Micro Laser Sintering - a process overview

Micro Laser Sintering is a powder bed based additive manufacturing technology, often called Selective Laser Sintering or Selective Laser Melting. Micro Laser Sintering is an industrial technology, providing micro metal parts to several industries.
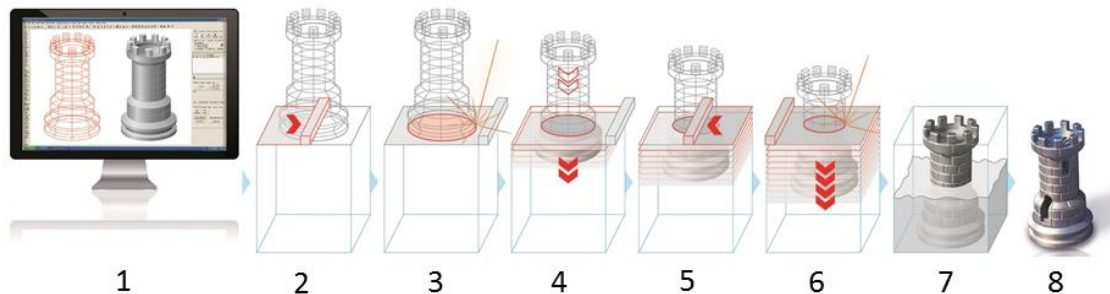

Figure 1: Scheme of the process steps for the manufacturing of laser sintered parts (source: EOS GmbH)

1: Prepare 3D CAD data	5: Powder coating
2: Powder coating	6: Repetition of 3 to 5 until part complete
3: Laser exposure	7: Powder removal
4: Platform lowering	8: Finished part

Micro Laser Sintering for finer details

A 3D-CAD model of the target geometry contains all details of the final part. This CAD model is split into several cross sections, called layers. During manufacturing, a thin layer of powder is applied to a build platform. The powder is selectively fused by a laser beam according to each cross section. After that the building platform is lowered, the procedure of powder coating, fusing and platform lowering is repeated layer by layer, until the part completed.

About 3D MicroPrint GmbH

3D MicroPrint GmbH is known for high-precision micro parts manufactured by Micro Laser Sintering. Since the company was founded in 2013 by EOS GmbH and 3D-Micromac AG, the additive manufacturing process has been further developed for micro parts and has been adapted to run an industrial production. Today we are providing our customers the entire portfolio of design consulting for additive manufacturing, feasibility studies and parts production up to their own 3D MicroPrint Micro Laser Sintering system. Furthermore 3D MicroPrint offers material developments for exclusive technologies on demand. The key applications for micro parts are medical industry, wearables, semiconductors and micro industries, high frequency applications as well as aerospace.