RAMSRAPP – ROBUST ADDITIVE MARKING SERIALISATION IN RESEARCH APPLICATION

In research projects, an immense number of test specimens and other experimental setups are built. Reliably tracking these construction jobs, their properties, and parameters in the later course of a project means a large manual effort for the researchers. Project RAMSRApp supports the DMRC and its researchers in a more efficient realization of its projects.

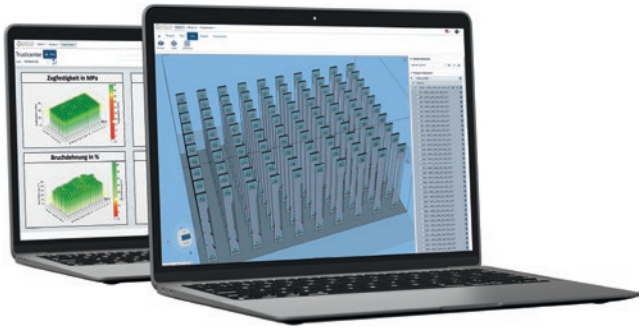

FIGURE 1: Partner projects get access to the Additive Marking Suite to automatically mark and document parts.

FIGURE 2: Extensive information can be stored digitally and assigned to the component via a digital twin.

PROJECT OVERVIEW

DURATION	01/2022 – 12/2022
PARTNER	DMRC
FUNDED BY	DMRC, Additive Marking GmbH
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Research in additive manufacturing does not only take place on paper or the computer: It is always associated with practical experiments and, in particular, the production of scores of test specimens. In the course of a project, hundreds to thousands of identical or at least similar test specimens are often created, whose properties, placement in the build chamber and build parameters must still be traceable months later at the end of that project. This is usually done by manual and time-consuming documentation of the individual specimens and build jobs.

Project RAMSRApp is now supporting researchers in reducing this effort and in automating repetitive, manual tasks. This is done by automatically generating and managing uniquely identifiable and traceable specimens and build jobs while assessing readability parameters.

To support the researchers in the project, they will be trained in the use of the Additive Marking Suite and the design and application of additively manufactured markings. This also addresses the way markings can be designed in different use cases. With the software solution (FIGURE 1) from Additive Marking GmbH, components and samples can be marked clearly and machine-readable as well as documented fast and with ease through the scanning and documentation solution that comes with the software. The markings created in this way are particularly effective and secure, as they are produced directly during 3D printing and are inseparably bonded to the component. Downstream, manual and error-prone marking steps therefore become unnecessary and are eliminated altogether. At the same time, comprehensive part and build job information can be linked to the part and stored via its digital twin (FIGURE 2). This information can be retrieved with ease and used at any time. This means that results and component parameters can be easily traced and, thanks to the connection via the Additive Marking Scan & Connect smartphone solution, can also be documented efficiently and with little manual effort.