

## Press Release

November 1<sup>st</sup>, 2018

# Japan Premiere of LASERTEC 30 *SLM* 2<sup>nd</sup> Generation at JIMTOF 2018

As a global full-liner with over 20 years of experience in the ADDITIVE MANUFACTURING of metal parts, DMG MORI stands for innovative manufacturing technologies and a worldwide service. The portfolio includes four complete process chains for additive processes using powder nozzle or powder bed technologies. For this integral offer DMG MORI combines its LASERTEC *3D* models and the LASERTEC 30 *SLM* 2<sup>nd</sup> Generation with the machining centres from its broadly diversified machine portfolio. Complete revision of the LASERTEC 30 *SLM* 2<sup>nd</sup> Generation is another proof of the machine tool manufacturer's commitment to continuous further development in the field of additive manufacturing. With its user-friendly Stealth design this second generation of the powder bed machine impresses through increased process autonomy as well as a high level of work safety.

### ◆ LASERTEC 30 *SLM* 2<sup>nd</sup> Generation:

- Two process chains with additive manufacturing in the powder bed
- Generative manufacturing in the powder bed with volumes of 300 × 300 × 300 mm
- Fast material exchange in less than 2 hours with the rePLUG powder module system
- CELOS: Consistent software solution from CAM Programming up to machine control
- Open System: Individual adjustment of all process parameters and unrestricted selection of the material supplier

## Potential of ADDITIVE MANUFACTURING

The steady growth of ADDITIVE MANUFACTURING technologies is alerting designers to the potential of this method in the construction of components and tools. The quality of workpieces produced with additive methods is also increasing as is machining speed. This has resulted in consistently positive forecasts: ADDITIVE MANUFACTURING is expected to grow by 20 to 30 percent by the year 2020. “In particular as a complement to conventional production methods powder nozzle and powder bed processes offer expedient and extremely promising possibilities”, explains Patrick Diederich, responsible for ADDITIVE MANUFACTURING at DMG MORI.

With its broadly diversified machine portfolio in both machining and ADDITIVE MANUFACTURING DMG MORI’s approach to this topic is clearly holistic. Patrick Diederich goes on to tell us: “If additive manufacturing is to become established on the shop floor, it is essential to integrate this method into existing production systems and process chains – especially where successfully progressing from prototype and small series production to serial production is concerned.” Cost efficiency plays a key role in this respect. “It is imperative to awake an awareness for the possibilities offered by additive manufacturing, which start with the design of components and extend throughout the entire life cycle of the product.” This is the only way to exploit its enormous potential.

DMG MORI has performed successfully on the market for over five years now with the combination of laser deposition welding and metal-cutting machining on the machines of the LASERTEC *3D hybrid* series. In addition to establishing and expanding the digital process chain DMG MORI has also developed to become a full-liner in ADDITIVE MANUFACTURING. While the LASERTEC 65 3D is geared solely towards laser deposition welding as a complement to existing machining centres on the shop floor, the LASERTEC 30 *SLM 2<sup>nd</sup>* Generation in the new Stealth design expands the portfolio to include the powder bed method using selective laser melting. Thanks to the combination of additive manufacturing technologies with conventional CNC machines DMG MORI has realised four individual needs-based process chains.

## Two process chains with ADDITIVE MANUFACTURING in the powder bed

DMG MORI offers the LASERTEC 30 *SLM* 2<sup>nd</sup> Generation for ADDITIVE MANUFACTURING in the powder bed (Selective Laser Melting). The second generation of the machine has a 300 x 300 x 300 mm construction volume and with its Stealth Design offers optimum user comfort. Two process chains can be realised with powder bed technology: On the one hand, workpieces produced by means of additive manufacturing can be finished to the required surface quality on a milling machine such as the 5-axis DMU 50 3<sup>rd</sup> Generation. On the other hand, the LASERTEC 30 *SLM* 2<sup>nd</sup> Generation can finish previously milled base plates and bases without any need for support structures.

As an integral software solution for CAM programming and machine control CELOS rounds off the LASERTEC 30 *SLM* 2<sup>nd</sup> Generation process chains. The coordinated and uniform user interface enables parts to be programmed externally with minimum time expenditure and transferred to the machine – regardless of their complexity. Thanks to the efficient flow of information and intuitive operation CELOS ensures optimum processes in the pre- and post-processing of additively manufactured parts. In addition the open system of the LASERTEC 30 *SLM* 2<sup>nd</sup> Generation enables individual adjustment of all machine settings and process parameters, right through to include an unlimited choice of material suppliers.

## Fast material exchange with the powder module system

Flexibility, productivity and process reliability are the outstanding features of the LASERTEC 30 *SLM* 2<sup>nd</sup> Generation that make it an impressive machine on the market of additive systems for selective laser melting. One highlight is the flexible powder module. “This enables a material exchange in less than two hours. In addition, the closed material circuit ensures a high level of work safety and process autonomy,” explains Mathias Wolpiansky, Managing Director of REALIZER GmbH. The ergonomic construction of the machine in the new Stealth design also reflects the principle that DMG MORI has been pursuing and optimizing continuously for many years, namely making work easier for the user by ensuring better accessibility to all key control features. “This will make working with the machine more efficient in the long term.”



LASERTEC 30 *SLM* 2<sup>nd</sup> Generation



New powder module system