ADDITIVE MANUFACTURING SYSTEM WITH PARTIALLY FLEXIBLE BUILD PLATFORM

ABSTRACT

An additive manufacturing (AM) system (100) includes a build chamber (108), a base (110) adjustably coupled to the build chamber (108), and a build material applicator (120) for depositing a build material (122) above a build platform (104) for creating the object (102). The build platform (104) includes a fixed region (140) fixedly and rigidly coupled to the base (110) and a flex region (142) configured to flex relative to the base (110) in response to a force applied to the build platform (104) by an object (102). The partial flexibility allows deformation caused by thermal distortion of the build platform (104) during use to reduce final object stress. The AM system (100) can produce larger additively manufactured objects out of crack-prone material. In addition, the partial flexibility may prevent damage to the build platform (104) and/or base (110) without an overly complicated arrangement.

[Figure 3]