High-Temperature Furnace for More Speed

By Dentply Sirona

For high masticatory forces, zirconium oxide is the material of choice. The new CEREC SpeedFire sintering furnace accelerates processing time. In this way Dr. Michael Skramstad from Minnesota, USA, can provide his patients in a single visit.

Dental and prosthetic restorations are made from conventional dental alloys. The biocompatible ceramic has been successfully used in dentistry for over 15 years – first only as a veneering framework material and for the last six years also for full anatomical crowns. This gives me the assurance to now use the material chairside when placing a crown that still has to sit perfectly years from now.

Besides its high stability and durability, zirconium oxide has two more important advantages. The flexural strength of the material allows me to fabricate restorations with very thin wall thicknesses. This enables me to prepare the tooth in a substances-friendly way. In addition, restorations can be placed more easily. Traditional cementation rather than adhesive bonding is used.

The chairside process is a comfort for my patients because it eliminates waiting time. My assistant also works as a temporary chairside assistant. While the patient waits, I do the remaining work to this crown made from pre-colored zirconium oxide in the patient's mouth.

CROWN RESTORATION MADE BY CEREC ZIRCONIA

1. After a cusp fracture in a tooth restored with amalgam, I proposed a CEREC crown made of full contour zirconia.

2. I drew in the preparation margins on the virtual model with the help of the automatic margin finder.

3. The CEREC software reconstructs the crown automatically with the Biojaw algorithm.

4. In the preview, I checked the position of the crown in the ceramic block. Adjustments could be made at this point if needed.

5. Finally, I placed the finished polished crown into the treated tooth.

FABRICATION OF ZIRCONIUM OXIDE RESTORATIONS IN JUST UNDER TWO HOURS

Digital impressions: The scan with Omnicam is done in the same way as with conventional CEREC restorations (2 min).

Designing on CEREC AC: Excellent initial proposals are generated with the Biojaw algorithm (8 min).

Milling: Zirconium oxide is milled in enlarged form. This allows for more detailed finishing of the structures (10 min).

Sintering: The assistant places the restoration in the CEREC SpeedFire furnace and starts the sintering process with a touch-pad (16 min).

Fitting and finishing: The restoration is cemented in the usual way. The remaining cement residue is then removed and the margins smoothed (8 min).

Making Good Use of Waiting Times

FABRICATION OF ZIRCONIUM OXIDE RESTORATIONS IN JUST UNDER TWO HOURS

Fabricating and placing full contour zirconia restorations in one appointment is possible due to the fact that I can sinter dry-milled zirconium oxide very quickly with the new CEREC SpeedFire furnace. For one crown, the device usually requires between 12 and 15 minutes. The entire production process therefore takes less than 90 minutes. Patients do not mind having to wait such a short time for their crown and use the time to read or watch a film. There is no need for them to make a second appointment and they do not require a temporary. An immediate restoration makes a lot of sense from a clinical perspective because it allows for better preservation of the remaining tooth substance.

I personally devote only around 30 minutes of my work time to this process. In the meantime, I do the preparation, take an impression of the tooth, fabricate the restoration and then fit it into place. I then delegate the remaining work steps to my assistant. While the crown is milled on the CEREC MC XL Premium Package, I tend to other patients. My assistant also operates the CEREC SpeedFire. The user interface is self-explanatory. The restoration just needs to be placed on the occlusion surface and the start button pressed – that is all. Dental assistants can also do repolishing, individualization and glazing. I only come back in the treatment room once the crown has been glazed and is ready for placement.

As a long-time CEREC user, I know and appreciate the advantages of being able to produce crowns, inlays, onlays and bridges in just one session. The chairside process is a comfort for my patients because it eliminates waiting time. My assistant also works as a temporary chairside assistant. While the patient waits, I do the remaining work to this crown made from pre-colored zirconium oxide in the patient's mouth.

Producing Zirconium Oxide Easily in The Practice

My experiences with CEREC Zirconia have been very positive. Fabricating dental prostheses from full contour zirconia using CAD/CAM technology is easy, we familiarized ourselves with the process very quickly. This is not surprising since the process is hardly any different from producing other milled restorations. By means of full anatomical zirconium oxide chairside fabrication with CEREC becomes even more versatile and economical. A great benefit for my practice!

First publication: VISION Customer magazine of Dentply Sirona; Issue 1/2016, p. 32-34.

