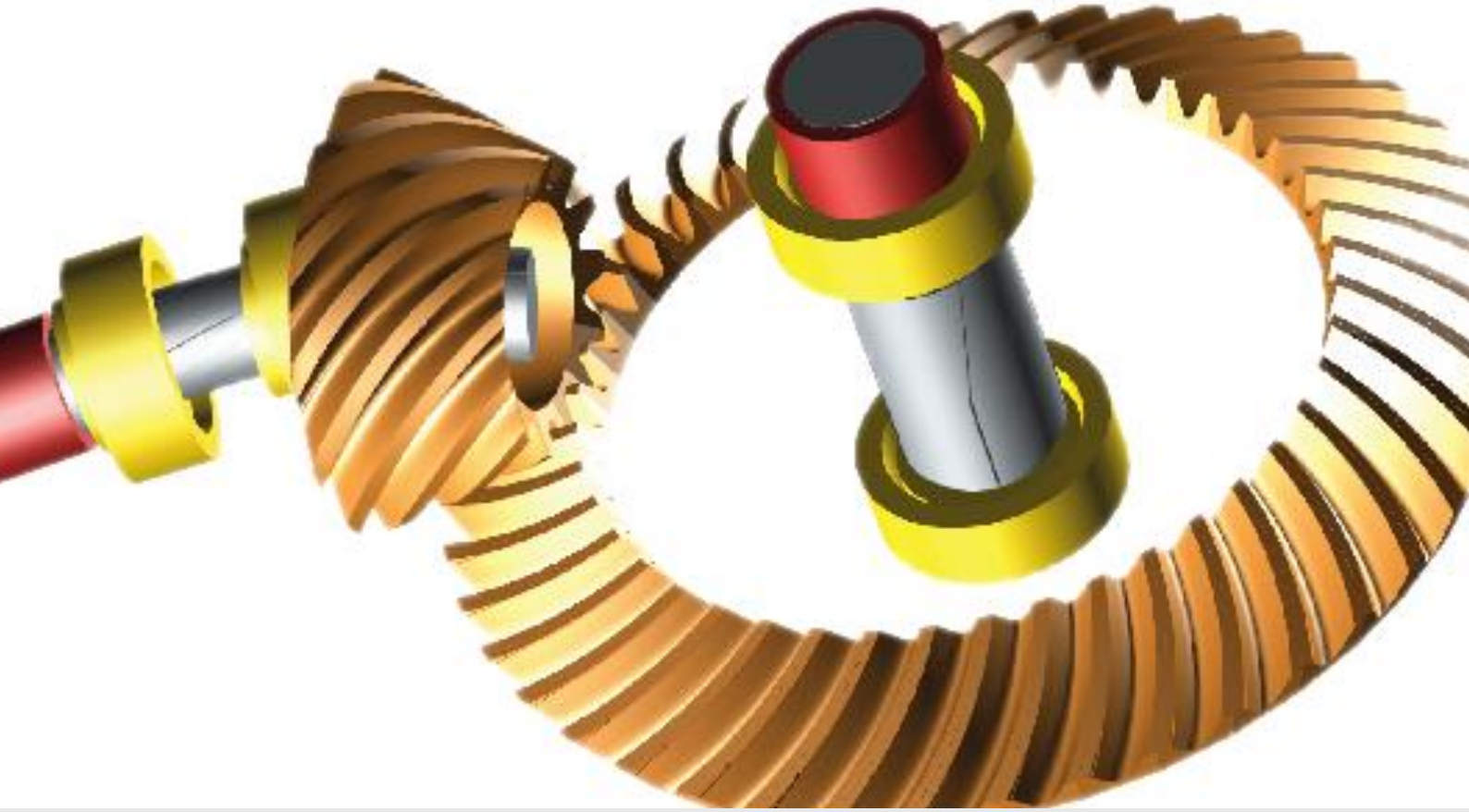
A Gleason Company KISSsoft

KISSsoft Live Stream Training

Special: Bevel and Hypoid Gears

November 6-9, 2023



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Sharing Knowledge

The below schedule is shown in time zone CET 2:00 pm – 6:00 pm (Brussels)

