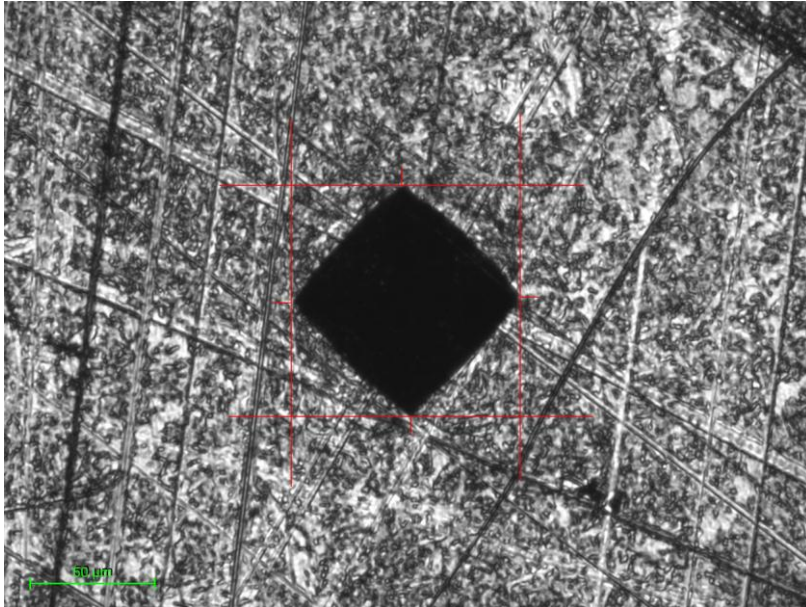


Name: Precision at HV1
 Test method: HV 1
 Customer names: Flachstahl
 Sample-No.: 8833
 Material: St_007
 Drawing number: 2011-04
 Objective/Zoom: 10x / 7



Machine: KB 30-FA
 Measurement: AF-Licht-BV

Smallest value: 219,3
 Biggest value: 220,2
 range: 0,911
 Average: 219,397

Optic: 10x
 reevaluation: ---

Standard deviation: 0,274
 Average minus 3S: 220,218
 Average plus 3S: 218,576

Hardness tolerance Max: 222
 Hardness tolerance Min: 218

No.	Hardness	Time
1. Precision HV1		
1	219,9 HV 1	26.04. 16:02
2	219,3 HV 1	26.04. 16:18
3	219,3 HV 1	26.04. 16:18
4	219,3 HV 1	26.04. 16:18
5	219,9 HV 1	26.04. 16:18
6	219,3 HV 1	26.04. 16:18
7	219,3 HV 1	26.04. 16:18
8	219,3 HV 1	26.04. 16:19
9	219,6 HV 1	26.04. 16:20
10	219,3 HV 1	26.04. 16:20

No.	Hardness	Time
1. Precision HV1		
11	219,9 HV 1	26.04. 16:21
12	219,3 HV 1	26.04. 16:22
13	219,3 HV 1	26.04. 16:23
14	219,3 HV 1	26.04. 16:23
15	219,3 HV 1	26.04. 16:23
16	219,3 HV 1	26.04. 16:24
17	219,3 HV 1	26.04. 16:25
18	219,3 HV 1	26.04. 16:25
19	220,2 HV 1	26.04. 16:26
20	219,3 HV 1	26.04. 16:26
21	219,3 HV 1	26.04. 16:27
22	219,3 HV 1	26.04. 16:27

Reproducibility on etched samples

One indentation was auto measured 20 times. After each measurement the light was controlled automatically. After this the auto focus and again the auto light control was applied. Thereupon the indentation was auto measured.

The indentation was measured on a **KB 30 with 10x objective in zoom step 7 and 5 MPs camera.**