Metal ceramic – well-proven and future oriented

We at Dentallabor Cera-Tech in Liestal/Switzerland, concentrate to a large extent on CAD/CAM technology and spend a lot of time advocating the cause of allceramics. Nevertheless, metal ceramic, comprises around 50% of our range of products and services, continues to remain an indispensable part of our programme.

Gold accounts for 70% of this, and trend increasing – non-precious metal alloys 30%.

The following article presents a corresponding case example.

Customer requirement and planning

The patient's tooth 11 was fractured and tooth 21 showed severe cracks (fig. 1). The requirements of the dentist were clearly defined, and communicated by oral agreement and an order form: the crowns were to be implemented as a standard restoration in metal ceramic, and at the same time blend harmoniously with the patient's oral situation.

For this reason, we decided to have the shade determination performed in the dental practice, and instead of using the casting technique, to fabricate the crown coping by milling a CAD/CAM restoration from a non-precious metal alloy. For the veneer we chose VITA VMK Master, a new metal ceramic for veneering in the classical style, and which promises brilliant shade reproduction.

The implementation

For shade determination we use – with growing enthusiasm – the VITA Linearguide 50-Master, which is also finding increasing approval on the part of our dentist customers. We like the fact that it is based on the already known linear principle because it does not require any rethinking in terms of the concept.

In this case described here, the dentist used this for determining the tooth shade. In addition to this, he documented the situation prior to treatment and the results of shade determination with regard to lightness and chroma by means of digital photographs which he sent us by e-mail.

Further discussion of the case took place by telephone. This procedure usually enables us to achieve a remarkably high degree of accuracy, even without the dental technician having come into contact with the patient in person.

The master model was scanned and used as a basis for the virtual framework design, and the latter was milled from a non-precious metal alloy. An important prerequisite for digitisation is that the dentist must be accurate in his preparation work, so that the preparation margin can be easily read by the scanner. The risk of cavities and porosities which could endanger the veneer, and in the event of late cracks result in work covered by guarantee, is no longer given in CAD/CAM manufacture, since the non-precious metal blanks are industrially fabricated according to unified quality standards. A further advantage of the milled non-precious metal copings is their high degree of marginal accuracy.

The work required in the fitting of the copings is reduced to a minimum – only the mounting pins have to be removed, and the margin finished in such a way that it tapers thinly.

40 years. 3 letters. 1 original. The term VMK has been commonly used for VITA Metal Keramik (metal ceramic) for generations. Based on its performance and the familiar layering technique, VITA VMK Master sets the standards for simple, reliable and economic handling. The ceramic is particularly suitable for veneering non-precious metal substrates.

Perfect results guaranteed with the VITA VACUMAT® New Generation firing system.
If dentist and/or patient insist on state-of-the-art equipment on a metal-ceramic instead of a full-ceramic high-end solution, we can offer attractive solutions with natural and high-quality materials. Results using our CAD/CAM system enable good, competitive solutions, which, in combination with the VITA Linarexguide, enables the fabrication of cements with natural aesthetics, time-consuming adjustments and corrections are usually unnecessary. We would appreciate a sample copy of any reprints.

VITA Zahnfabrik H. Rauter GmbH & Co. KG

Headquartered in Bad Säckingen/Germany, VITA Zahnfabrik H. Rauter GmbH & Co. KG has been developing, producing and marketing innovative solutions for dental prosthetics according to consistently high-quality standards for over 85 years, and has been known from the very beginning as a pioneer and worldwide trendsetter. The VITA shade standard, for instance, is recognised internationally in the dental branch as a shade reference system. Users in 120 different countries benefit from the comprehensive range of products and services provided by VITA Zahnfabrik. These include analogue and digital tooth shade determination systems, acrylic and ceramic teeth, veneering and framework materials for conventional and computer-aided manufacturing procedures, dental equipment as well as a wide range of service and training facilities.

Conclusion

Our aim is to provide an attractive solution with natural aesthetics in the VMK technique, even in cases which initially do not look very promising. If dentist and/or patient insist on a metal ceramic instead of a full ceramic high-end solution, we can offer good, competitive results using our CAD/CAM system and VITA VMK Master, which is based on a combination of state-of-the-art equipment and high-quality materials. Thanks to the use of a ceramic which is simple to process, pleasant to work with, and has a wide processing interval and accurate shade reproduction, which, in combination with the VITA Linarexguide, enables the fabrication of cements with natural aesthetics, time-consuming adjustments and corrections are usually unnecessary. We would appreciate a sample copy of any reprints.

PRODONT-HOLLIGER

1st French Manufacturer of dental instruments

PRODONT-HOLLIGER, presents to you his production, carried out in best stainless-steel and according to the most recent production techniques. Our ISO 9001 certification guarantees the quality of our instruments at each phase of production.

The company, subsidiary of the Nadia Group, has worked for more than 40 years with dental customers of the whole world, in more than 90 countries. From the association of the company Prodont (abrasives and waxes) and Holliger (mirrors) in the Eighties, the company diversified during time by integrating the production of dental instruments for dentists and laboratories, as well as the burners and the blowlights.

Product description:

Today, the company diversifies its products ranges in 6 branches of industry, for the dental market (dentalists and laboratories) and out-dental (jewellery, clock industry, spectacle industry, visual arts, agro-alimentary...). Dental and laryngeal mirrors (Actual, Holy, Holyclar, DMS), the abrasive discs Speedy, dental instruments (diagnostic, restoration, prosthodontics, extraction, dental surgery, implantology, laboratory), the burners (Minifulam, Holy, Labsflam, Maticflam, Microtorch, Protorch), dental waxes, demonstration and study models.

Our mirrors are made of stainless steel, by automatic or handmade process, with quality control at each stage of assembly (ISO 9001:2008 certification). The amount of mirrors produced by day can reach 10,000 units. We provide personalization of the packaging and mirrors with laser etching on-demand.

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