

December 6, 2016 OPM Laboratory News Release

OPM Laboratory successfully develops software to support derivation of laser conditions for metal 3D printers

OPM Laboratory Co., Ltd. (Kyoto, Japan) has announced the successful development of software to support the derivation of laser conditions for metal 3D printers using powdered metallic materials.

Metal 3D printer makers spend long hours of repeated testing to derive the optimal laser conditions needed to add various metallic powder materials to their product lineups.

OPM Laboratory has developed a series of algorithms and formulas based on the relationship knowledge and databases it has built up over the years from the results of testing various metallic powder materials. When the chemical ingredients and granular distribution of a metallic powder materials are input using this software, it automatically calculates the recommended target values for:

- Energy (e),
- Power (w),
- Laser velocity (mm/sec), and
- Scan-line pitch (mm)

Using the resulting output to begin testing cuts the amount of labor required to no more than one-third that of traditional testing.

Future plans call for using this software to add metallic powder materials rapidly to the lineup of materials usable with Sodick's OPM series (250L/350L) of metal 3D printers.