



AMABLE – PLATFORM FOR DEVELOPMENT SUPPORT

Task

When a company considers using additive manufacturing for a new product development, it is confronted with a large number of options in all areas from design to production. Decisions in mechanical design, for example, can mean that excess powder material can no longer be removed in downstream production steps, or that the dimensional tolerances of a product cannot be maintained since thermal influences impair the construction process. Ideally, such problems are detected at an early stage and prevented using appropriate measures. However, there is often a lack of on-site knowledge in the specific application. The search for suitable expertise is also time-consuming and cost-intensive.

Method

In additive manufacturing, engineers are constantly gaining new insights into product design and process control, many of them in the laboratories of leading research institutes. For example, if they are designing a new lightweight heat exchanger to withstand high pressure and temperature stresses, they need access to current findings in material development. If the choice of material influences the dimensional accuracy of the manufactured product, knowledge of process control is also essential.

- 1 *Design process using the AMable platform.*
- 2 *Heat exchanger realized with AMable,*
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Comprehensive competence along the product development chain is ideally covered by combining the know-how of many experts from the various sub-disciplines. The AMable platform offers precisely this pool of expertise through its partners from Europe's leading research institutes, thus creating a unique resource for SMEs and industrial users. AMable is a true one-stop "shop" for quick solutions. Once the user has formulated the question, a suitable and available expert is found within a short time to provide concrete support in finding a solution. The entire process from inquiry to solution remains under one roof and can also include the production of prototypes.

Results

AMable offers dedicated support for the development of additively manufactured products in its "Services Arena". SMEs and industrial users can use services such as "Design for AM" or "Materials for AM" to draw on external expertise for their development throughout Europe. Users can decide for themselves whether they want to use the services as training or as outsourcing.

Applications

The AMable platform supports additive manufacturing users in all phases of product development - from design to manufacturing – with all materials and processes.

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