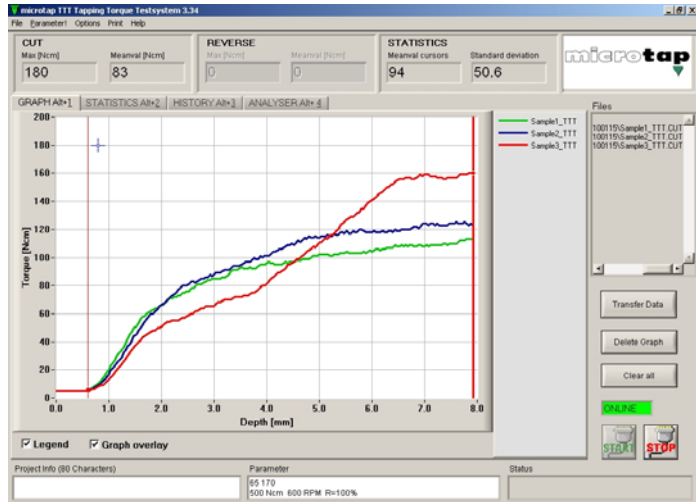


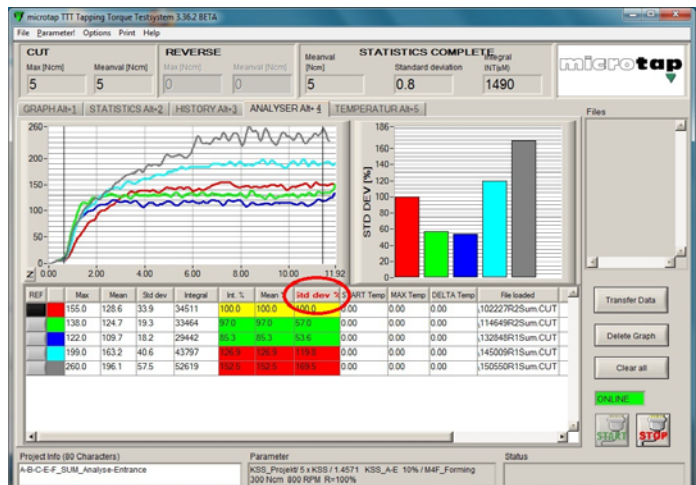
TTT_Tapping-Torque-Testsystem

Laboratory Evaluation & Analysis System

WinPCA3 - „Monitoring & Analysis Software“



Measurement process



Analyzer

Measurements are compared (process quality controlled) and values displayed on the screen as a graph, with applied torque shown as a bar chart. The formulas used to find the mean & the standard deviation are as follows

$$\text{Average (mean value)} = \sum_{i=0}^{n-1} x_i / n \quad \text{StDev} = \sqrt{\sum_{i=0}^{n-1} [x_i - \text{ave}]^2 / n}$$

Mean value / Arithmetic method

The expression is called arithmetic methods of n sizes a_1, a_2, \dots, a_n

$$\chi_A = \frac{a_1 + a_2 + \dots + a_n}{n} = \frac{1}{n} \sum_{k=1}^n a_k$$

For two sizes a and b
$$\chi_A = \frac{a + b}{2}$$

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