

Four IPS e.max CAD single crowns – Teeth 12-22, in 4 hours

Case Description

A 53-year-old patient came to my practice with problems in her front teeth. The examination revealed inadequate fillings on teeth 12-22 and an uneven gingival line on 12 and 11. The patient turned down the option of a surgical adjustment. In addition to the aforementioned problems, the contour of the incisal edges was severely eroded and inconsistent. The patient suffered from these esthetic issues and she hardly dared to smile. We planned to restore the four teeth in one session with single crowns. Due to the C3 tooth shade, I decided to make her restorations with IPS e.max CAD, a lithium disilicate ceramic. The restoration of 23-26 would be adjusted later to achieve consistent esthetics. The patient explicitly asked for this. For the restoration, I followed the classic CEREC protocol. In the virtual model I slightly corrected the automatically marked preparation margins and made an intraoral comparison. I then designed the crowns chairside. We fabricated all four crowns in succession with the CEREC Primemill. It took approximately ten minutes in the Fine mode for each one. The crowns were smooth and esthetically pleasingly structured as planned. After glazing and individualization, the crowns could be sintered in the CEREC SpeedFire. To create even greater optical transparency, enamel was simulated with blue ceramic stain. After sintering, the restorations were fitted once again, prepared with phosphoric and hydrofluoric acid as well as silane and adhesively bonded under the rubber dam and teflon tape for contact point isolation in two sections with Prime&Bond active and Calibra CERAM adhesive and then trimmed. After an occlusion check, the new crowns received a final polish. In the end, the total treatment time took less than 4 hours and resulted in a patient very satisfied with the esthetic results and with her new beautiful smile.

Discussion

For anterior teeth, particularly high esthetic requirements apply. These requirements can also be met very well with ceramic-veneered metal or ceramic crowns. However the disadvantage is that a conventional impression and a temporary restoration would have been necessary until the final restoration was completed in a lab. Not all patients can cope with this, especially in the anterior region. In addition, the restoration with all-ceramic crowns did not require subgingival preparation to cover the margin and no dark metal shadows disturbed the esthetics. With CEREC Primescan and CEREC Primemill patients receive a high-quality all-ceramic restoration faster than ever before.



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Before:

Inadequate fillings on teeth 12-22, an uneven gingival line on 12-11 and incisal edges severely eroded.



After:

Four highly esthetic and individualized lithium disilicate ceramic crowns.

Clinical Images

Insufficient fillings in the upper front and abraded incisal edges. The crowns 23-26 were made several years ago alieno loco and should be replaced with the next procedure.



Also from palatal the teeth 12-22 had a secure distraction.

The irregular line of the gingival margin.



After anesthesia the teeth were prepared.



After cementation with Prime&Bond and Calibra CERAM, lateral view.

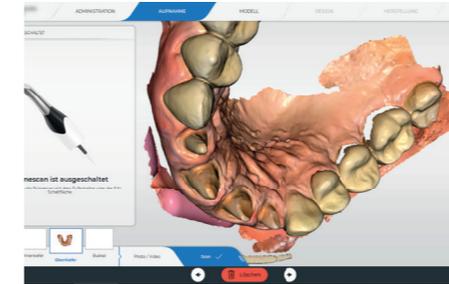


After adhesive cementation with Prime&Bond and Calibra CERAM, front view.

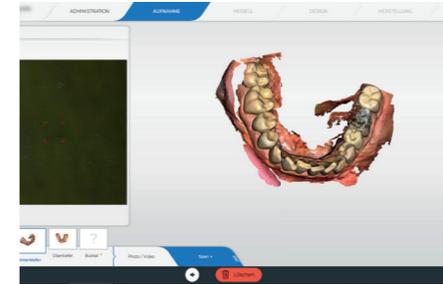


After cementation with Prime&Bond and Calibra CERAM, palatal view.

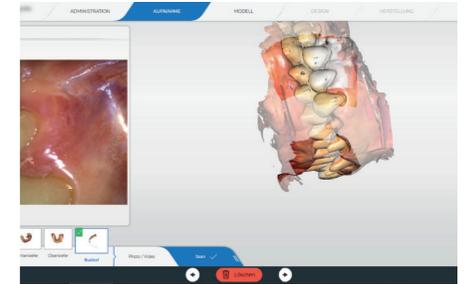
Workflow Images



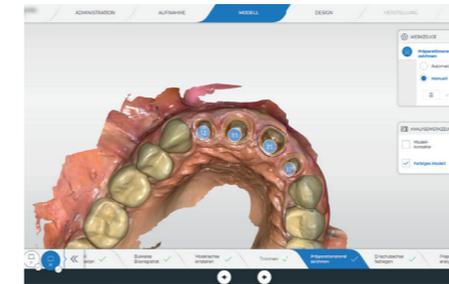
The scan of the upper prepared jaw.



The scan of the lower jaw.



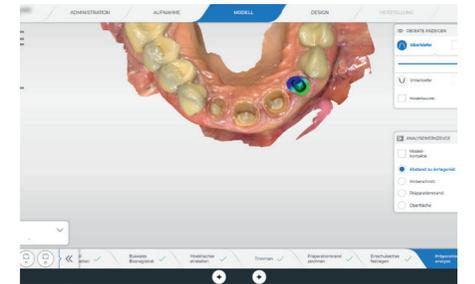
Buccal occlusion.



The system showed a perfect preparation line.



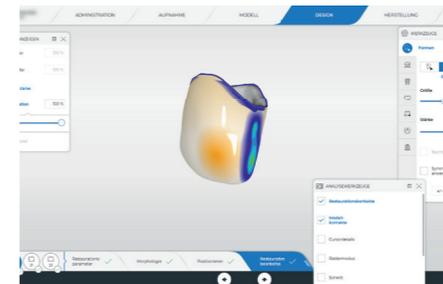
Only minimal corrections of the preparation line were made.



Preparation analysis to identify potentially problematic areas. In this case there were none.



The construction from the labial side.



The design of the proximal contact point.