245 | Foreign Material |
| 209 | Failed Testing |  | 246 | Porous |
| 210 | Testing Not Performed |  | 247 | Obsolete |
| 211 | Unauthorized Shipments |  | 248 | Wrong Size |
| 212 | Pre-Shipment Sample Not Received |  | 249 | Insufficient Stock |
| 213 | Contaminated  |  | 250 | Void/Hallow |
| 214 | Prolonged Storage Damage |  | 251 | Weld Defect (splatter, voids, cracks, etc.) |
| 215 | Environmental Damage |  | 252 | Braze Defect (splatter, voids, etc.) |
| 216 | Shipping/Handling Damage |  | 253 | Plating Defect |
| 217 | Shelf Life Expired |  | 254 | Almen Strips out of Spec. |
| 218 | Shelf Life Marking Omitted |  | 255 | Overspray/Underspray |
| 219 | Lot Number Designation Incorrect |  | 256 | Plasma Spray Defect |
| 220 | Unapproved Material Source |  | 257 | Thickness Undersize/Oversize |
| 221 | Incomplete Operation |  | 258 | Damaged Threads |
| 222 | Incorrect Operation |  | 259 | Hole(s) Undersize/Oversize/Elongated |
| 223 | Missed Operation |  | 260 | Countersink Undersize/Oversize/Elongated |
| 224 | Engineering Change Not Implemented |  | 261 | Geometry Out of Spec. (concentricity, Parallelism, etc.) |
| 225 | Incorrect Tare Weight |  | 262 | Overblend |
| 226 | Unauthorized Repair |  | 263 | Poor Bond |
| 227 | Unauthorized Change |  | 264 | Poor Seal |
| 228 | Incorrectly Assembled |  |  |  |

**SDAR REASON CODES**

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| **REASON****CODE** | **DESCRIPTION** |

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| **REASON****CODE** | **DESCRIPTION** |

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|  | **PROCESS MATERIAL RELATED DEFICIENCIES** |  | **CASTING & ALLOY RELATED DEFICIENCIES CONT’D** |
| 301 | Surface Area Out of Spec. (generally al/ox,) | 414 | Porosity/Gas (alloy, casting) |
| 302 | Specific Surface Area Out of Spec. (generally colloidals) | 415 | Latent Defect (Casting - detected in subsequent processing) |
| 303 | Particle Size Out of Spec. (generally al/ox, alumina, zircon, etc.) | 416 | Airflow Out of Spec. (casting) |
| 304 | Chemical Composition Out of Spec. (alloy, al/ox, etc.) | 417 | Waterflow Out of Spec. (casting) |
| 305 | Chemical Impurities out of Spec. | 418 | Parting Lines (casting) |
| 306 | Crystalline Content Out of Spec. (generally silica) | 419 | Incorrect Alloy (alloy, castings) |
| 307 | Viscosity Out of Spec. (generally binders, resins) | 420 | Blocked Passage(s) (casting) |
| 308 | PH Levels Out of Spec. (generally binders) | 421 | Core Shift (casting) |
| 309 | Bulk Density Out of Spec. (zircon flours) | 422 | Shell in Cored Passage (casting) |
| 310 | Specific Gravity Out of Spec. (generally binders) | 423 | Shrinkage (casting) |
| 311 | Trace Analysis out of Spec. | 424 | Misrun (casting) |
| 312 | Ash Levels Out of Spec. (generally plastic, wax, etc.)  | 425 | Wall Thickness Undersize/Oversize (casting) |
| 313 | Flash Point out of Spec. (generally oils, penetrants) |  |  |
| 314 | Melt Point Out of Spec. (generally resins) |  | **CERAMIC PRODUCT RELATED DEFICIENCIES** |
| 315 | Loss on Ignition Out of Spec. (generally resins) | 501 | Unapproved Patching (cores, pourcups) |
| 316 | Softening Point out of Spec. (generally wax, binders) | 502 | Core Flash |
| 317 | Penetration Out of Spec. (generally wax, binders) | 503 | Improperly Fired (green) (cores, pourcups) |
| 318 | Density Out of Spec. (generally thermal wrap) | 504 | Bow/Slump (cores, pourcups) |
|  |  | 505 | Tendrils |
|  | **CASTING & ALLOY RELATED DEFICIENCIES** | 506 | Shrinkage (core) |
| 401 | Phacomp out of Spec. (alloy) | 507 | MOR (Modulus of Rupture) Out of Spec. |
| 402 | Remelt Stock Not Uniform (alloy) | 508 | Apparent Density Out of Spec. |
| 403 | Virgin/Scrap-remelt % Out of Spec (alloy, casting) | 509 | Porosity |
| 404 | Non-metallic Inclusions (alloy, casting) | 510 | Thermal Expansion out Spec. |
| 405 | Incorrect Ingot Size (alloy | 511 | Cristobalite Out of Spec |
| 406 | Dross (alloy, casting) | 512 | Core Compound Spiral Flow Out of Spec. |
| 407 | Porosity/Gas Holes (alloy, casting) | 513 | Obstructed Quartz Tube |
| 408 | Hot Tears (alloy, casting) |  |  |
| 409 | Cold Shuts (alloy, casting) |  | **TOOLING RELATED DEFICIENCIES** |
| 410 | Pipe Shrinkage (alloy) | 601 | Tool/Part does not dimensionally correlate |
| 411 | Mechanical properties Out of Spec. (Stress Rupture, tensile, creep rupture, etc.) | 602 | Tooling Manual/Build Instruction discrepancy |
| 412 | Beta Transus Out of Spec. (Ti-alloy) | 603 | Tool does not function properly |
| 413 | Heat Code(s) Omitted (alloy, casting) |  |  |