

Coko Werk Streamlines Mold Manufacturing with SpaceClaim

The range of parts that Coko produces is extensive, including parts for washing machines and dishwashers, large diesel engines, automotive lights, gambling machines, tanning beds, seats and armrests for trains and head rests for premium car seats, such as those found in Daimler's S-Class.

Frank Steinkamp is a Designer who is focused on the analysis of plastic parts in preparation for manufacturing.

THE CHALLENGE: SIMPLIFY AND SHORTEN THE TIME TO CONVERT DIVERSE CAD DATA FOR MOLD PREPARATION

Coko is a leader in injection molding, with equipment that produces hundreds of thousands of parts every year.

The individual requirements of injection-molded parts determine the manufacturing method. Constant improvements to and modernizations of this technical process are the basis for Coko's high standard of work and services.

Coko produces injection-molded plastic parts up to a weight of 20 kg and has over 80 modern injection molding machines with a locking force of up to 24,000 kN. As the company has grown, mold analysis has become more critical. Frank's responsibilities have shifted from molding design to molding analysis and he leverages Moldflow software in his work.

The challenge Frank and others on his team were facing was the amount of time it took to open CAD data, perform mold flow analysis, and modify the geometry to suit molding requirements. Customer files are sent to Coko in a range of software, including CATIA and NX. It was very time consuming to move in and out of different forms of software to perform analysis, and often the process was often prone to errors.

SPACECLAIM TRIPLES THE SPEED OF MODEL PREP AND MOLD ANALYSIS

Conducting plastic injection-molding simulation enables Coko to validate and optimize the design of plastic parts and molds. This process reduces the need for expensive prototypes, avoids manufacturing defects and shortens time to market. Accuracy and flexibility are key.

The process involves bringing in data in different formats and preparing it for Moldflow. First, Frank opens the CAD data and prepares the geometry for mold

ABOUT COKO WERK

Coko Werk GmbH & Company is a large system supplier of technical plastic parts for automotive, appliance and other consumer and transportation industries.

Coko is a strong partner in many fields of plastic processing and finishing. From the design of a tool or plastic article, through mold making right down to injection molding, everything comes from the same source. A large number of the plastic parts are further processed after injection molding, e.g. the assembly of components, varnishing, foaming, bonding, printing, etc. The company is one of the leading suppliers with 800 employees across Germany, Poland and Turkey.

www.coko-werk.de

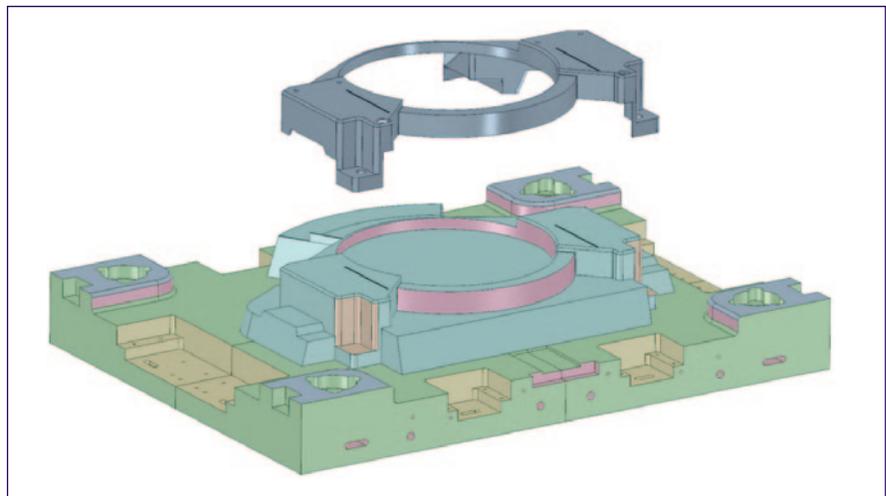


Figure 1: A typical mold design, including locked customer geometry and flexible mold geometry

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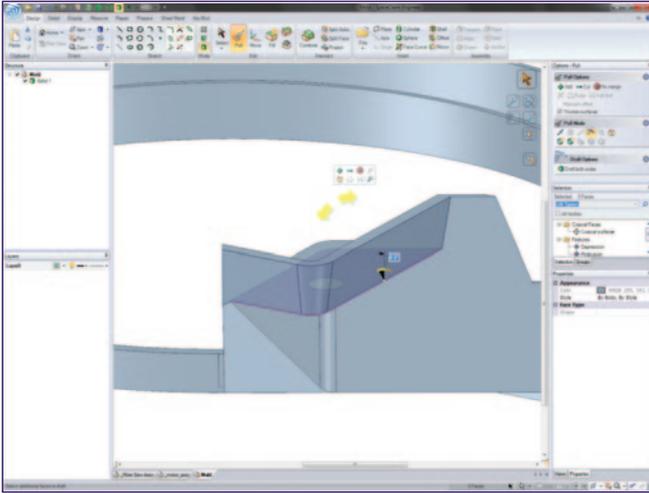


Figure 2: SpaceClaim can adjust rounds and draft angles from imported data, lowering manufacturing costs

simulation. Then, Frank typically iterates the analysis process three to five times, modifying the geometry as required to optimize the design by changing parameters and geometry and re-running until all issues have been identified.

Collaborating closely with German value-added reseller Lino, Steinkamp found out about SpaceClaim. With SpaceClaim, Frank easily can fix poor geometry; remove small rounds; change the position, number and thickness of ribs; edit the wall thickness of parts; and finally send the data to Moldflow in a Parasolid format.

"SpaceClaim is very fast and easy to use. I estimate that I can now work three times faster and more efficiently. SpaceClaim is very reliable and has changed our

simulation and analysis process significantly," Frank Steinkamp, Designer, Coko Werk GmbH & Co.

Often Coko is asked to complete plastic parts designed by suppliers. The files can be easily and quickly opened and changes made, all with SpaceClaim.

"I was able to learn the basics of SpaceClaim in less than a day and with an intuitive interface the process to be productive was easy. SpaceClaim enables me to make the many changes I have to without going in and out of different software. It not only saves me time, it has made our workflow much less stressful," Frank Steinkamp.

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Frank Steinkamp
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