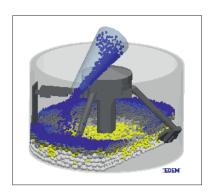
# Simulation of technical processes: Optimization of mixing processes

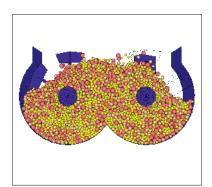




### Analysis of the actual process

- Modeling of the mixer geometry within the simulation program
- Calibration of the material model
- Implementation of the system dynamics into the simulation
- Virtual sampling within the simulation

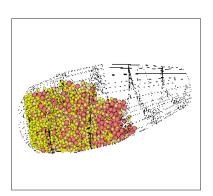
Planetary mixer



## Improvement of mixing systems

- Optimization of the mixing process by adapted mixing tools and parameters
- Visualization and detection of dead zones and areas with increased likelihood of wear
- Improvement of resource and energy efficiency

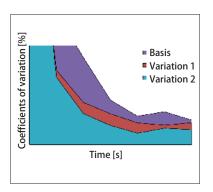
Twin shaft mixer



### **Numerical evaluation**

- Calculation of the coefficient of variation as an indicator of mixing quality (DIN 459-2)
- Analysis of the particle distribution in the process area
- Process representation by pictures and animations
- Visualization and measurement of forces

Truck mixer



# Optional simulation possibilities

- Addition of fibrous particles
- Integration of fluid material properties
- Simulation of solids and fluids

Comparison of coefficients of variation over time

IAB Weimar gGmbH Über der Nonnenwiese 1 99428 Weimar

Head of Department Simulation Dipl.-Inf. K. Krenzer

1 +49 3643 8684-157

+49 3643 8684-113

k.krenzer@iab-weimar.de www.iab-weimar.de