

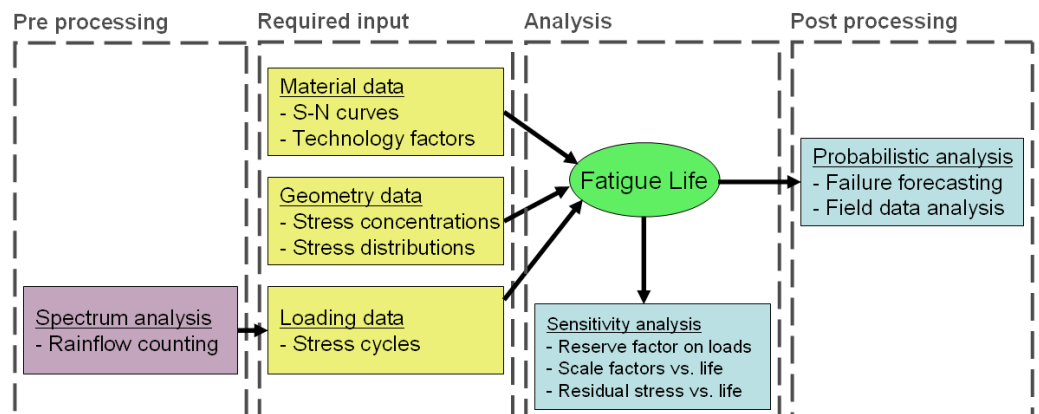
fFatigue

FACT SHEET

www.ffatigue.net

- fFatigue is a sophisticated stand-alone tool with which a designer can quickly and accurately analyse the fatigue life of a product. fFatigue can evaluate constant amplitude loads, load design spectra and load histories from strain gauge measurements. fFatigue comes with a large materials and geometry database and offers the user a very easy to use interface. fFatigue also offers tools for failure forecasting based on analysis and field data.

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Fatigue Analysis

- High cycle fatigue* - Stress-life fatigue analysis (**Not** strain-life as many others tools do. The strain-life method describes a different process and is not suitable for high cycle fatigue).
- Very user-friendly GUI.
- Mean stress correction according to either Gerber, Goodman, Soderberg or Schütz.
- Damage accumulation according to relative Miner.

Materials Database

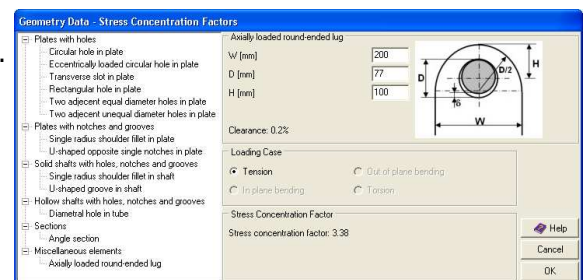
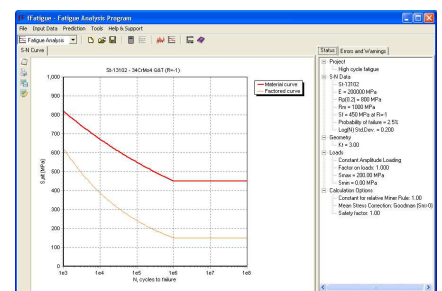
- Over 250 entries.
- Fatigue limit based data ($K_t=1$, $R=-1$).
- Haigh diagram based data (range of K_t values).
- Welded steel structures (Eurocode 3).
- Import and export of user defined material data.

Technology Factors

- Surface conditions.
- Temperature.
- Loading: tension vs. Shear.

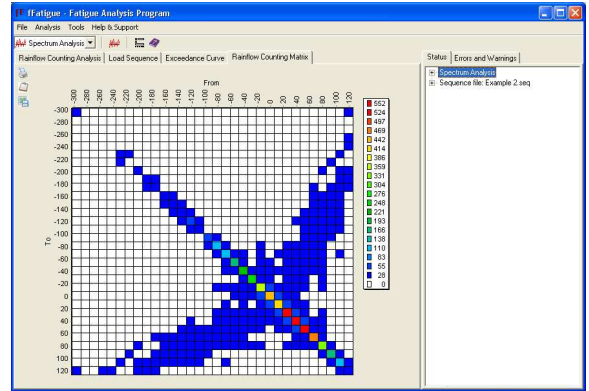
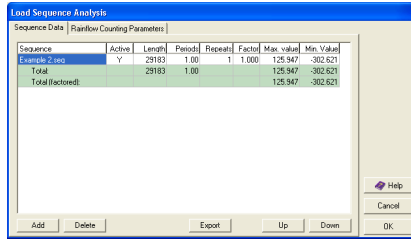
Geometry Data

- Stress concentration calculation tool.



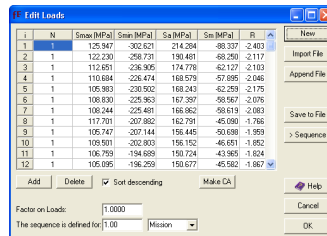
Spectrum Analysis

- Transforms a load sequence to stress cycles using the Rainflow Count method.
- Load sequence can be given as condition code (load cases). This option is very convenient when working with FEA data.



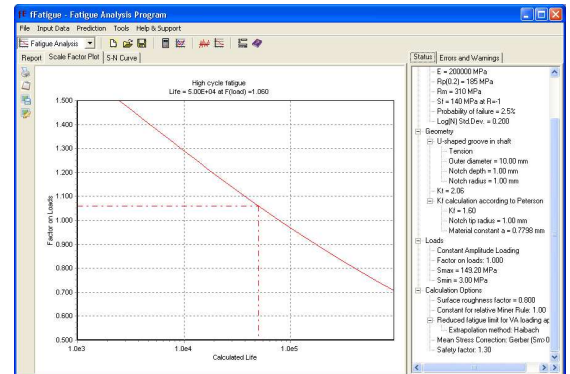
Loading Data

- List of stress cycles
- Load scalars



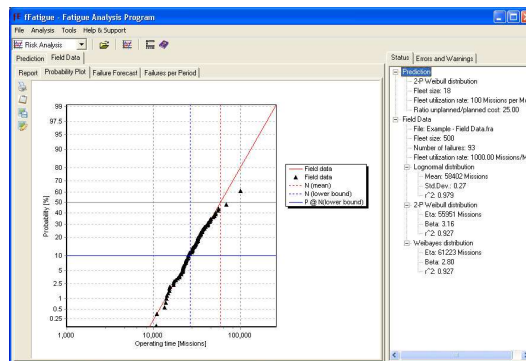
Sensitivity Analysis

- Reserve factor
- Scale factors vs. life
- Residual stresses vs. Life



Probabilistic Analysis

- Failure forecasting
- Field data analysis



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