# Purpose

The purpose of this procedure is to describe the process used to qualify each new ceramic powder batch prior to release for production.

# Responsibilities

Crystals Engineering is responsible for maintaining this procedure.

Crystals Production is responsible for carrying out this procedure.

# Associated and Referenced Documents

ISO 9001, QAM, QSM, AS9100, CR025

# Procedure

1. For each new powder batch, create a Batch Qualification Traveler, CR025.
   1. Print a copy of CR025 specific to the material specification (e.g. PCB370).
   2. Controlled versions of CR025 specific to each material specification commonly produced are available on TCS.
2. Complete the processing steps as they are defined on the pertinent traveler.

NOTE: The processing instructions may only be altered by Crystals Engineering or the Lead Technician.

* 1. Refer the to applicable procedure called out for each process step.
  2. Note the processing specifications called out for each process step.
  3. Charge all labor time to the appropriate category, indicated in the bottom right corner of CR025.
  4. At the end of each process step, initial or stamp the traveler, date it and indicate the quantity of parts passed to the next process step.

1. At the conclusion of the processing and testing, disposition the batch.
   1. If the testing results indicate the batch is suitable for use in production, disposition the batch by filling in the appropriate designation: PCB480, PCB395, PCB370, PCB140, PCB20, or PCBTC.
   2. If the testing results indicate the batch needs to be blended with another to meet the requirements of PCB395 or PCB370, disposition the batch as “Reserved for Blending”.
   3. If the testing results indictate the batch does not meet the requirements for the PCB designation, but the powder may still be used to create end pieces for machining, disposition the batch as “Set-up pieces only”.
2. Move the container of powder into the appropriate cabinet:
   1. Move batches dispositioned “Approved for …” or “Reserved for Blending” into the “Approved Batch” cabinet.
   2. Move batches dispositioned “Set-up pieces only” into the “Nonconforming Batch” cabinet.
3. Review CR025 for completeness and make sure all the appropriate paperwork is included in the data package:
   1. CR011 Batch Control Sheet, pages 1 and 2
   2. Calcine Thermal Profile Plot
   3. CR025 Batch Qualification Traveler
   4. CR034 Fired Stock In-Process Data Sheet
   5. High Fire Thermal Profile Plot
   6. CR017 Crystals In-Process Data Sheet
   7. CR022 Test Sample Data Sheet
   8. CR019 Batch TR Data Sheet
   9. CR037 Ceramic Powder Batch Qualification Data Sheet
4. Scan the entire data package to a PDF:
   1. Use the scanner in the powders room. It is preconfigured to do this.
   2. Save it in the directory “R:\Crystals\Batching Data\Scanned Batching Sheets”.
   3. Name the file after the batch number (e.g. 13-253.pdf).
   4. Notify the Crystals Engineer that a new batch is through qualification.