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(54) Title: METHOD OF ADDITIVELY MANUFACTURING A MINIMAL SURFACE STRUCTURE

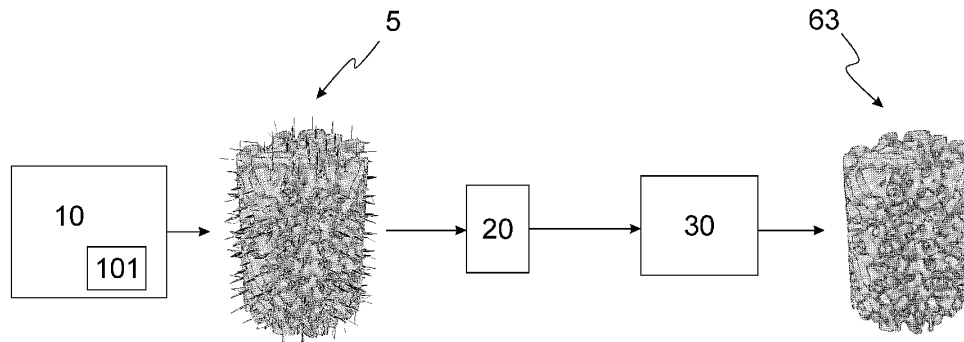


Fig.18

(57) Abstract: A method of additively manufacturing a minimal surface structure (63) of a three-dimensional article is described, the method comprising a computer (10) executing the steps of: recording in the computer (10) an envelope of the three-dimensional article; generating a density field across a volume enclosed by the envelope with densities of the density field corresponding to local requirement values of at least one physical parameter at respective positions of the three-dimensional article; generating an adaptive Voronoi tessellation of the volume using the density field; generating a first skeleton graph associated with the adaptive Voronoi tessellation; generating a second skeleton graph associated with the first skeleton graph; generating a digital minimal surface model (5) from the first and second skeleton graphs; wherein the method further comprises a 3D printer (30) additively manufacturing the minimal surface structure (63) according to the digital minimal surface model (5).

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