

MODERN CERAMIC VENEER ALTERNATIVES

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Porcelain veneers have become an accepted treatment modality for the modern dental practitioner to restore missing tooth structure and to enhance aesthetics. While direct composite veneers remain a viable treatment option as well, most dentists routinely utilize ceramic veneers due to the increased strength and longevity. These also enable the restorations to be built slowly by a ceramic artist while the patient wears provisional restorations. The evolution of the preparation and bonding techniques that have occurred in the last 15 years have increased the success, predictability, and demand for these services. Most recently, a network television show—"Extreme Makeover"—has thrust aesthetic dentistry into the limelight as never before.

The first ceramic veneers were fabricated from feldspathic porcelain. With the launch of IPS Empress 15 years ago, pressed ceramics became the most popular technique for fabricating veneers. In our laboratory today, 86% of porcelain veneers are fabricated from pressed ceramic and 14% are fabricated from feldspathic. However, there are certainly

times when feldspathic ceramic restorations can be preferable to pressed ceramic restorations. This article examines the two techniques and discusses a rationale for choosing one over the other.

ADVANTAGES OF PRESSED CERAMIC:

- Wear compatibility
- Increased translucency
- Ability to wax-up final contours prior to pressing
- Stronger than feldspathic (IPS Empress 120 MPa compared to 60 MPa to 110 MPa feldspathic)
- More consistent results for the average ceramist

ADVANTAGES OF FELDSPATHIC CERAMIC:

- Ability to mask out darker preps
- Less tooth structure removal (.3 mm to .5 mm vs .6 mm to .8 mm)
- More 3D appearance in thinner areas
- Ability to use same ceramic as in adjacent PFMs
- Ability to place different opacity levels within the restoration



FIGURE 1. The IPS Empress restoration is fabricated by waxing the veneer on the master die, investing, and pressing into ceramic.



FIGURE 2. After divesting, the veneers can be stained or cut back and layered to accentuate the incisal edge.



FIGURE 3. The patient presented with worn incisal edges and desired longer teeth.



FIGURE 4. This is a typical IPS Empress veneer smile enhancement that creates a natural-looking result.



FIGURE 5. Feldspathic porcelain is built-up on a refractory model using internal modifiers, body, and enamel powders.



FIGURE 6. After firing, the veneers can be further modified with stain and then glazed for final aesthetic results.



FIGURE 7. The patient presented with multiple diastemata and requested a brighter smile.



FIGURE 8. Using minimal tooth preparation, the feldspathic veneers improved aesthetics and contours.

RECOMMENDATIONS FOR PRESSED CERAMIC SELECTION:

- When significant malposition exists in arch
- When significant increase in tooth length is desired
- When strength is of utmost importance

RECOMMENDATIONS FOR FELDSPATHIC CERAMIC SELECTION:

- When minimal preparation is desired due to patient concerns or minimal changes in size, shape, and shade
- Diastema closures when shade is not altered significantly
- Teeth with minimal malpositions within the arch
- When adjacent teeth will have PFM restorations placed

CONCLUSION:

While either fabrication technique can be a viable solution for most ceramic veneer cases, there are distinct advantages and disadvantages to both techniques. The key to

aesthetic success remains largely in the artistic capabilities of the ceramist. Materials and techniques work differently in different hands, therefore, it is imperative to build a relationship with a laboratory that suits your needs both functionally and aesthetically. Consult with your laboratory regarding the materials they prefer on certain cases to achieve the most natural-looking result. Sending preoperative photographs and study models as guideposts for your laboratory will provide the best chances of creating the smile envisioned by you and your patient. ■



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