

CAE Material Databases

Material related parameters have a tremendous influence on the precision of CAE calculations. However, the quality of the material data input to CAE has been neglected in the past and responsible managers become aware that material data has become the most critical quality factor in design and simulation. It becomes obvious that many companies have no concept for the internal handling of material data at their disposal.

In many cases no centralized management of material data has been established; every designer is

installed on a central server and becomes available through either the internet or an internal company intranet. Clients do not need any additional installation on their hardware.

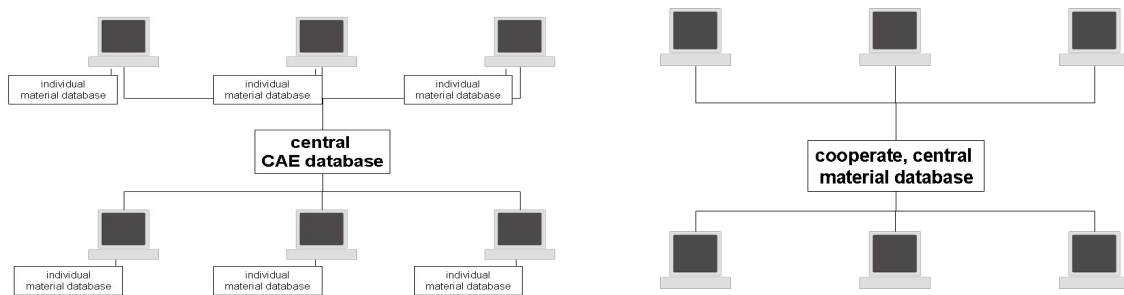
The complete functionality is available using any commercial browser. Using adequate interfaces, CAE systems can read out the data directly and without any transmission error.

The user has access to all necessary operations for the handling of material data (print

many companies, especially material producers and in the automotive industry (OEMs, as well as Tier1).

Every customer has specific needs. Therefore, we recommend an extensive analysis of the specific situation at each customer. It has to be checked, if the specific content and data structures are compatible. Also the specific data flow and procedures in the data inquiry, as well as the access rules need to be considered.

This task is more than a mere



Situation Today

Ideal Situation

allowed to work with an individual data pool and documentation of applied material parameters is not up to normal quality standards.

The preparation of material related input for CAE is very complicated and a serious source of errors. CAE systems require input formats which are absolutely un-structured and insufficiently documented. The transfer of material parameters from existing sources into CAE systems is time consuming and error-prone. This situation can be improved. Based on many years of experience in the design and realization of high-end material information systems, M-Base can offer the necessary know-how and reliable software tools for these purposes.

Our material databases are well equipped for the management and supply of CAE parameters. The software uses the latest internet technology, this means the complete system with all features will be

datasheets, search for properties, generate tables, sort data, convert units, presentation of multipoint data (curves), etc. Specific data interfaces generate correctly formatted input files for any target system.

In case that target systems need mathematical parameters for specific material models, adequate regression analysis tools are available to generate these parameters from the physical properties stored in the system.

Comprehensive administration tools allow the entry and editing of individual data and also an individual user management including the control of access rights.

Our software enables customers to install one unique, central data basis for the whole company, to assure that all users rely on the same set of data, which was collected and released by the person in charge.

Our software is already used by

collection of requirements and preparation of a correct specification. The installation of a well designed material database will always lead to optimizations in the business organization of the customer. Almost without exception, we will during the data structuring process generate suggestions for improvement for the work flow in relation with material data and for the integration of material information into the internal knowledge management.

As a qualified and highly specialized provider of high end material information systems, M-Base contributes the appropriate know-how into the software specification phase in order to stand out from the crowd of general purpose software vendors.

Basically our software can handle any class of material. Successful references in the areas of plastics, elastomers, steel and aluminum are on hand.

M-Base
Engineering + Software GmbH
For more information:

Dennewartstr. 27
D-52068 Aachen
www.m-base.de

Phone: +49-241-963-1450
Fax: +49-241-963-1469
E-mail: info@m-base.de