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Evaluation of Tensile Tests for Polymers

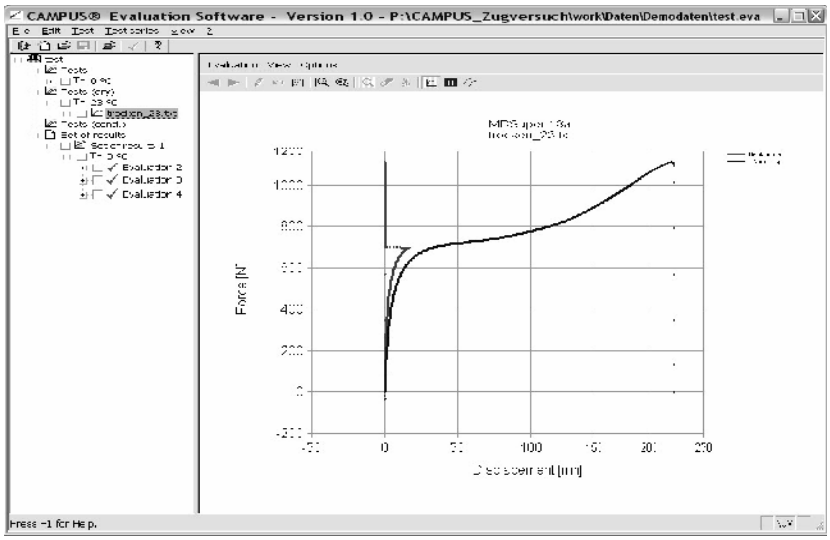
Tensile tests are the most important methods for the **mechanical** characterization of polymers. It turned out that the engineering properties determined from this kind of test strongly depend on the person who evaluates the raw data. This causes a weak point in the system.

Apart from that, all steps are determined by **CAMPUS**, from the production of the specimen via the rules for the test proceedings until the determination of the formats, in which the results are documented.

Therefore, to close this last shortcoming, material producers involved in CAMPUS commissioned M-Base with the conceptual design of a standardized **evaluation software**, which is going to be delivered to all participating resin producers very soon. The program is based on the MARLIS evaluation software, which was developed by M-Base for the automotive industry and which evaluates tensile tests with steel and aluminum.

Through the adjustment to the specific standards for polymers, the program is able to read in original data files from the test machine, to smooth the curve and to determine average values for the most important **engineering properties** (E-modulus, yield point, strain at break etc). In doing so, the program works according to recently developed methods completely automatically and therefore absolutely user independent. Thus, the uniformity and comparability of determined data is further improved. At first, only those data are determined which also find consideration in the current version of CAMPUS.

In the near future, M-Base will extend the software to tensile tests with higher velocity and thus to provide material data for **crash simulations**.



Evaluation of Tensile Tests

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