Session 1: November 6, 2023

2:00 – 2:15 pm	Welcome
2:15 – 3:25 pm	Cutting methods for straight and helical bevel gears Cutting methods Face Hobbing, Face Milling and its specialties
3:25 – 3:40 pm	Break
3:40 – 5:00 pm	Calculation of geometry according to ISO 23509
5:00 – 6:00 pm	**Exercise: Input from a Gleason dimension sheet**

Session 2: November 7, 2023

2:00 – 3:40 pm	Strength calculation according to different standards such as ISO 10300, AGMA, etc.
3:40 – 3:55 pm	Break
3:55 – 5:00 pm	Other calculations such as scuffing, flank fracture, efficiency, etc.
5:00 – 6:00 pm	**Exercise: Bevel gear strength calculation**

Session 3: November 8, 2023

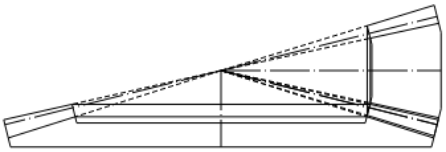
2:00 – 3:30 pm	Design of macro geometry
3:30 – 3:50 pm	Break
3:50 – 4:30 pm	**Exercise: Sizing of a hypoid gear pair**
4:30 – 5:00 pm	Contact analysis and micro geometry
5:00 – 6:00 pm	Differential bevel gears

Session 4: November 9, 2023

2:00 – 3:00 pm	Design processes and 3D models
3:00 – 3:30 pm	**Exercise: Topological modification and measurement grid**
3:30 – 3:50 pm	Break
3:50 – 5:00 pm	Bevel gears in transmissions
5:00 – 5:45 pm	**Exercise: EPG and contact analysis**
5:45 – 6:00 pm	Ending

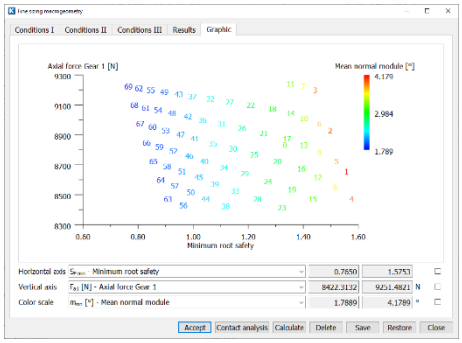
Training Scope

Cutting Methods and Geometry



- Cutting methods for straight and helical bevel gears
- Cuttung methods Face Hobbing, Face Milling and its specialties
- Calculation of geometry, virtual cylindrical gear

Strength Calculation

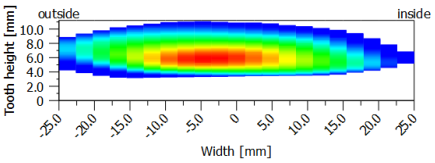


- Strength calculation according to ISO 10300, AGMA 2003, ..
- Scuffing according to ISO/DTS 10300-20
- Flank fracture according to ISO/DTR

Design of Bevel Gears

- Rough sizing, relevant parameters
- Fine sizing, optimization of bevel and hypoid gears
- Microgeometry

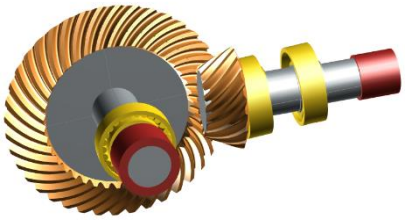
Contact Analysis



- Contact analysis theory
- Contact pattern and transmission error
- Optimization using gear modifications

Processes

- Design processes for conventional manufacturing and 5-Axis milling
- 3D models, check of contact lines
- Topological modifications



Bevel Gears in Transmissions

- Bevel and hypoid gears in KISSsys models
- Calculation of EPG misalignments
- Interface to GEMS®