Chemring
Energetic Devices

# GENERAL MEASUREMENT / INSPECTION GUIDELINES FOR CED SUPPLIERS

ALWAYS REFER TO ASME Y14.5-2018 (unless otherwise specified) FOR PRINT INTERPRETATION

**06-03-2026**

The following items are provided as guidance to Chemring Energetic Devices (CED) suppliers. Their applicability depends on the supplier's capabilities and ability to perform the contracted work.

If there are any questions or clarifications needed, the supplier must consult their CED Point of Contact (POC) before proceeding.

## 1. EDGE BREAK

Edge break callouts shall comply with CED drawing requirements. This feature is typically defined in the title block or, depending on its nature, in the applicable area of the drawing.

Edge breaks are typically measured and inspected using a "Contracer (Mitutoyo)" or Optical Comparator.

## 2. RADIUS

Radius callouts shall be within the specified tolerance range.

This feature is typically inspected by a "Contracer (Mitutoyo)" or with an equivalent high-accuracy equipment. A measurement/inspection with an Optical Comparator may be acceptable with basis on the location of the feature within the part.

## 3. BREAK ALL SHARP CORNERS

Sharp corners must be broken when specified in the drawing.

Sharp corners are typically measured and inspected using various methods, including but not limited to: mold impression (putty), optical comparator, laser scanning (OASIS), as well as visual and tactile inspection.

## 4. SURFACE ROUGHNESS (Machine Surface / Surface Finish)

In instances where the drawing call-out a "machined" or specific surface finish, the part must meet the drawing requirements.

When "Machined Surface" is listed in the print, the interpretation is the same as Surface Roughness or Surface Finished. It shouldn't be interpreted as a surface that is machined via a mechanical machining process.

This feature is typically measured using a profilometer (as applicable) and recorded as a value. In very rare instances, visual inspection may be permitted if the surface can be compared using a visual surface finish comparator/template.

## 5. INTERNAL FEATURES THAT CAN'T BE DIRECTLY MEASURED

These features are typically measured using a mold impression (putty) method in conjunction with an optical comparator or equivalent equipment.

## 6. UAME & LOCAL SIZE (LS) FOR INTERNAL/ EXTERNAL CIRCULAR FORMS

All cylindrical features, including hole diameters, are typically measured using a CMM or equivalent high accuracy measuring equipment, with inspection records maintained. **Unrelated Actual Mating envelope** (**UAME)** and **Local Size (LS)** are reported as part of the inspection record.

Verification of hole diameters using pin gauges is for **reference** only.

## 7. UNLESS OTHERWISE SPECIFIED & EXCEPT AS NOTED

In addition to verifying the notes under the **"UNLESS OTHERWISE SPECIFIED"** tolerance block, ensure that all applicable dimensions from the **"EXCEPT AS NOTED"** section of the drawing, located at the bottom of the first page, are measured, and that they meet the specified requirements.