Industry News

Optomec Selected for NASA Mission

Optomec, Inc., an Albuquerque, NM-based supplier of additive manufacturing (AM) equipment and software, gas announced that its LENS directed energy deposition (DED) metal 3D printing system will be used to print bi-metallic rocket engine parts that will go to the moon in 2024 as part of a grant from NASA.

Work on this grant is a collaboration between the Navajo Technical University (NTU), which is acting as the lead on the project, the Marshall Space Flight Center Advanced Manufacturing Center (MSFC); the University of Alabama Huntsville (UAH); V&M Global Solutions, an Ojo Caliente NM-based science-consulting firm; Optomec. The team will collaborate on AM research around DED of bi-metallic parts for NASA applications and build institutional capacity in STEM research and education.

The proposed research will focus on characterization (micro and nano-scale) of the microstructure of AM Inconel-Cu alloy bimetallic parts in three conditions: as built; hot-isostatic pressing and heat treatment; and after a combined hot-isostatic pressing and heat treatment in order to establish the necessary linkages between microstructure, post-processing, dimensional accuracy and mechanical properties. The research also involves metrology to provide insights into the dimensional accuracy of DED printed parts for use in the Space Launch System.