

Bad Soden, Germany, 25 November 2019

Messer supplies welding gases for 3D printing of a bridge

Messer, the largest family-run industrial gases specialist worldwide, has supported a unique research project carried out by the Institute of Steel Construction and Mechanics of Materials at Technische Universität (Technical University) Darmstadt: the construction of a bridge using the WAAM (Wire Arc Additive Manufacturing) 3D printing process. This involved using arc welding to melt a metal wire and build it up layer by layer. Students erected a steel bridge over running water on the university grounds and tested an alternative method for bridge construction. The bridge is approximately 3 metres long with a width of 1.5 metres in the centre. Messer supported this project with its welding gas mixture Ferroline and its experience in this area.

In contrast to conventional manufacturing, 3D printing offers advantages in the production of complex components. The layer-by-layer construction makes it possible to produce complex structures that are difficult or impossible to achieve with conventional production methods. Often 3D printing is used for the production of single pieces or small series, because the construction of a conventional production is too expensive. Examples include hip prostheses and dentures in the field of medicine as well as turbine blades and turbochargers.

<https://newsroom.messergroup.com/en/messer-supplies-welding-gases-for-3d-printing-of-a-bridge/>

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