

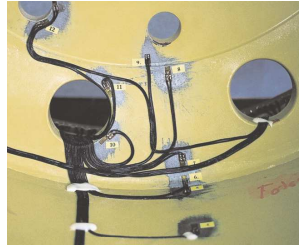
Derivation of dimensioning data and test programmes for fatigue life evaluation

Determination of operational loads

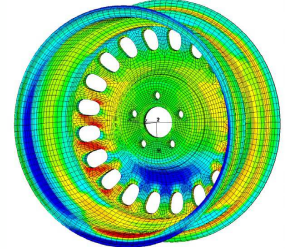
Measurements of different load cases under driving conditions on test tracks



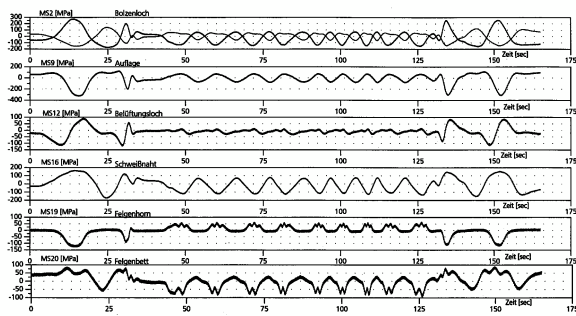
Wheel prepared for measurement



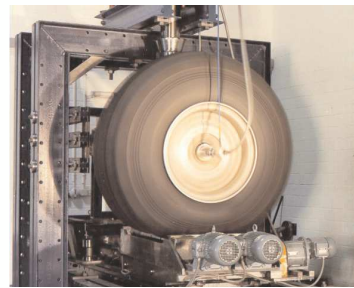
Numerical calculation using preliminary load assumptions



Results of vehicle measurement



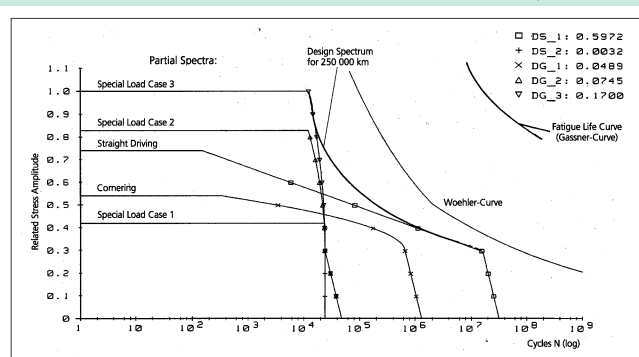
Experimental stress analysis using preliminary load assumptions



Derivation of dimensioning data

Definition of the required design spectrum in cooperation with the customer/user

- wheel forces
- correlation
- cumulative frequency distribution
- partial spectra



Theoretical evaluation based on experience

Fatigue strength evaluation

Operational load simulation

Derivation/adaption of test programmes for special applications

Experimental proof of structural fatigue strength in the test rig under consideration of preloads, fretting corrosion etc.



Final evaluation under consideration of design, manufacturing, material