

You know that Apple is no stranger to innovation.

Even when it comes to ceramics, the Fruit has patented and innovated new materials and new methods to manufacture those materials, such as those used in this year's [Apple Watch](#).

According to [Patently Apple](#), Apple has filed a new(ish) patent for a ceramic component casting method to manufacture harder zirconia ceramics.

“The new method is applied to eliminate air bubbles in component parts,” Patently Apple reports.

To do that, the patent details a few different vacuuming methods, including “vacuuming a ceramic-based slurry mixture and/or vacuuming a component mold,” the [patent](#) states.

In the former method, a vacuum sucks out air bubbles from the ceramic slurry itself, before casting. The latter method involves vacuuming the ceramic slurry within a component mold. The component mold may be vacuumed for a predetermined amount of time or continuously, the patent suggests.

While nixing bubbles is the key, Apple seems to have devised a whole contained system in which slurry is mixed, pumped through into a mold, and formed into a final component.

The slurry is mixed from a combination of two mystery materials—a “first material” and “second material,” the patent devluges—that at least one of which contains “a plurality of zirconia particles.”

Once uniformly mixed by physical, ultrasonic, and/or rotary vibrations, the patent details that the evenly-mixed slurry is then pumped into a coated component mold that is positioned askew.

“The cavity of the component mold includes at least one angular sidewall to allow air bubbles to substantially flow to a vacuum conduit of the component mold during the disposing of the ceramic-based slurry mixture into the cavity of the component mold,” the patent states.

Altogether the system creates a harder zirconia ceramic product, which presumably

Apple will incorporate into future produce—I mean products.

The patent was filed with the U.S. Patent & Trademark Office in February 2014, but it was just recently published on the Office' s website.

For all the technical details, head over to the U.S. Patent & Trademark Office website to view the [full patent application](#).