

Quality Control and Inspection Fact Sheet

Toolmaking

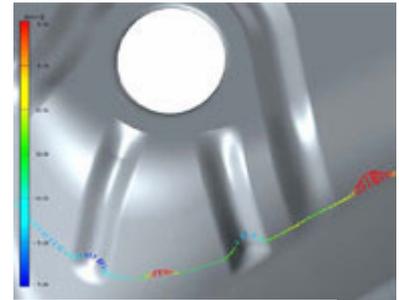
3D Digitizing in Tool and Mould making

In tool and mouldmaking it is important to capture the actual contour of a mould as shrinkage and springback of those parts is compensated during the production process. During tool try-out and pilot production, the tools that were manufactured according to the CAD data are finalized by reworking. The complete digitizing with ATOS and TRITOP of current tools and moulds provide for defining the master. Based on this master, reworking of the tool is planned and carried out accordingly. In addition, a tool can be duplicated quickly without any problems.



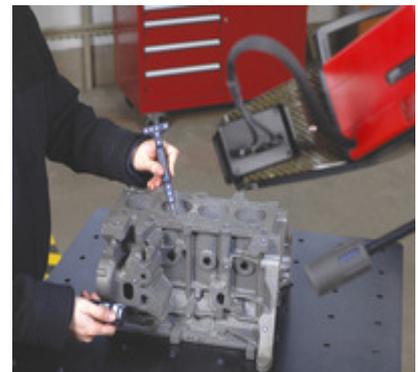
Touch Probe for Casting Inspection Analysis

The ATOS optical surface measuring system is widely used within the casting industry for full field surface analysis of sand cores, patterns and casted parts. The Touch Probe Kit is an add-on to the ATOS system. It offers the ideal combination of optical 3D freeform measurement and online tactile probing. Beside online alignment the Touch Probe system allows the smart measurement of optical hidden surfaces, live inspection of individual points with direct comparison to CAD as well as quick probing of primitives.



Optical Measuring Technologies in Sheet Metal Processing

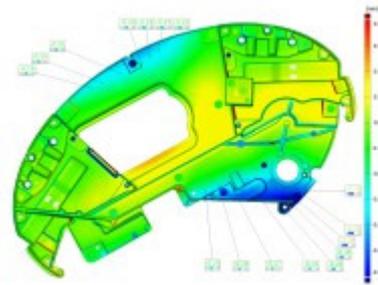
During recent years, optical measuring technologies in sheet metal forming and tooling have been used more and more in the industry. Main applications are the digitizing of metal sheet parts and tools, forming analysis of metal sheets as well as the determination of material properties. Good interfaces to conventional CAD/CAM and numerical simulation systems made such optical measuring systems a part of complex process chains. These process chains mainly focus on optimizing the development of products and production processes and on improving the product quality. Using optical systems considerably decreases the development time for products and production while improving the quality.



Injection Moulding

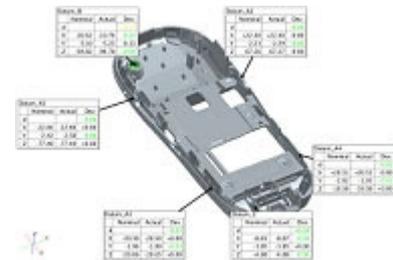
Quality Control of Injection Moulded Parts

The ATOS 3D scanner, measuring full-field surfaces, is used in the injection-moulding and plastic-processing industry all over the world for shape and dimension inspection. The evaluation of injection-moulded parts using the 3D full-field colour deviation plot is considerably faster and more efficient compared to conventional measuring methods. In particular, warpage and shrinkage of parts are quickly and clearly displayed speeding up mould try-out and production control.



Computer Aided Verification for Mobile Phone Components

This first article dimensional inspection defines the start of the production and is the benchmark for the quality of the parts produced in volumes. Therefore, it is a very critical process for both the supplier and the ordering party just before the mass production starts and the new model will be released to the market.



Quality Control in Plastic Blow Moulding

Fuel tanks for cars are typically manufactured using plastic blow moulding. To verify the production parameters and optimize the production, the digitizer ATOS sensor can be used to analyse surface deviation against original CAD data. In addition to fuel, other blow moulding applications could also be inspected e.g. PET bottles, HDPE bottles, blow mould tooling etc.

