



Part1: Modules of the Data Management

The modules of the data management form the foundation of the PMP-Software. All information characterising the current condition of a grainy material (grading-, material- and operating specific properties) are summarized in the material objects. Describing the particle size is essential in this process. Further characterising values can be integrated application- and problem-related by module AC, so that the program is able to cope with different demands and the data structure still remains clear.

The PMP-Software enables an uniform and comparable evaluation of properties of grainy materials. Meaningful result demonstrations become possible by manifold representations, which are cut specifically to the mechanical process engineering. At the same time, the modules are required for revealing process- and system technical contexts efficiently.

Basis Module: PMP ParSize

Description of grainy materials, powders and dusts by particle size distributions (mass-related)

Contains methods for

- ◆ setting up problem-related data structures
- ◆ recording particle size distributions
import, manual input
- ◆ calculating characteristic values under consideration of different distribution laws
- ◆ calculating functions
RRSB,- log-normal-, and power distribution
- ◆ visualising distributions, characteristic values and functions in various table- and graphic views
- ◆ converting class divisions under consideration of various distribution laws
- ◆ administrating in problem-related projects

Import interfaces

The distributions can be transferred directly:

- ◆ from measurement devices
laser diffraction
screening
optical counting
and others
- ◆ from text files
(spread sheet)
- ◆ from data bases

Module: AC

Administration of Characteristics

Additional description of grainy materials with problem-related characteristic values.

Contains methods for

- ◆ formulating problem-related characteristics
- ◆ setting up data structures with problem-related characteristics
- ◆ common visualisation combined with the distribution in tables and graphics
- ◆ setting up trends and contexts
- ◆ evaluating test series

Module: TGM

Table- and Graphic Manager

Contains methods for

- ◆ setting up individual graphic- and table views
- ◆ administrating various views

Module: RG

Report Generator

Contains methods for

- ◆ designing print pages
- ◆ administrating and sending reports



Part 1: Additional modules of the Data Management

The additional modules complete the basic module and provide methods enabling a proceeding evaluation. The modules can be combined independently of each other and individually with the basic module.

The formula generator serves for embedding individual contexts between characteristic values. Formula collections for different application areas can be set up and provided generally. With this scope, in-house contexts can be included independently from the software producer.

Module Package ParSize Plus

Module: Statistics

Description of grainy materials with a medium particle size distribution and a particle size related deviation curve

Contains methods for

- ◆ calculating medium particle size distributions
- ◆ presenting deviations
- ◆ comparing particle size distributions

Module: PSD Synthesis

Contains methods for calculating complete particle size distributions from two fineness characteristic values over the distribution laws:

RRSB-, log-normal- and power distribution

Module: Interfacing distribution data

Contains methods for

- ◆ linking two distributions with known mass proportion
- ◆ linking two distributions with unknown mass proportion
- ◆ converting a distribution with a given coarse rate

Module: Kinds of Quantity

Contains methods for converting particle size distributions to kinds of quantity:

(mass), surface, number

Module: Calibration

Contains methods for

- ◆ Setting up a particle size related correction curve (calibration)
- ◆ particle size related correction of particle size distributions (revalidation)

Module: Mixing Formula

Calculation of ideal recipe

Contains methods for

- ◆ calculating a mixing distribution from n component distributions
- ◆ calculating optimal mixing proportions under given n component- and nominal distributions
The maximum rate of components in a mixture can be restricted.

Module: Formula Editor

Contains methods for

- ◆ setting up and checking individual contexts between characteristics
- ◆ linking formulas and characteristics as well as assignment to PMP-Objects
- ◆ automatic calculation of formulas