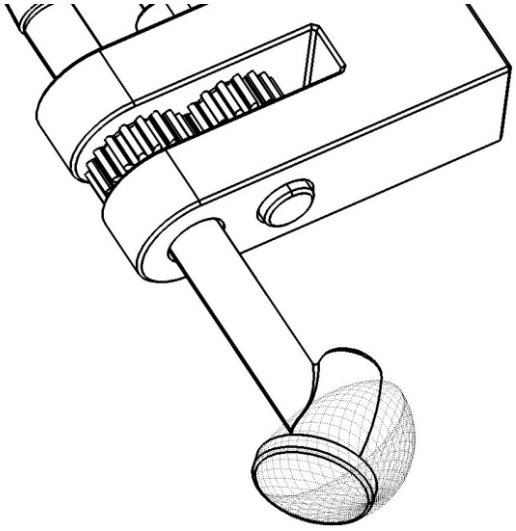
Milling head

Problem definition

up to now full radius and sphere milling ist used to abtain halfspherical processing. The geometry of these tools implies disadvantages: the large zone of contact of the tool requires high cutting forces, the cutting velocity over the entrie cut autline is different, the splinter removal is insufficient and the tool tends to self centring.



Solution:

The cutting velocity can be adapted exactly to the material which is to be worked on. There is no centre with cutting velocity zero. The wearout of the mill is uniformly and the roundness more exactly. Service lifes and surface quality are increased. A large area for the splinter removal remains. The tool does not center itself. The comparatively small zone of contact does not require large cutting forces. The processing area is well visible because the tool is smaller than the geometry which is to build.

Advantages

The shown milling head represents a new manufacturing process. It is a patent application which is developed by us. The rotation of the milling tool is overlaid by a further rotation around the milling head center. The angles of the rotation axes to each other and the tool dimensions are co-ordinated in a way that a hemisphere results during the rotation of the milling tool.

Applications

You see possible applications in the preparation of the bone joint of hip endoprostheses, 3D-editing with large material removal like in yachts building, model making, where an efficient splinter exhaust behind the tool can be supplemented.

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