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As if by magic ...

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As if by magic ...

Peter Berger (dental technician), Germany

Dental ceramics and metal alloys sometimes simply do not get along. Unless they are in perfect harmony and unless they have been meticulously processed, fissures and microcracks may develop during firing. Peter Berger has discovered a way to “heal” such cracks: the magic fairy is called ... Denseo Fairy.

There are more than a thousand possible combinations of dental ceramics and metal alloys, with sometimes highly sensitive interactions. And in this high-tech age, cracks in ceramics occur more, not less, frequently. Depending on the design of the crown or bridge, the incidence of cracks may be substantial.



A seriously cracked crown.

Okay to repair cracks?

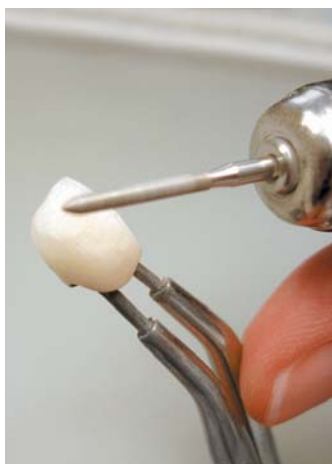
So what do we do when we discover a crack? Throw several hours' worth of hard work out the window and start over? Or do we simply make the crack disappear under a new glaze layer? Tight deadlines often do not leave the technician any

other option but to attempt a repair. But repairs always leave a feeling of unease behind – because, can you ever be sure that no internal microcracks remain?

Looking around for a solution to this problem, I discovered a fairy – Denseo Fairy. Denseo Fairy is a new product that you paint on the cracked crown, which is then subjected to a “healer firing” in the furnace. A vacuum is first created in the furnace to make sure the Denseo material deeply penetrates the crack and any ramifying microcracks. Independent of the ceramic material and alloy used, the “healer firing” is always performed at a constant temperature, which is lower than that for glaze firing. The manufacturer of Denseo states that the ceramic material on both sides of the crack will be rejoined at a molecular level. We wanted to be completely sure, so we put Denseo Fairy to a very challenging test.

Shock testing

We took a ceramic crown, still searing hot, directly out of the ceramic furnace, and shock-sprayed it with cold spray. An ominous cracking sound signaled the presence of numerous fissures – truly a case for the bin. We then applied a thin coat of Denseo Fairy and performed a healing firing. The result after ten minutes was that the material had been seamlessly re-joined. No more cracks were visible even under the microscope, not even after abrasive removal of the surface. This fairy is a reliable helper in a time of need! ■



Grinding the crown.



Applying Denseo Fairy.



After firing. No more cracks.

More information
and purchasing sources:
+49 6021 860460
www.aera-online.de and
www.denseo.de