OAK RIDGE NATIONAL LABORATORY
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Enhanced Additive Manufacturing with a Reciprocating Leveling and Force Sensing Platen

Disclosure Number

201403257

Technology Summary

When fabricating objects with an additive manufacturing system that use a nozzle to deposit extruded material, we have found that this material often bulges above the nozzle face. These bulges in the material, when solidified, interfere with the deposition of subsequent adjacent beads of material. In addition, it is difficult to fill material into a given layer without voids or overfilling. This invention improves the deposition quality of additively manufactured parts by reducing unwanted bulges, voids and geometric errors during deposition. It also may improve layer-to-layer adhesion.

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