DEVELOPMENT OF A CUTTING FORCE MODEL

Problem Description

• In the development of new tools the system approach is getting more and more important, in this case tool+blade
• Currently the cutting force is only applicable for tools with already performed measurements. For every variant of blade and cut material a new measurement is needed
• The cutting force is needed for the simulation of all given cutting processes (normal mode, blocking, etc.)

Objectives & Tasks

• Transfer and application of the proven concept for circular sawing to a linear sawing process
• Programming of a cutting force model and building a reduced multibodysimulation model
• Validation of the cutting force model by measurements
• Implementation of the validated cutting force model into the full powertool model and performing parameter studies with the full model