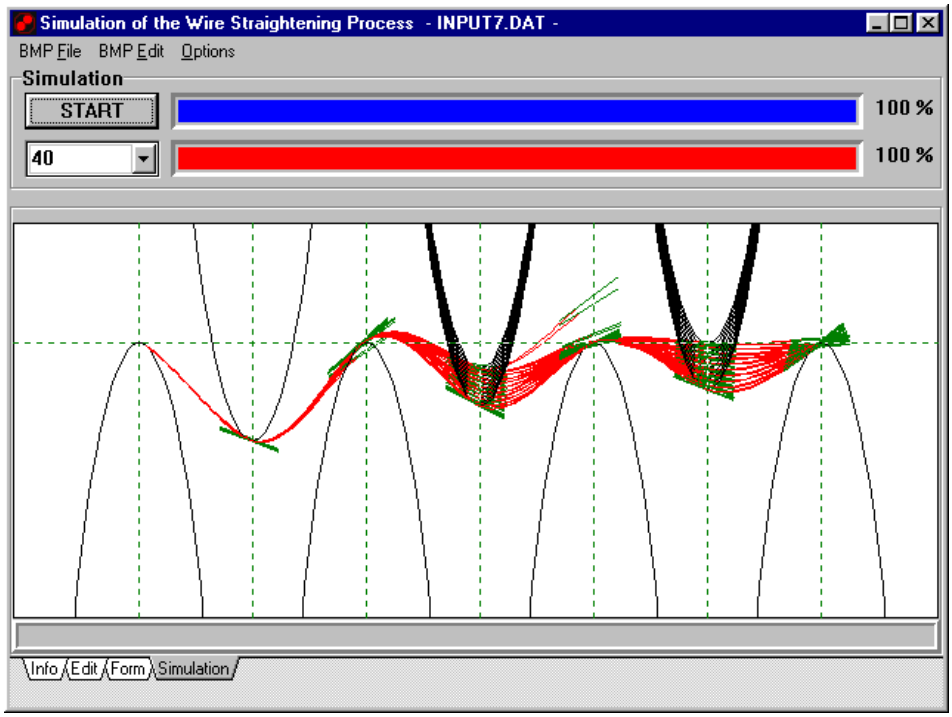
SIMULATION



In various processes of metal material deformation there is still room for optimization with regards to the quality of finished product. Straightening on roller straightening units can be regarded as a representative of this group of processes.

Efforts to obtain process material with an acceptable degree of straightness have focused up until now on a method of trial and error, i. e. making subjective changes to the settings of adjustable rollers on a straightening unit while keeping a constant watch on the emerging process material. In respect of modern methods of fabrication with a need for a constant and high final product quality this traditional approach is untenable. On the other hand it requires to much labor, time and process material.

For the first time our process simulation software opens up the objective possibility to calculate the necessary roller adjustment of straightening units to produce a straight metal wire.

The software's background is a simulation model that describes the technological process of roller based straightening. A knowledge of the elasto-plastic behaviour of the material under alternating loads, an appropriate representation of this behaviour and a description of the relationship between bending moment and bend are important elements on which the model is based. The calculation results can be used for the objective preadjustment of WITELS-ALBERT straightening units.

In respect of all the possible boundary conditions of incoming and outgoing process material a final tuning of specific adjustable rollers sometimes is required. Using straightening units with all adjustable rollers, WITELS-ALBERT recommends a final tuning on the rollers with odd numbers.

For our customers and potential customers we offer calculations using the process simulation software at reasonable costs. Just give us a call (+49 30 723 988 0), send a fax (+49 30 723 988 88) or an eMail (info@witels-albert.com) and let us know all the needed boundary conditions highlighted also in our questionnaires, which can be downloaded from our website www.witels-albert.com (=> PRODUCTS => ACCESORIES => ???).