Patent claims

1. Method for cutting machining of turbine blades (1) on a multi-axis machine tool, wherein the turbine blade (1) is held by a rotatable blade-root clamping device and a rotatable blade-tip clamping device (2) and is machined by means of a tool which is chucked in a tool spindle, characterised in that a first profile section (4) which is adjacent to the blade tip is first of all machined by the tool, in that the tool is then removed and the tool spindle grabs an additional clamping device (5) which has clamping jaws (6.1, 6.2) adapted to the first profile section (4), in that the additional clamping device (5) is positioned on the blade-tip clamping device (2) in such a way that the clamping jaws (6.1, 6.2) rest in the first profile section (4), in that the tool spindle grabs a tool and machines the remaining profile section with it.

2. Method according to Claim 1, characterised in that the additional clamping device (5) is fastened on the blade-tip clamping device (2) by means of a zero-point clamping system.

3. Method according to one of the preceding claims, characterised in that the clamping jaws (6.1, 6.2) are arranged in the additional clamping device (5) in an exchangeable manner.

4. Method according to one of the preceding claims, characterised in that the additional clamping device consists of two parts (5.1, 5.2), of which each has a clamping jaw (6.1, 6.2).

5. Method according to Claim 4, characterised in that the first part (5.1) of the additional clamping device (5) is first of all attached on the suction side or the pressure side of the machined profile section (4), in that the turbine blade (1) is rotated by 180 degrees and then the second part (5.2) of the additional clamping device (5) is attached on the pressure side or the suction side of the machined profile section (4).

6. Method according to Claim 5, characterised in that a manipulating pin (7) is arranged on each part (5.1, 5.2) of the additional clamping device (5) for grabbing the part (5.1, 5.2) by means of the tool spindle.

7. Method according to Claim 6, characterised in that the manipulating pin (7) is hollow.

8. Method according to Claim 7, characterised in that the additional clamping device (5) is clamped or released by means of a pressurised fluid which is fed through the tool spindle.

9. Machine tool for cutting machining of turbine blades (1), wherein the machine tool has a rotatable blade-root clamping device and a rotatable blade-tip clamping device (2) for holding a turbine blade (1), wherein the machine tool furthermore has a tool spindle for the chucking of a tool, characterised in that the machine tool has an additional clamping device (5) which consists of two parts (5.1, 5.2) which in each case are equipped with one or more clamping jaws (6.1, 6.2), and wherein the two parts (5.1, 5.2) can be independently positioned and fastened to the blade-tip clamping device (2).

10. Machine tool for cutting machining of turbine blades (1) according to Claim 9, characterised in that a manipulating pin (7) is provided on each part (5.1, 5.2) of the additional clamping device (5) for grabbing the part (5.1, 5.2).

11. Machine tool for cutting machining of turbine blades (1) according to either of Claims 9 and 10, characterised in that the additional clamping device (5) is clamped or released by means of a pressurised fluid which is fed through the tool spindle.

12. Machine tool for cutting machining of turbine blades (1) according to any one of preceding Claims 9 to 11, characterised in that the additional clamping device (5) can be fastened on the blade-tip clamping device (2), by means of a zero-point clamping system.

13. Machine tool for cutting machining of turbine blades (1) according to any one of preceding Claims 9 to 12, characterised in that when not in use, the additional clamping device (5) is stowed on another part of the machine tool.