

■ *Excellent results with little effort*

‘PFM restorations – Anything but outdated’

German Bär, dental technician and veneering professional of Dental Team Sankt Augustin, Germany, tested Shofu’s metal-bonded porcelain system, Vintage PRO, before its launch at the 2017 International Dental Show (IDS). It is now an integral part of the production processes in his laboratory. One year and many PFM restorations later, he shares his experience.

When browsing dental journals we might think that PFM restorations play only a minor role in the everyday work of dental technicians. Reality is different. Due to increasing cost awareness and decreasing payments from statutory health insurances, dental laboratories increasingly use nonprecious alloys for standard PFMs. However, customers and patients have not lowered their aesthetic demands as a result of these cost-cutting measures – quite the contrary. We need modern

build-up porcelains that are not prone to greyish or greenish discolouration; that are natural-looking even on nonprecious alloys. Patients expect their PFMs to be more or less as aesthetic as all-ceramic restorations. For dental technicians, it is important to achieve this challenging goal with little effort.

PFM vs All-ceramic: advantages of the classic approach

In my view the use of PFM restorations in dentistry is comparable to the use of concrete in construction, which is also often frowned upon. It depends on what you make of it. In cases with difficult statics e.g. when interocclusal distances are short or long-span bridges are necessary, I still prefer PFM to all-ceramic solutions – if only for reasons of longevity and safety.

Vintage PRO closely matches the VITA Shade Guide, which I regard as a great benefit. If the VITA shade has been correctly selected, I can be sure that my result will accurately match the tooth



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shade. That means when I build up A3, I will get A3. Even if the porcelain has to be fired more often than usual, it will not become greyish but show high shade stability. Besides, the appearance will come close to that of an all-ceramic even when using normal layer thicknesses.

Promoting dental materials as ‘easy to use’ is one thing; keeping this promise is another. Vintage PRO has really met our expectations in practical use: this build-up porcelain can be used by experienced technicians, newcomers and ambitious trainees. The materials are highly stackable during layering and very easy to sculpt with some practice.

Moreover the porcelain shows only minimal firing shrinkage. The details I create during layering will still be there after firing. This allows users to experience great success, especially if they are beginners. And the Effect and Gum shades help experienced dental technicians to easily, safely and efficiently fabricate even the most complicated large-scale restorations and demanding anterior teeth. Vintage PRO can be recommended to all technicians wishing to achieve excellent results with little effort.

By the way, the system can also be successfully used for indications not included in the manufacturer’s IFU. We used it to build up veneers on refractory dies. The results were great. When there is no metal framework, lifelike light effects will be especially visible. We were also very happy with the natural opalescence of the Effect and Incisal shades. The benefits of Vintage PRO have made



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everyday work much easier for us. Anterior and posterior crowns and bridges can now be efficiently veneered. Posterior crowns can be made in the 'one bake technique' with some practice. The efficiency of this technique is virtually unbeatable: one layering step, one firing step, and that's it.

And even aesthetics leave nothing to be desired. Let's take a look at the fabrication of anterior single crowns, a dental technician's core competence. To naturally and harmoniously match a crown to the adjacent teeth in terms of shade and all the other characteristics, I must be able to precisely control the opalescence and fluorescence of my porcelain. Vintage PRO allows me to optimally achieve the opalescent light refraction and brilliant shade effect desired. Shofu was the first manufacturer to introduce the interplay of light between fluorescent dentin and opalescent enamel into dental porcelains. This phenomenon is particularly well visible in reflected and transmitted light. Vintage PRO benefits from Shofu's years of experience in every respect.



Translucency: The opalescent Vintage PRO Incisal and Translucent shades ...



... allow technicians to accurately reproduce the optical properties of natural teeth with minimal effort

Equipped for all situations: comprehensive assortments

We have thoroughly tested all Vintage PRO assortments with all porcelains available, including Body, Effect and Gum, in cooperation with clinicians. Our conclusion: Vintage PRO has definitely proved itself. This porcelain system helps us to fully satisfy both patients and customers.

To colleagues who wish to excel in their work and go beyond standard PFM layering, I recommend the shades of the Enamel Effect Set. And when fabricating large, implant-supported bridgework, the gum shades will be essential. Like all experienced technicians, I have developed my own preferences; I like to work with the body porcelains, not least because they closely match the VITA shades. Besides, I highly appreciate Effect and Opal with their natural opalescence.

The challenge: PFMs and all-ceramics side by side

Frequently patients receive all-ceramic anterior restorations and PFM posterior restorations. These cases are not always easy to handle. However, Vintage PRO proves very useful here since it conducts light virtually like all-ceramic restorations. With little effort, transitions can be concealed even when using a normal layer thickness, so that they are no problem for technicians and not recognisable in the patient's mouth. The transition from anterior to posterior teeth can be inconspicuous and harmonious because canines are often more chromatic.

Even when handling a material that is essentially easy to use, a few basic points should be observed. In the case of a metal-bonded porcelain system, first of all, the coefficient of thermal expansion (CTE) of the metal framework deserves closer attention. Vintage PRO is designed for a firing temperature of approximately 900°C. The firing schedule included in the IFU is primarily geared to nonprecious alloy frameworks, regardless of whether they are traditionally cast, made by CAD/CAM or sintered.



Mimicking nature: studies of layers and shapes by dental team German Bär. Thanks to its great ease of use and low error potential ...



... Vintage PRO can be used not only by experienced technicians, but also by newcomers and ambitious trainees

When veneering these alloys, long-term cooling may be beneficial. When veneering high-gold or reduced-gold alloys, long-term cooling may or may not be advisable, depending on the CTE.

My tip for colleagues: try something new

I can really recommend giving Vintage PRO a try e.g. the incisal porcelains with their beautiful transparency. Or why not mix incisal with some Opal-OC for more diffuse light refraction? There are so many ways to use this versatile porcelain system to your advantage. Just remember, practice makes perfect.

Material information

Vintage PRO (Shofu) is a metal-bonded leucite-reinforced feldspathic porcelain system for the conventional CTE range of 13.5 to 14.8 x 10⁻⁶ K⁻¹. It is designed primarily for veneering nonprecious alloys but also suitable for high-gold, reduced-gold or palladium-based alloys.

- First published in: *dzw Zahntechnik*, Issue 5/18, 2 May 2018
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