Technical Calculations 

- Finite Elements calculation for structural and thermal problems
- Lifetime and fatigue strength by FKM
- Optimization of components
- Weakness-analysis
- Modal-analysis
- Simulation of metal forming (rolling, levelling, bending)
- Vibration-simulation of drive



Competences



Finite Elements Software

- FEMAP with NX Nastran and Adina Solver
- Autodesk Simulation Mechanical (former ALGOR)

Mathematic Software

- Mathcad and Mathcad Prime
- Maxima

Simulation Software

- Scilab and Scicos
- Openmodelica

Programming Languages

- Visual Studio C++, C#
- Python

Others

Kisssoft

Software





250 300

200





150

Axial Distance From Mill Centerline [mm]

50 100

Optimization of roll contact



- Bending levelling
- Roll
- Stamp

Self-developed and specialized calculation models for dimensioning and optimization of metal forming machines. The calculation effort for these models in comparison to commercial FEM-packages is reduced significantly.



Simulation of metal forming



Ergebnisse



Dynamic-simulation tilting cradle







Self-developed 2D-temperatur-model





Thermal calculations

Table roller



Ergebnisse

Benennung	Ofentemperatur	Stummeltemperatur
Bestandsrolle	1050°C	70°C
Neue Rolle	1050°C	130°C











Notch optimization

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