Dr. Michael Skramstad is a dentist in Orono, Minnesota, USA. He specializes in restorative and cosmetic dentistry as well as implantology. He is a certified trainer for Patterson Dental and lectures internationally on digital dentistry.
Dental Tribune Middle East & Africa Edition | 6/2016

Pink & White Aesthetics with BEAUTIFIL II

By SHOFU

BEAUTIFIL II ENAMEL and GINGIVA from Shofu are developed as a complementary line extension of BEAUTIFIL II to easily create life-like direct aesthetic restorations. A special one-push syringe ensures controlled dispensing of the smooth and creamy material that is easy to sculpt into fine details and recreate the surface textures seen in natural teeth & gums.

Integrating of nanofillers and newly developed organic-inorganic filler complex into a unique silanol modified resin network imparts BEAUTIFIL II ENAMEL and GINGIVA with exceptional handling characteristics, longer working time, high abrasion/wear resistance, stable shades, effortless and superior polish with sustained polish retention for lasting aesthetics. Shofu’s proprietary Si-PFG fillers offer additional fluoride benefits and anti-plaque effect on the restoration surface.

BEAUTIFIL II ENAMEL is available in 4 naturally translucent and opalescent, Value based shades that facilitate life-like shade reproduction of the patient’s individual gum while restoring areas with receded or missing gums/papilla, cervical defects, root caries/erosion, exposed PFM margins and abutments to achieve red and white aesthetic harmony.

New Putty super soft consistency - very smooth and easy to mix - PRESIDENT wash materials show perfect flow behavior under pressure - to capture all marginal details precisely

New, fresh colors provide better contrast and more accurate detail readability -

Dentsply Sirona appoints new group Vice President of CAD/CAM Systems

By DTI

BENSHEIM, Germany/SAALBURG, Austria: Dentsply Sirona has announced that Dr. Frank Thiel will be succeeding Dr. Joachim Pfeiffer as head of the company’s strategic CAD/CAM business unit. Owing to the Dentsply–Sirona merger at the beginning of 2016, Pfeiffer’s tasks as chief technology officer will keep expanding and Thiel, who was previously involved in the development of the CEREC Omnicam 3-D intra-oral scanner, will take over his responsibilities in the development, production and acquisition sections of the CAD/CAM division.

Thiel will be sharing the management position of the division with Roddy MacLeod, who will be in charge of product management, marketing and control.

Thiel has been working in the company’s CAD/CAM division for more than 15 years. From 2009 to 2016, he held the position of head of development for optical 3-D measurement technologies, and he oversaw basic developments from 2006 to 2009. Thiel began as a development engineer at the then Sirona Dental Systems and took over management of the development projects soon afterwards. Prior to his career at the company, Thiel was involved in basic research in the fields of atomic, molecular and electronic physics, as well as photonics.

REINFORCED COMPOSITE BLOC FOR PERMANENT RESTORATION

BRILLIANT CRIOS

High performance – made brilliant

ANALOG OR DIGITAL

A-SILICONE IMPRESSION MATERIAL

PRESIDENT

The Original

High flexural strength – resistant restorations - Tooth-like modulus of elasticity – shock-absorbing - Wear resistant and gentle to the antagonist

Industry
The presented ‘Game Changer’ was developed in close cooperation with universities, dentists, dental hygienists and EMS specialists. Therefore, it is no surprise that Nina Von De Fersen, prophylaxis professional and trainer at the Swiss Dental Academy, is ‘proud to be a game changer’. Indeed, dental maintenance and oral hygiene has never been as important as it is today. The participants feel like pioneers who experience a high standard homogeneous solution for every patient. And it seems that a new gold standard has been created in the field of prophylaxis, coming straight out of Switzerland.

The GBT is safer, more comfortable and more efficient than conventional methods. Thus, it is definitely time to change the game!

“I believe that education and awareness is key to making game changers out of our colleagues.”

Try it and you like it

“GBT meeting made me realize that AIR-FLOW® can be used not only in periodontal maintenance but also for active treatment – periodontitis, peri-implantitis and peri-implant mucositis.” (Dr. Dong Xiao Xiao, Periodontist)

The GBT, which is a detailed clinical protocol, ensures a high standard in dental maintenance and facilitates complete removal of biofilm sub- and supra-gingivally. The GBT aims to bring a fast and comfortable treatment to any patient profile with the use of the high technology powder PLUS based on Erythritol, the AIR-FLOW® and the PIEZON® NO PAIN technologies. Be it children, sensitive patients, recall or pre-surgery prophylaxis, the GBT offers a complete solution. The GBT, this new, simple and predictable approach to professional dental maintenance, begins with the use of a disclosing agent. It guides the dental professional to see the biofilm normally not visible to the naked eye and to demonstrate biofilm presence to the patient. This procedure is followed by removal of biofilm and stains from the hard and soft tissues sub- and supra-gingivally by using AIR-FLOW® with the very fine Erythritol powder PLUS. After this procedure, calculus and concrements are easy to detect and can be removed using PIEZON® NO PAIN and the PS instrument. Scaling is only needed if there are hard deposits. Therefore, GBT provides a minimal invasive therapy. Afterwards, the GBT is completed with a quality control and the recall management.

