

## A 3D Laser Scanner Setup for a Measuring of Geometrical Product Specifications

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The laser line scanners are coming to be frequently used in a field of dimensional inspection process. There are several phenomena that make the data acquisition more difficult. Particularly secondary reflection, direct reflection, scan overlapping, outlying points. The effect of these phenomena can be minimised by optimal setting of scanning parameters stated in this paper. The parameters were determined from an experimental measurements of 50 various parts. Additionally a thermal stability effect was measured at two types of Nikon scanners. The stabilisation time and the systematic error were determined for the scanner LC15Dx: 45 min, 20 $\mu$ m and 30 min and 37  $\mu$ m for the LC60Dx scanner. It should help to prevent the systematic errors during the measurement.

3D Scanning, Laser Line Scanner, Dimensional Inspection, Stabilisation interval.

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