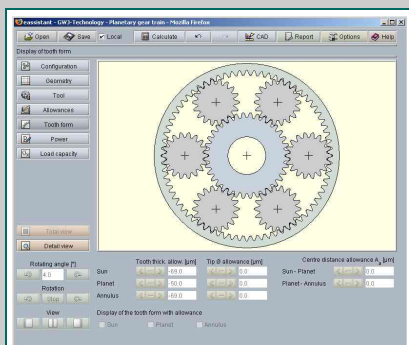
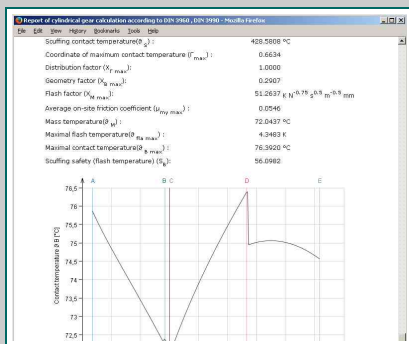
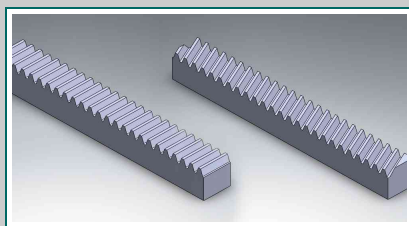
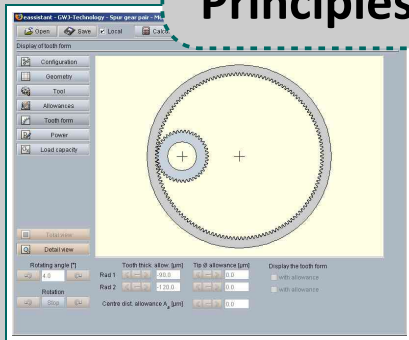


Principles to Dimension and Optimize Cylindrical Gears



This course provides in-depth knowledge and skills in the dimensioning and optimizing of cylindrical gears. After a brief review of fundamentals, the attendees will dive to more advanced in-depth, technical issues. This workshop is a perfect complement to the „Theoretical Basics of Cylindrical Gears“ workshop. The course is intended for engineers who have some basic knowledge, experienced engineers, designers as well as technicians.

The software products eAssistant and TBK 2014 are used in order to illustrate certain principles. Special eAssistant or TBK 2014 knowledge is not necessary.

Main Topics

1. Dimensioning and Optimization of Cylindrical Gears

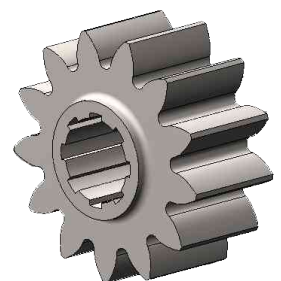
- Purpose and principle phases of development work
- Meshing interferences of external and internal cylindrical gears, analysis and remedy of meshing interferences
- Guideline for cylindrical gear design: Requirements, module, facewidth, selection of profile shift sum, distribution of profile shift, constructive information
- Load spectra
- Special gearings: Special requirements
- Possibilities for optimization: Load capacity of tooth root and tooth flank, scuffing
- Noise optimization: Selected factors to influence the gear geometry
- Modifications: Profile and flank modifications
- Distribution of contact ratio of multi-stage gearboxes

2. Rack-Pinion Gear Pair

- General information

3. Planetary Gear Trains

- Basics / basic principles of planetary gear trains
- Simple design of planetary gear trains



The full-day seminar includes practical exercises with eAssistant or TBK 2014. Individual questions are allowed and welcomed during the workshop (depending on time).