Claims

1. A method of manufacturing a component of a rotary machine that has at least one inner passage extending from a center up to a boundary surface of the component and is at least partly closed, the method comprising:
providing a blank comprising the boundary surface and a top surface;
carrying out a first subtractive machining in which a part of the passage that at least comprises an opening of the passage into the boundary surface as well as a cut-out in the top surface is manufactured by machining production; and
subsequently completing the passage by build-up production on the blank such that the passage has a first end in the center and a second end at the boundary surface;
wherein the at least one inner passage comprises a plurality of inner passages of which each extends out or the center up to the boundary surface, each of a plurality of adjacent passages of the plurality of inner passages are partially separated by respective one of a plurality of partition walls, a respective part of each respective passage of the plurality of inner passages is manufactured in tile first subtractive machining of each passage of the plurality of inner passages, each of the respective parts at least partially delimiting the opening of the respective passage into the boundary surface and partially delimiting an opening of the respective passage into a cut-out in the top surface, and each of the partition walls is only completed by the build-up production.

2. The method in accordance with claim 1, wherein the carrying out the first subtractive machining includes producing the cut-out in the top surface such that the cut-out extends to the center.

3. The method in accordance with claim 1, wherein the top surface of the blank has at most one central opening before the first subtractive machining that is arranged in a radially inwardly disposed manner such that a start of the passage disposed at the center is separated from the central opening by a ring body in a completed state of the component.

4. The method in accordance with claim 1, wherein the first subtractive machining is carried out such that, after completion of the first subtractive machining, the top surface of the blank has a contiguous ring-shaped region adjacent to the boundary surface and covering all the openings.

5. The method in accordance with claim 1, wherein the build-up production takes place layer-wise.

6. The method in accordance with claim 1, wherein the build-up production comprises a plurality of additive machining to successively build up the component.

7. The method in accordance with claim 6, further comprising at least one further subtractive machining is carried out between the additive machining.

8. The method in accordance with claim 6, wherein a further subtractive machining is carried out between two additive machining.

9. The method in accordance with claim 1, wherein the completing the passage by build-up production on the blank is a step in a process in which the component is built up element by element after the first subtractive machining.

10. The method in accordance with claim 1, wherein the build-up production is carried out with the aid of a laser.

11. The method in accordance with claim 1, wherein the component is an impeller or a stator or a diffuser of a rotary machine.

12. The method in accordance with claim 1, wherein the completing the passage by build-up production on the blank is a step in a process in which the component is built up element by element after the first subtractive machining.

13. The method in accordance with claim 1, wherein the component is an impeller or a stator or a diffuser of a pump, of a turbine, of a compressor, of a compactor or of an expander.