

# ROUGHNESS COMPARATIVE ANALYSIS OF CUTTING TOOLS WORKING SURFACES USING THE DIGITAL PORTABLE ROUGHNESS TESTER

STĂNCIOIU Alin\*, GÎRNICEANU Gheorghe\*\*, POPESCU Gheorghe\*\*\*

[\\*alin@utgjiu.ro](mailto:alin@utgjiu.ro), [\\*\\*girniceanu@utgjiu.ro](mailto:girniceanu@utgjiu.ro), [\\*\\*\\*gepo@utgjiu.ro](mailto:gepo@utgjiu.ro)

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**Abstract:** The strength of the tools against wearing is different, depending upon the chemical composition of the steel and the type of the used heating treatment.

In this work are shown the results of researches on the cutting tools manufactured of steel OSC10, comparatively with the ones manufactured of chrom-coated steel OSC10, each of them carrying out 16000 punching operations under the same technological conditions.

The gauge designed for testing the roughness was a. It is a super-compact, mobile, accuracy tool, meaning the result of the most current technological researches.



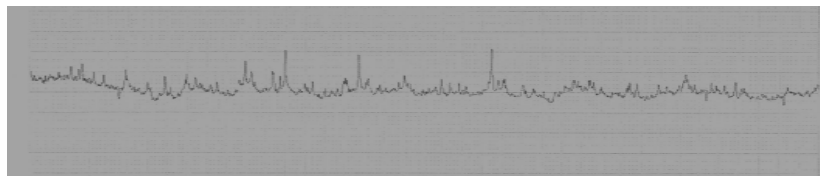
Fig.1 Portable roughness tester



Fig. 2 Positioning the feeding unit on the part

The results of the measurements have been the following :

```
FILTER GAUSS
EVA-L 4.0mm
N 5
λc 0.8mm
λs 2.5μm
TILT-COMP. ALL
M-SPEED 0.5mm/s
RANGE AUTO
PRE/POST ON
DRIVE R-TYPE
R-PROFILE
EVA-L 4.0mm
λc 0.8mmX5
Ra 0.24μm
Rz 1.87μm
Rq 0.32μm
R-PROFILE
EVA-L 4.0mm
λc=0.8mmX5
Ver. 2.0μm/cm
Hor. 200.0μm/cm
```



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