SURFACE PREPARATION
ELECTRO-CHEMICAL DEBURRING
DSF 3.2.8

Definition:

Depending on the machining process, burrs, flaking and particles on internal edges and surfaces can occur during manufacture. These unwanted features have the potential of making the component not fit for purpose.

Electro Chemical Deburring (**ECD**) is one of the most efficient methods available to correct internal features on drilled holes, edges and threads where conventional deburring methods are not possible or extremely difficult and time consuming.

This is a selective (controlled) non- contact process using low voltage, direct current, & non-toxic salt electrolytes for use on most hardened & non-hardened metals including extruded aluminium & stainless steel. A clean, degreased component is submerged in an electrolyte solution; an isolated anode is placed internally & adjacent to the burrs/sharp edges etc. that need to be dissolved away with this "reverse plating" action. A low DC charge is applied between it & a stationary cathode. By adjusting time, pulse & voltage the electrostatic charge can be focused on dissolving the sharp features (burrs) on the component.

This stress-free process can be applied successfully on thin-walled and easily-bent parts as well as parts made of soft materials. The overall finish takes on a semi-polished appearance.

Properties:

- Selective De-burring.
- Removal of burrs from inaccessible internal surfaces.
- Internal surface polishing.

ASM (DEK) Typical Applications:

Removal of small burrs & edges from internal (inaccessible areas) such as cross drilling in manifolds and valve bodies.