

Small Batch Series Needs Great Attention to Detail Too



As part of the process of updating their models, car manufacturers overhaul their models and replace minor details with functionally higher-quality components. In the case of the new VW Beetle, which was unveiled in spring 2011, one of the requirements was to replace the indicator with an indicator containing a fog light. For pilot series production, Modellbau Hofmann was commissioned to supply 300 modules. The aim was to develop a double group featuring halogen technology. For the third brake light, the specification was to supply a module with LED technology.

Project structure

After clarifying the design with the customer VW, Hofmann undertook the preparation of moulds and used rapid technologies such as LaserCUSING of the parts of these three assemblies. Finishing techniques such as vapour deposition are mandatory for lighting elements and so of course is fitting right through to when the finished assembly is produced.

The part produced matches up in every way in terms of finishing, the materials used and function to a classic mass-produced part. Whereas the development time for a comparable mass-produced part is around 25 weeks, Hofmann was able to use its technologies to supply the pilot series parts to VW in just 12 weeks. In addition to this time component, which with new models often represents the decisive criterion, cost considerations are also playing an increasingly important role.

Hofmann is now also receiving enquiries for small batch series of complete headlights. A change is also taking place in relation to the parts used in the area of lighting: for instance, for the first time Modellbau Hofmann is also being presented with 3K PMMA parts that display special light functions, as the third brake light featuring LED technology shows.

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 Hall 11 Stand D70

Optical 3D Measurement Systems and Engineering Services



continuously measure positions and orientations in space with great precision, which makes it possible to control displacements, drive assembly processes or measure deformations. With the

Creaform, manufacturer of portable optical 3D measurement solutions, will present its 3D coordinate measuring systems. New this year, the company will also showcase its 3D engineering services in a dedicated area.

Creaform provides turnkey engineering services projects that are executed on site or in its laboratories. In addition to the 3D scanning services, the portfolio includes reverse engineering, finite element analysis (FEA) and CAD services. Since its inception in 2002, Creaform has carried out more than 10,000 service projects.

The HandyPROBE, MetraSCAN, Handyscan 3D and MaxSHOT 3D optical measurement devices cover most portable measurement applications and allow inspections directly in the production environment. The HandyPROBE arm-free 3D probing system and the MetraSCAN 3D laser scanner are intended for 3D control of manufactured parts. With the VXtrack dynamic measurement module, it is even possible to drive assembly operations, as it can be used to simultaneously and

Handyscan 3D handheld 3D scanners, it is possible to digitise large and small parts with an accuracy of up to 0.040 mm. The portable scanners can be used, among others, for CAD comparison, 3D inspection, reverse engineering and FEA.

The new MaxSHOT 3D, launched in September, adds to the Creaform product line the accuracy and speed of photogrammetry. In combination with the Handyscan 3D, the MetraSCAN or the HandyPROBE, it translates into shorter measuring times on larger parts, accelerated positioning of the device around the part and higher measurement accuracy, which ultimately leads to reduced production costs and increased efficiency.

All Creaform measurement systems are completely portable and insensitive to vibrations in the work environment. Regardless of vibration or shock, they also generate high accuracy in the production and workshop area.

Creaform
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Delcam to Show New CAD and CAM at Euromold

Delcam will demonstrate the latest versions of its PowerSHAPE CAD software for tooling design and its PowerMILL CAM system for high-speed and five-axis machining at the Euromold exhibition.

The main addition to the 2012 release of PowerSHAPE is a range of direct modelling options. Unlike other programs that have incorporated direct modelling as part of a product design system, the PowerSHAPE options are focussed on design for manufacture, in particular on

The new functionality will enable tooling designers to tackle all the common problems that they find in product designs, such as insufficient draft or inappropriate fillet sizes. For these adjustments, it is often faster to use direct modelling than surface modelling so the new options can shorten the overall time needed to produce the tools.

Another direct modelling command makes it easy to modify the thickness of any feature within the design. This can be used to adjust

to add machining allowances before manufacturing, for example, when adding material to the split surfaces of a mould, or to offset surfaces to create electrode designs from tooling designs.

PowerSHAPE 2012 has the ability to identify features within 'dumb' geometry, including holes, pockets, cuts and bosses. Intelligent manufacturing information can be added to the features and passed to PowerMILL. For example, information on the sizes and types of holes can be used for automated

within the model so that, for example, holes in a surface can be ignored by the machining program until they need to be drilled.

Together with the extensive data translation and data repair options already available in PowerSHAPE, the addition of direct modelling gives a unique range of capabilities to tooling designers, whether they are working with moulds, press tools or die-casting equipment.

Delcam plc
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