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#idscologne

IDS 2023 in Cologne: 100 years of IDS has been part of metal ceramic history for decades - and is sustainable for the next 100 years

Durable metal ceramic restorations - Veneer aesthetics - Analogue and digital processing methods - New business models - A comprehensive overview of the 40th IDS 2023 in Cologne

Progress in additive production and digital methods in general are also changing the dental alloys market. However, the most remarkable thing is: With their clinical long-time reliability and their aesthetics that are greatly based on skilful dental technology, metal ceramics are still proving to be an excellent option for many patients. The visitors of the 40th International Dental Show 2023 (IDS) can experience the current status from 14 to 18 March in Cologne.

In the crown and bridge technology section the trend has been towards digitally-driven production processes for years. As such, the market shares of the materials suitable for these processes have increased (above all ceramic). Yet, at the same time the following applies: "As a treatment option, analogue metal ceramic can still hold its own against the computer-controlled technology and is still demanded by the patients, who desire a high aesthetic level for their fixed restorations." (1)

For the practices and laboratories this means: The weighting is shifting with every innovation, whereby in the current state of technology, all of the materials we know retain their relevance. Especially in the case of metal ceramic this is due to an ingenious concept that has been implemented in Germany for 60 years under different terms (i.e. PFM or veneer crowns): The network former silicon dioxide is modified by adding alkaline earth metals as so-called network changers (2) so that a tension of around ten percent is built up (3,4,5) in the blend zone while cooling down after the bonding process. The special feature of the corresponding patent is the combination of two entirely different materials to form a successful team. The ceramic veneer fits tightly without chipping off. Even after many years follow-up investigations have demonstrated: Such restorations are functional, aesthetically convincing and have low loss rates (i.e. under one percent a year) (6).

Thanks to innovative processing methods alloys are experiencing a boost. For instance this applies for the milling technique used for shaping alloys with a high content of gold. If a laboratory's demand for such restorations is not high enough for the necessary, critical mass, it can make use of an industrial precious metal milling service. This allows warehouse storage costs to be reduced and/or the



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implementation of universal digital processes (here: CAD/CAM).

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Alloys are experiencing further upswing due to the trend towards 3D printing. These include for instance the laser metal fusion technology (LMF), the selective laser melting method (SLM), selective laser sintering (SLS), direct metal laser sintering (DMLS) and lasercusing. All of the cited methods are used to produce crowns, bridges and denture bases ("digital model casting bases") from non-precious metal dental alloys.

"There is a lot happening in the field of metal dental materials," said Dr. Markus Heibach, Chief Operating Officer of the Association of German Dental Manufacturers e.V. (VDDI). "This is also the reason for a shift in business models too. For example, in each individual case the decision has to be taken as to whether the production is carried out in the own laboratory, in a partner laboratory, by a centralised manufacturer or by an industrial production service. The visitors can find out exactly how the ancillary conditions are currently changing at IDS from 14 to 18 March 2023 in Cologne - and at the same time celebrate a special anniversary under the motto: 100 years of IDS - shaping the dental future."

About IDS:

IDS takes place in Cologne every two years and is organised by the GFDI Gesellschaft zur Förderung der Dental-Industrie mbH, the commercial enterprise of the Association of German Dental Manufacturers (VDDI). It is staged by the Koelnmesse GmbH, Cologne.

Literature

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