Nevertheless, the presentation of the detailed GBT protocol was only one of the highlights of the conference. The guest speakers like Prof. Magda Mensi, Dr. Klaus-Dieter Bastendorf, Eva Müller, Karen Davis and Brigite Schönleib, board member of the European Dental Hygienist Federation, offered a course on pathogenic biofilm, the history of biofilm removal and the challenges of clinical cases. With a total of 18 speakers a variety of topics was treated, including hand piece technique and literature analysis. The attendants were professors, dentists, dental hygienists and dental assistants, actively involved in dental prophylaxis either at the clinics or in dental universities. The aim of the congress on Guided Biofilm Therapy was essentially to build a common understanding of the need to introduce the approach towards prophylaxis – based on knowledge, experience and supported by clinical evidence. Every presenter shared his personal opinion on best practices which were differentiated and country specific.

GBT — no conflict of ethics and profitability

“I prefer to earn money with the health of my patients (GBT), than the diseases of my patients!” (Dr.)
Klaus Dieter Bastendorf, Dental Specialist in Prevention

It has long been proven that oral biofilms cause caries, gingivitis, peri-implantitis, peri-implantitis and periodontitis—the main causes of tooth- and implant loss. Helping patients to preserve their natural teeth is one of the highest ethical values for a dentist and the GBT makes this possible. As the dentist is not only a medical scientist, but also an entrepreneur, the profitability of a treatment is an important aspect. With the GBT, the dentist can delegate this service to a dental hygienist and therefore generate further revenue and profit. Additionally, the GBT opens the opportunity to run a successful recall operation in a dental cabinet. Emphasizing on patient motivation and individual oral hygiene education, the GBT strengthens the relationship between the dental professional and patient by increasing patient satisfaction and personal well-being. Following the GBT protocol, patients are not only enthusiastic for a dental prophylaxis but it also serves them as an incentive to keep their oral hygiene at the optimal level even at home. Thus, the GBT provides a sustainable and long-lasting improvement of health and attractiveness. As the GBT offers a maximal patient comfort, it subsequently increases the patient recall.

Oral health: Why annoy when you can enjoy

“With Guided Biofilm Therapy, no more patients complain, only smiles” (Prof. Magda Mensi, University of Brescia)

The GBT congress emphasized the importance of high-quality dental maintenance. The effective removal of biofilm is paramount to long-term oral health. Thus, it’s definitely time to provide the neglected fields of dentistry—dental maintenance and prevention—the reputation they deserve. Indeed, the awareness of dental care and oral hygiene has never been as high as it is today. And that is why the GBT protocol is so virtual. Conventional dental prophylaxis with hand instruments, rubber cups and abrasive pastes—the so-called gold standard—is not up to date anymore but is still used by over 80% of dental professionals. These methods induce recession when used in a sulcus, create scratches on exposed dentine or cementum, remove natural enamel structure and obviously, this treatment is not comfortable for the patient at all. Jasmina Karinik, dentist, has only one answer to this: “Guided Biofilm Therapy—finally to replace the traditional way of thinking that endodontics is the savior.”

Perio for a better life

“GBT and its focus on general health aspects reducing massively the oral bacterial load—thus reducing health risks” (Klearchis Manolakis, Prosthodontist)

Compared to conventional methods, the GBT is more comfortable, safer and makes professional dental maintenance feel more like a wellness treatment instead of an unkloved medical examination. The AIR-FLOW® Powder PLUS has a grain size of only 14µm, therefore it feels very soft, even if applied sub-gingivally! The presentations convinced the attending dental professionals: “GBT meeting encouraged me to use PLUS powder for all my periodontal and implant maintenance patients”, states Jolene Pinder, Dental Hygienist. And with PIEZON® NO PAIN—composed of PIEZON® NO PAIN Module, Original PIEZON® handpiece and Original Swiss Instrument PI-PS—the removal of

“With Guided Biofilm Therapy, no more patients complain, only smiles”