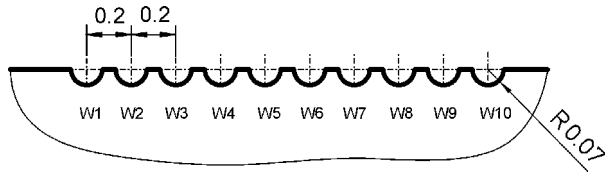


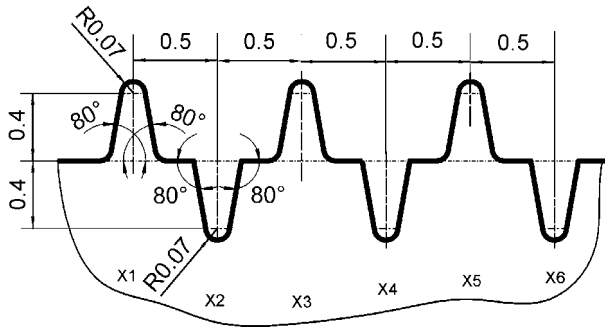
Information

Department 5.3
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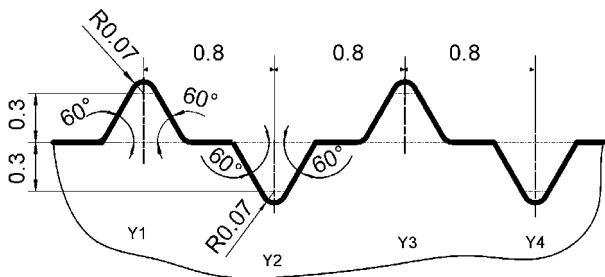
detail W:



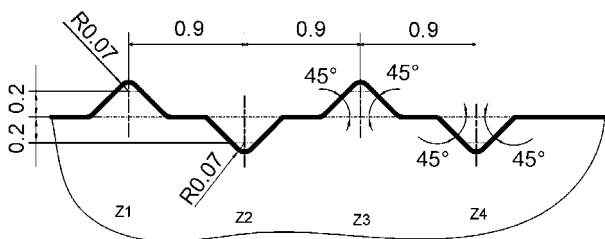
detail X:



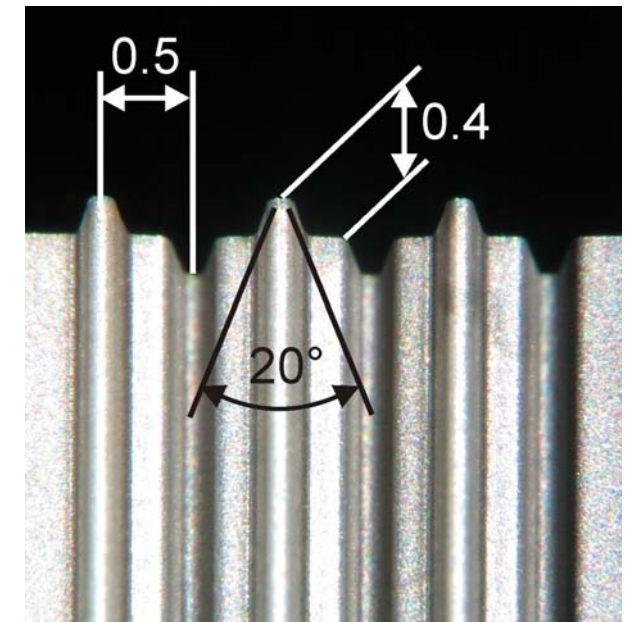
detail Y:



detail Z:



A Micro-Artefact for Fringe Projection



A Micro-Artefact for Testing of Fringe Projection Measuring Systems

Testing of fringe projection measuring systems:

Suitable for small measuring fields, approx. 2 x 2 mm to 45 x 33 mm.

Testing by means of:

- Comparison with reference profile,
- Comparison with calibrated parameters like radii, distances, angles (more than 50 parameters).

Material: Stainless steel.

Manufacture: Electro-erosion (EDM) as a stack of 7 artefacts and 6 metal sheets (50 μm), very low form deviations, homogeneous contour over the hole width, low surface roughness ($R_z \approx 2 \mu\text{m}$), very homogeneous, diffusely reflecting surface.

Calibration:

Optical CMM, method patented.

Uncertainty of parameters:

$U(\text{radii}) \approx 2 \dots 5 \mu\text{m}$

$U(\text{lateral distances}) \approx 1 \dots 5 \mu\text{m}$

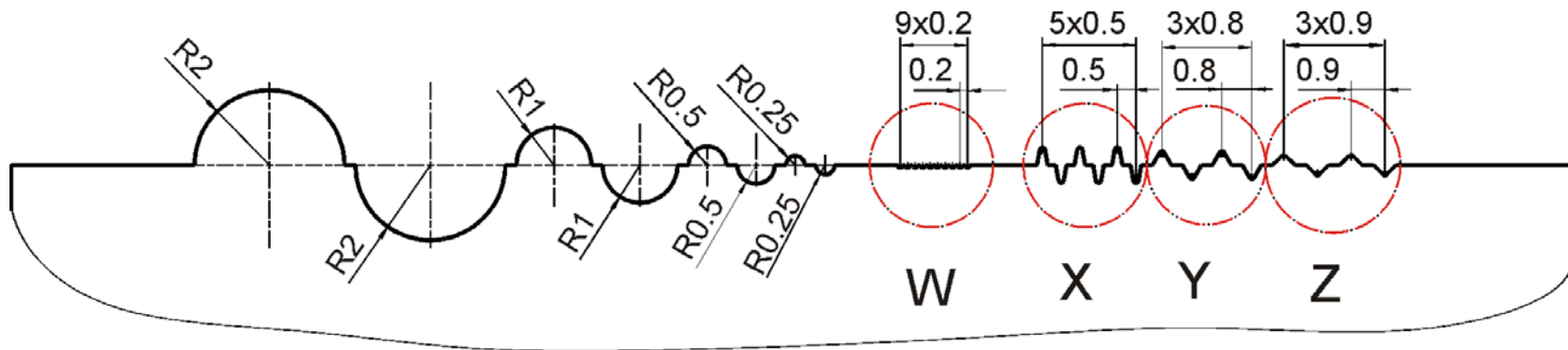
$U(\text{vertical distances}) \approx 2 \dots 10 \mu\text{m}$

$U(\text{angles}) \approx 0.5^\circ$

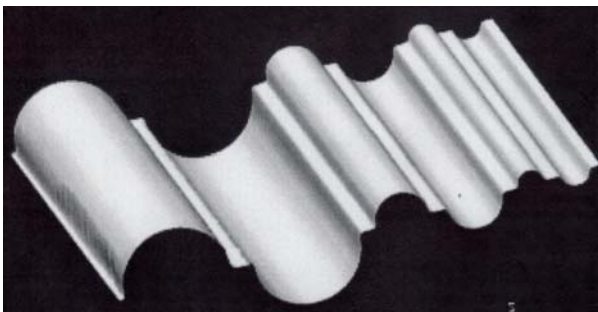
Profile any line:

$U(x_i, y_i) \approx 2 \mu\text{m}$

general view, 42 x 3 mm:



measurement R2 to R0.5:



measurement of detail W:



measurement of details Y and Z:

