# DIN EN ISO 9013:2017-05 (E)

## Thermal cutting - Classification of thermal cuts - Geometrical product specification and quality tolerances (ISO 9013:2017)

# Contents

Page


**European foreword** ... **3**

**Foreword** ... **4**

**1 Scope** ... **5**

**2 Normative references** ... **5**

**3 Terms and definitions** ... **5**
3.1 General ... 5
3.2 Terms and definitions explained by figures ... 6
3.2.1 Terms related to the cutting process ... 6
3.2.2 Terms on the cut work piece ... 7
3.2.3 Cut types ... 8

**4 Symbols** ... **12**

**5 Form and location tolerances** ... **13**

**6 Determination of the quality of cut surfaces** ... **13**
6.1 General ... 13
6.2 Measuring ... 14
6.2.1 Measuring conditions ... 14
6.2.2 Measuring point ... 14
6.2.3 Procedure ... 15

**7 Quality of the cut surface** ... **16**
7.1 Characteristic values ... 16
7.2 Measuring ranges ... 16
7.2.1 General ... 16
7.2.2 Perpendicularity or angularity tolerance, *u* ... 16
7.2.3 Mean height of the profile, *Rz*5 ... 17

**8 Dimensional tolerances** ... **19**
8.1 General ... 19
8.2 Dimensional tolerances on parts without finishing ... 22
8.3 Dimensional tolerances on parts with finishing ... 22
8.3.1 General ... 22
8.3.2 Machining allowance ... 23

**9 Designation** ... **23**

**10 Information in technical documentation** ... **24**
10.1 Indications of size ... 24
10.2 Indication of quality of cut surface and of tolerance class ... 24
10.2.1 On technical drawings ... 24
10.2.2 Title block of technical documentation ... 24

**Annex A** (informative) **Achievable cut qualities for different cutting processes** ... **25**

**Annex B** (informative) **Thermal cutting — Process principles** ... **30**

**Bibliography** ... **32**