Flowsheet Editor 1.0

Creating and Administrating Procedural Flowsheets

The FLOWSHEET EDITOR is a tool which serves for linking units of the mechanical process engineering in flowsheets. The editor supports the design of flowsheets by using standardised symbols for mechanical processes as well as symbols for feeding, transportation and supplementary equipment. With this technique, entire process engineering stages can be represented.

All flowsheets are administrated in a specific flowsheet collection. An individual browser enables a fast and detailed navigation .

Flowsheets which have been created by the flowsheet editor module can be transferred directly into the PMP-Software for further calculations.

REFLECTING PROCESS ENGINEERING STAGES

Symbols for devices and machines can be arranged on the drawing area in a raster. The solid flows between the process units are realised by line connection. Material flows start from an exit point (discharge) of one unit and end at an entry point (input) of another unit. The concrete stream path can be defined by the user.
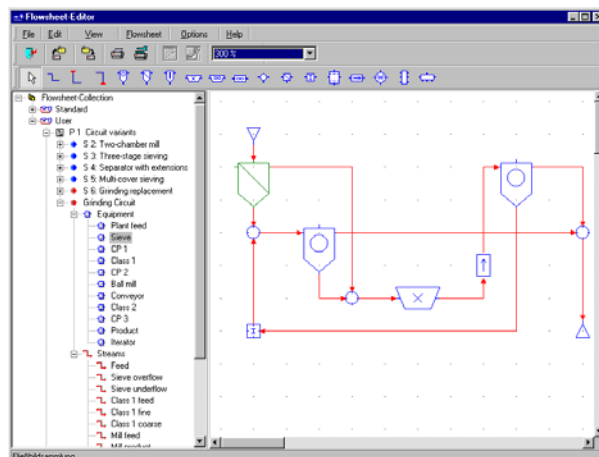

Fig. 1 Basic window of the flowsheet editor:

left area:	Browser of the flowsheet collection
right area:	Drawing area

All devices and flows belonging to a flowsheet are named and displayed in the browser of the flowsheet collection, see fig. 1. Each device or flow can be selected for editing. In this case, it will be occupied with a blue background in the browser and a green one in the drawing area.

Apart from classes of process units of fig. 1 for

♦ comminution processes (size reduction)

♦ classification processes

♦ coarsening processes (e.g. pelletising)

symbols for other process classes are available as well.

CLEAR DESIGN OF PROCESSING SYSTEMS

Quite complex process engineering stages can be structured clearly by means of the flowsheet collection.. For this purpose, free topic areas are available, where any number of flowsheets can be arranged.

Fig. 2 Browser of the flowsheet collection

The collection can simply be updated by a series of menu commands:

♦ Add / Remove

♦ Copy / Paste

♦ Rearrange ...

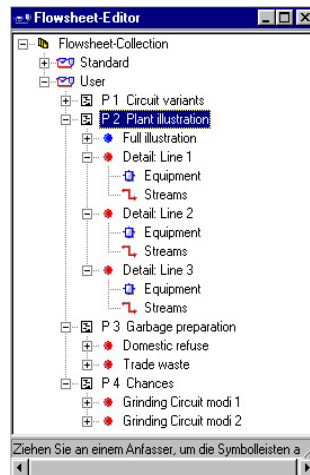### CALCULATIONS IN THE FLOWSHEET

Directly on finishing the flowsheet design, its calculability will be checked. Both, the ports of the single units as well as the connections will be checked upon consistency thereto.
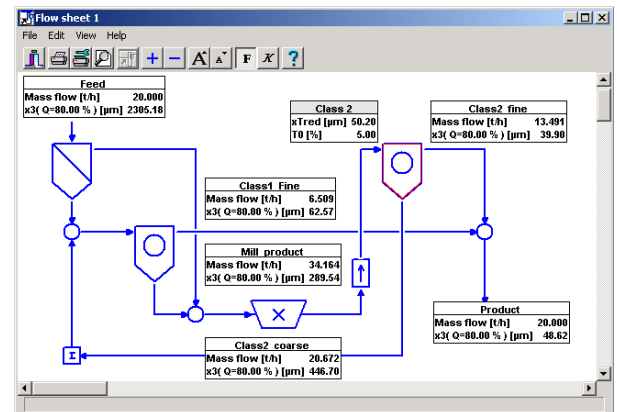

Fig. 3 Calculation mode of the flowsheet inside the PMP-Software

If the check has been successful, the flowsheet will be released in the flowsheet collection and will be available in the PMP-Software for diverse tasks:

♦ Automated data record

♦ Observing and visualising characteristic values of material flows and process units.

♦ Balance calculations on devices aimed to set up significant characteristics and particle size related characteristic curves

♦ Predicting complex plant states with particle size related solid balances which can be combined with a device dimensioning.