1 Scope

This standard is intended to provide manufacturers and users of stampings with an idea of the burr heights likely to be obtained. However, the values given in Table 1 are not permissible burr heights in the sense of tolerances for stampings, nor are they intended as a criterion for classification of cutting tools into quality classes. The data in Table 1 cannot therefore be regarded as substantial information for delivery conditions of cutting tools.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

DIN 2192, *Flat form springs — Quality requirements*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
burr
sharp-edged, usually thin, projection of material, forming during cutting, which can be loosely or firmly attached to a cut edge

NOTE This standard is concerned only with burrs forming due to shearing.

3.2
burr height
maximum height of a burr on a cut part, where the flat surface of the workpiece in the immediate proximity of the burr serves as the reference surface

4 Formation of burrs

Shearing is generally associated with the formation of a burr. The manufacturing of burr-free stampings generally requires the additional removal of the burr, e.g. by barrelling.

Burr formation is mainly dependent on:

— the thickness of the workpiece;
— the tensile strength of the material being cut;
— the clearance between punch and die;
— the condition of the tool.

Burr formation increases with:

— increasing thickness;
— decreasing tensile strength;
— increasing clearance between punch and die;
— increasing tool wear.