SIEMENS

Quality assurance with maximum precision

SIDIS 3DCAM – the universal, visual 3-D measuring system for surfaces

Factory Automation Solutions

Answers for industry.

With SIDIS 3DCAM to top quality

In production processes, quality assurance has to meet ever higher requirements. Only in this way can constant product quality be ensured in the long term. Gaps and flushness, for example, have therefore become increasingly more important in recent years as quality criteria in the automotive industry. On the one hand, these two factors are a measure for accuracy and reliability of the processes in the manufacturing of the individual components. On the other hand, it has been found that customers perceive that tighter gaps of a vehicle are a visual quality criterion.

Siemens provides you with an innovative measurement system which has been specially developed for use in quality assurance processes in production: SIDIS 3DCAM.

Universally applicable

SIDIS 3DCAM determines and evaluates surfaces, contours and spatial positions with maximum precision. The system is highly variable and extremely flexible and can be used in many application areas – e.g. in inline quality assurance in the automotive industry, for position detection in the precise fitting of components, or for detecting surface defects in transport systems.

Maximum precision

Surface areas, distances and their positions are evaluated relative to one another in the µm range by means of an innovative 3-D measurement procedure based on stripe projection. This allows a statement about the production quality to be derived by comparing the specified target state to the determined actual state.

The determined measurement data can be used for optimizing the current production processes and be sent to upstream processes (e.g. product and production design) as quality and trend statements.

This ensures a high degree of production quality and reduces costly reworking.

Intuitive operation

The supplied intuitive application software allows measurement tasks to be easily and flexibly configured by means of freely definable measuring fields. Based on the configuration, the software generates automatically the test sequences in coordination with the automation system (PLC and drives).

The determined measurement values of the SIDIS 3DCAM system are stored to a freely accessible database on the measuring computer and visualized on a workstation display. It is also possible to send the data to higher-level quality assurance systems.

Maximum flexibility

SIDIS 3DCAM provides various expansion levels, which can be tailored to individual needs and requirements. This allows the system to be integrated during production in order to solve a variety of tasks.

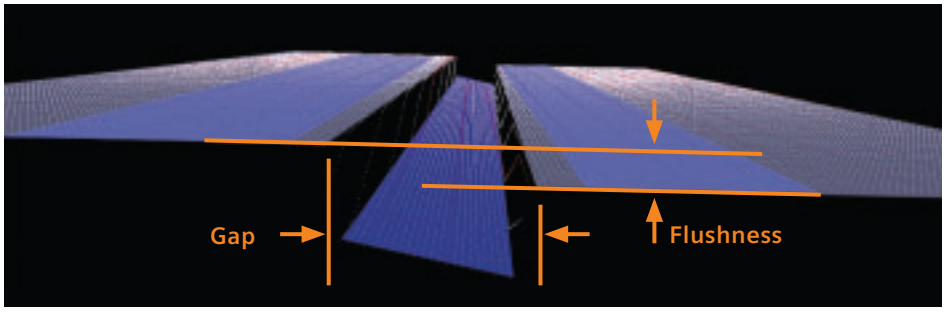
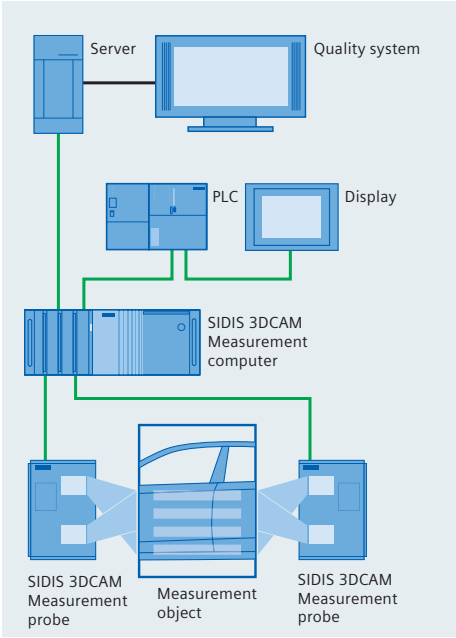


Illustration of gaps and flushness

Conclusion: SIDIS 3DCAM precisely and reliably solves many different measurement and installation tasks in the production industry. In this way, the innovative and flexible system makes an efficient contribution to the quality assurance process in production.

Architecture of the automation solution



Technical data:

- Measuring accuracy between +/– 0.1 mm and +/– 0.3 mm
- Large measuring area: approx. 0.5 m²
- Positioning of the body/measurement object: +/– 20 mm in X, Y, Z
- Duration of measurement, incl. determining of results, between 0.3 s and 8 s
- Measurement of flushness (depth measurement) and measurement of gaps available in the entire field of view
- Automatic exposure setting
- Short installation and commissioning times by teaching the measurement points
- Easy installation of the measurement probes

Highlights at a glance

- Time and cost savings through the automation of quality assurance processes
- Large measuring field with maximum accuracy
- Intuitive and user-friendly software
- A minimum of adapting to varying measurement objects (e.g. body type changes in the automotive industry)
- Optimization of the entire production process by means of trend statements and statistic functions

Siemens AG
Industry Sector
Industry Automation
P.O. Box 48 48
90026 NUREMBERG
GERMANY

Subject to change without prior notice 03/2011
Order No.: E20001-A1010-P200-X-7600
Dispo 06303
SCHÖ/32474 MI.GC.VM.XXAU.52.1.01
SB 04111.
Printed in Germany