**AMB 2018/Intec 2019**

**Harnessing synergies – Combining competencies**

Horn lends customers a hand with additive manufacturing

Paul Horn GmbH uses additive manufacturing to produce its own tools, particularly when making prototypes, special tools and tool holders. Having recognised the advanced possibilities offered by additive manufacturing, Horn is now making these available to its customers and partners as well. To facilitate this step into the future, Horn is creating a new “Additive Manufacturing” production area. This department is closely linked to mechanical production and powder analysis as well as quality assurance.

Horn is using a process called selective laser melting, a powder bed process that also goes by the name of direct metal laser sintering. In this technique, the metal powder is applied to a lowerable platform in layers and then the relevant area is targeted and melted by the laser. This process is repeated until the required component height has been achieved. The only materials being used by Horn for the time being are aluminium (AlSi10Mg) and stainless steel (1.4404). However, other materials are currently being tested. The maximum build area is 300 x 300 x 300 mm (11.811 x 11.811 x 11.811").

As Horn keeps all the production stages in-house, it is able to respond to customer requirements directly. The parts are produced in various designs according to customers’ wishes. Horn also helps customers to choose a structure that is compatible with the selective laser melting method and to select appropriate powder-based parameters. Depending on what customers require, Horn can produce everything from unfinished and semi-finished products right through to the finished component. Further advantages are the ability to make use of the available machinery and appropriate measuring equipment.

*1.746 characters incl. spaces*

**Image captions:**

 

**Image:** Components that can be produced using the additive manufacturing method.

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