**winLIFE** is a powerfull Windows program in German and English language, which runs on any PC. It is easy to use but needs a good understanding of fatigue theory. **winLIFE** has been used for 25 years in the following areas: Automotive, Aerospace, Military Vehicles, Wind Energy Systems, Civil Engineering, Mining Machinery, Ship Industry, Universities. There are the following modules to cover nearly all of the problems which can occur in fatigue:

winLIFE BASIC

- Fatigue Calculation according to Nominal Stress, Local Stress, Local Strain Approach

- Interaction with existing FE-and MBS-Codes (Nx NASTRAN, ANSYS, ABAQUS, FEMAP, RecurDyn)

- S-N-Curve Generator / e-N-Curve Generator (FKM-Guideline, UML, Hück, GL, Haibach)

- Material Database with more than thousand material data

- Measured Loading Histories can be used, no limit in length, powerful visual Data Correction Tools

- Load spectrum generator available

- Powerful visual Analysis Tools

- Super positioning results (weighted sum of different Load Cases)

- Report generator enables standard and user-defined Reports
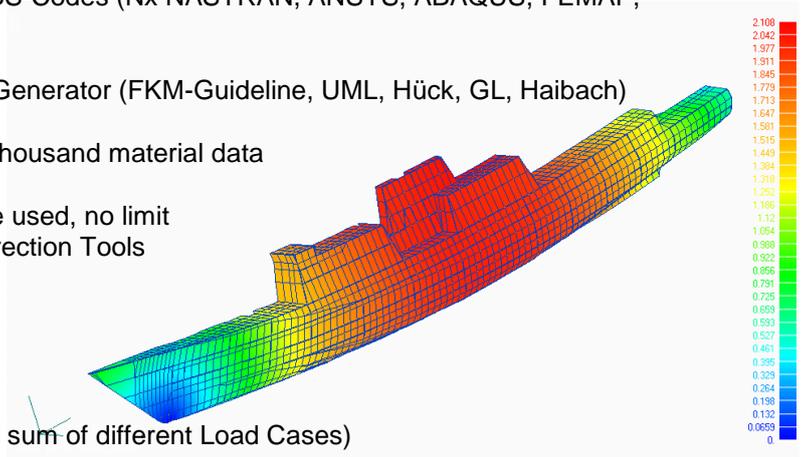
winLIFE MULTIAXIAL
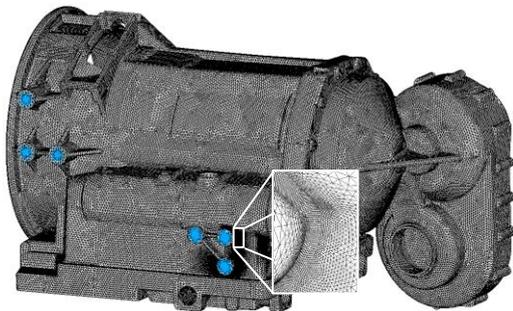
- Fatigue Estimation using the Critical Plane Approach

- many Damage Hypothesis in the plane can be used

- up to 200 parallel Loadings can be used synchronously

- Strain Gage Data readable directly from any gage

- Powerful visual Analysis of Data for every Node and Plane

- Fast and effective algorithm to reduce Calculation time

winLIFE VIEWER4WINLIFE

- Direct access to ANSYS, ABAQUS and OP2 result files.

- Graphical representation of FEA results (stress and strain) and fatigue results within winLIFE.

- High speed input of huge databases.
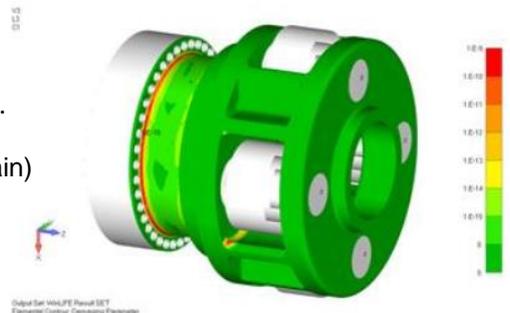
winLIFE QUICKCHECK

- static and endurance proof according to FKM-Guideline

- worst-case analysis for load spectra combinations with constant stress ratio to find the most dangered point for all nodes of the surface. Very simple to use !
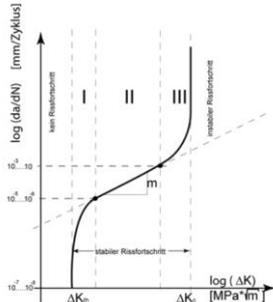
GEARWHEEL&BEARING

Fatigue analysis: Calculation for component parts necessary for calculating gearwheels and bearings. You can use it together with the ZAR-software of HEXAGON
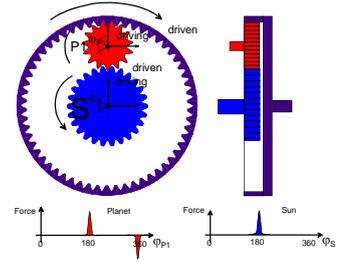

CRACK GROWTH

Calculating crack growth in mode I according to Paris and Erdogan Ratwani

RANDOM

- Fatigue calculation based on PSD results from FEA respective MBS simulations. In aerospace-, ship-, military- and automotive industry this is an established methode.

- Customers who have to meet fatigue tests in the certification process on random-test-rigs use it successfully.
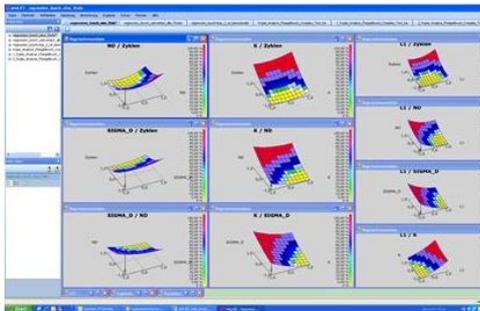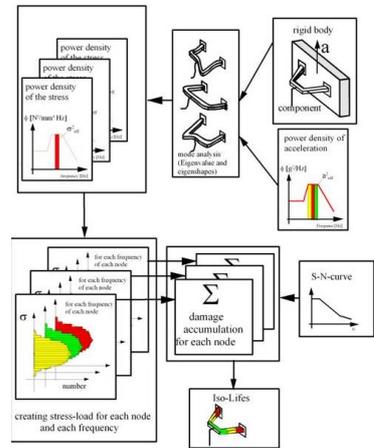
STATISTIC

Getting relations between single parameters and fatigue life in a parameter range.

Creating combinations of parameters (DOE), automatic calculation of variants, multiple nonlinear regression analysis, and grap.

Various investigations are performed.

Training worldwide

60 times training courses in Germany happened.
Worldwide training in customer´s companies were done in English language.

250 installations worldwide including:

Andritz Hydro, Borg Warner, Bosch, Daimler, Doosan, FAG, Hitachi, Hyundai Heavy Ind,Komatsu Hanomag, MAIT, MAN, MAK, Mitsubishi, Krauss Maffei Wegmann, Lürssen Werft, LBF, Pfleiderer Verkehrstechnik, Porsche, Rheinmetall Landsysteme, TEMIC, Thyssen, Voith, Zeppelin, ZF.