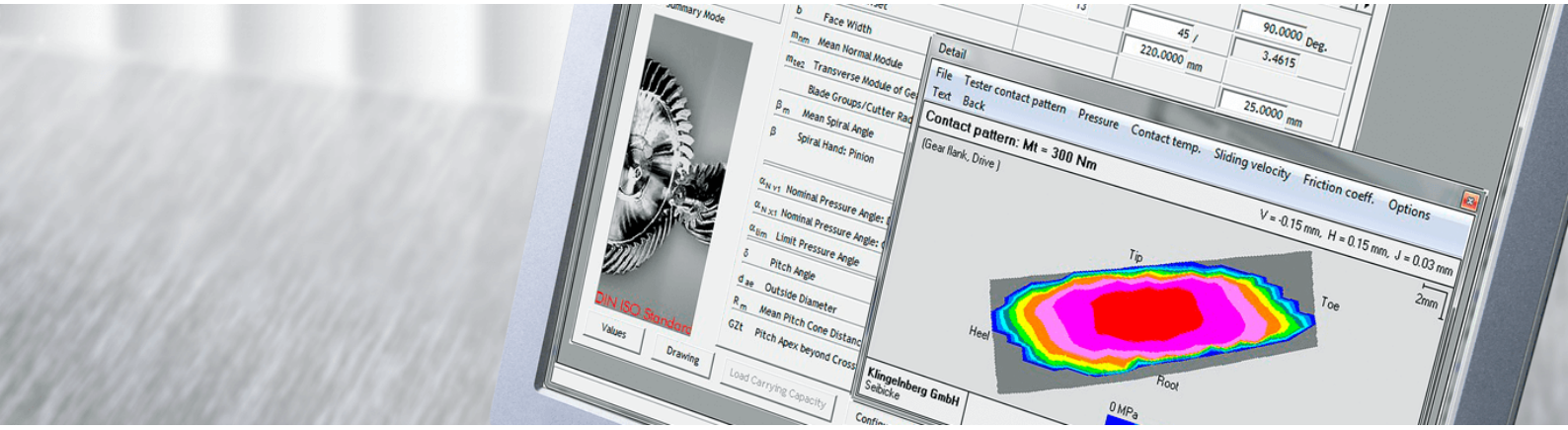
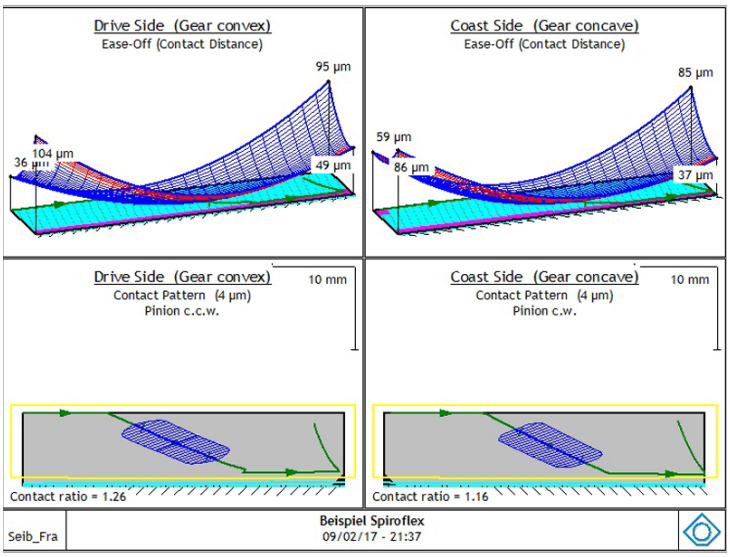
KLINGELNBERG





KIMOS

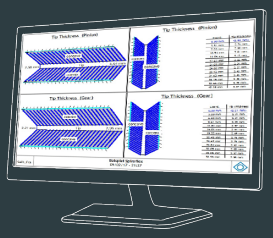
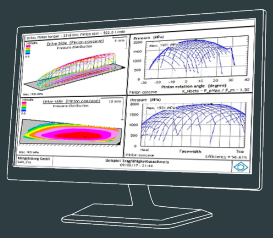
SOFTWARE

INDUSTRY 4.0 IN PRACTICE: DESIGN OF BEVEL GEAR GEOMETRY AND THE MANUFACTURING PROCESS

Geometry, process, and tool design for bevel gears

KIMoS (Klingelnberg Integrated Manufacturing of Spiral Bevel Gears) enables the design, optimization and computer-aided production of spiral bevel gears for various gearing systems. Based on a simulation of the production process and the intermating of tooth flanks generated in this way, the gear set running behavior can be examined in detail and optimized. All data records are organized in one or more databases containing the theoretical nominal data for topographical measurement of the tooth flanks, the theoretical machine setting values and tool data, as well as the optimized machine setting values.

HIGHLIGHTS:

- Geometry dimensioning for all common bevel gear manufacturing processes
- Macrogeometry inspection based on common standards
- Simulation of the manufacturing process and contact conditions
- Tooth contact analysis for load-free optimization of running quality
- Interference analysis
- Tooth contact analysis under load, taking real tooth form into account
- Data provisioning for production and quality control
- Production optimization, documentation of all results: a digital twin at the ready!

HIGHLIGHTS