

Engineering Case Study

Simulation
Services

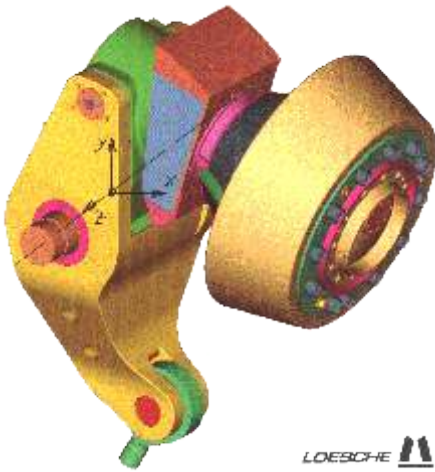
Analysis &
Optimization

Component
Testing

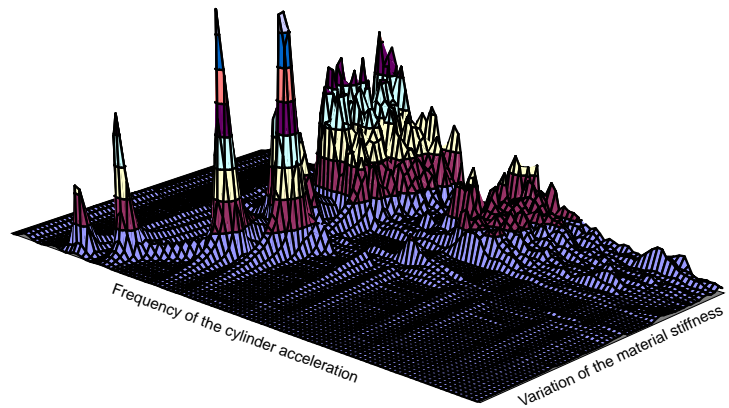
Hardware
Development



Loesche supplies dry-grinding plants for the cement, mineral and power generation industries.



3D-drawing of the grinding unit



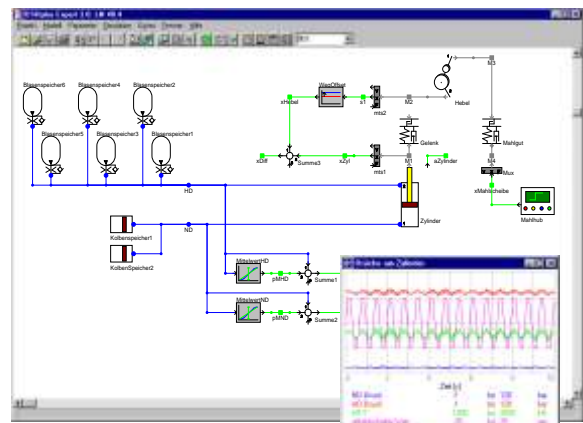
Frequency spectrum of the cylinder acceleration

Task

- ⇒ Simulation of a grinding mill unit in consideration of the dynamic behavior at different mineral stiffness

Realization

- ⇒ Programming of a lever model which represents the mechanical parts of a grinding unit
- ⇒ Setup of a hydraulic-mechanical simulation model of the grinding mill
- ⇒ Dynamic simulation of the milling process in order to verify the simulation model
- ⇒ Automatic variation of the mineral stiffness in order to cover the whole possible working area of the mill
- ⇒ Frequency analysis of the simulation results in order to identify critical operation points



Simulation model of a hydro-pneumatic mill spring