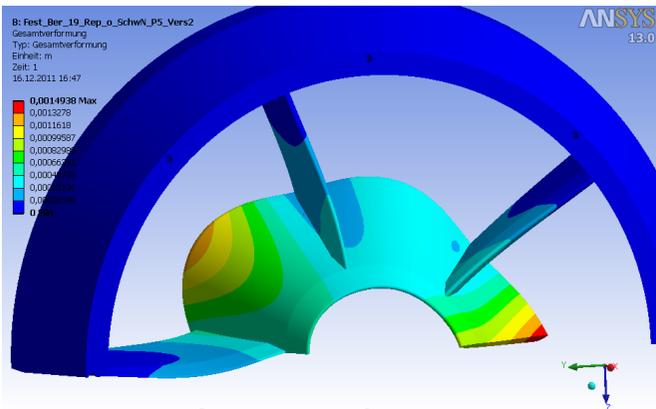
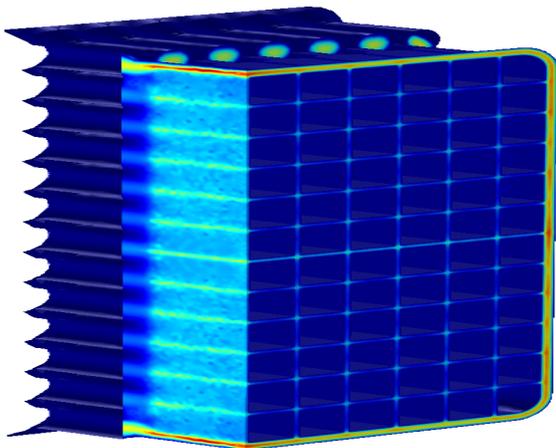


Die and fluid volume



Deformation of a strainer



Velocity profile in the die

Contact:

sico-solutions

scientific and technical solutions

Lehenstraße 30

D-70180 Stuttgart

Telefon: +49 (0)711 1206247

Telefax: +49 (0)711 1206254

support@sico-solutions.de

www.sico-solutions.com

Contact person:

Dr. Wolfgang Hoffmann

wolfgang.hoffmann@sico-solutions.de



Contact us.

**We are looking forward to be
challenged by you.**

sico-solutions
scientific and technical solutions

**Optimization of
extrusion dies**

Simulation

Innovation

Research

Development

Your resource for innovation, research and development in the field of scientific computing, simulation technology and product development.

sico-solutions is a team of highly qualified scientists in the domain of physics, mathematics and engineering. Our goal is to find answers to complex and the most difficult problems applying modern simulation technologies. We are specialized in multi-physical modeling, from standard application up to applied industry-oriented research.

sico-solutions provides simulation services from standard up to complex scientific and technical applications. We optimize your products, procedures, processes and innovations using trustworthy simulations. As we look at your topic in its entirety, we are a strong and reliable partner within the realization of your innovations in all relevant steps.

sico-solutions has profound experience in projects with international partners and provides professional management for the realization of international projects with challenging technical and scientific topics.

Extrusion

A particular strength of **sico-solutions** is the simulation of extrusion processes. Thereby the non-linear flow of a ceramic compound or a metal powder through a die is simulated. Simulation is crucial in optimizing your products and manufacturing processes by visualizing all relevant physical phenomena and quantities in the die. Furthermore, you discover material agglomerations, pressure minima and pressure maxima in the feed of the die.

You profit from simulation by:

- a better understanding of the physical phenomena
- new insights and more creativity in the product development
- virtual prototyping, test your ideas fast and straightforward
- avoid minus development, fail-fast
- purposive prototype construction
- higher product quality and form stability
- significant reduction of cracks and failures due to defects in the consecutive production process

Rheolog

The rheometer **Rheopress** and the software **Rheolog** determine all important material parameters which describe the flow of ceramic compounds. The four parameters yield stress, Bingham viscosity, wall yield stress and k-factor constitute definitely the visco-plastic material behavior. Especially the set-up at the walls is explicitly dissolved. With these parameters the plastic deformation can be simulated, which gives you an innovative tool for designing optimal extrusion dies. Besides, contract measurements as a separate service are part of the portfolio of sico-solutions.

Rheosim

You want to use the gained parameters instantly to test your developed extrusion devices or in-time delivered materials and compounds virtually? Use Rheosim. This is an interactive easy-to-use simulation platform. Speed up your innovation process with **Rheosim**.

