DynaMill – Final publishable summary report (M1 – M36)

Figure 1

- Dynamill analysis and optimization loop

Diagram:
- Tool path, cutting conditions
- Material removed during machining
- Workpiece, tool and MT: Dynamics
- Process simulation
- CAM: planning module
- ModuleWorks
- FRFs and adapted spindle speeds
- Workpiece: Tool path simulation
- IPT
- IPT
- IPT
- IPT
Figure 2

- User Interface of the Dynamill CAM-Module
Figure 3
Figure 5
Figure 6

- High damping metals
- Adapted clearance chamfer
- Adapted variable helix angles

Source of Figure: Walter AG
**Figure 7**

**Module 1: Process planning**
- First machining of the workpiece with standard or experience-based process parameters

**Module 2: Adaptive clamping devices**
- Measuring calibration FRFs of the workpiece which is fixed in the machine tool
- Use measured calibration FRFs as input parameter for the CAM planning module to be able to predict the dynamic behavior of the workpiece and to compile the needed NC code

**Module 3: Cutting conditions**
- Optimized machining of the workpiece based on the DynaMill Technology

**Step 1**
- Usage of DynaMill adaptive clamping device

**Step 2**
- DynaMill Technology

**Step 3**
- Usage of DynaMill damping milling tools