



Zirkonzahn®

*“Perfection through
perseverance”*

Enrico Steger



Welcome

Welcome to the world of Zirkonzahn. We cordially invite you to discover our “world of Zirkonzahn”. Experience how it all began and gain insight into our production. Find out about the heart of the Zirkon world, about our ambitions and priorities when working for you and with you. Of course, we will also be pleased to welcome you in our beautiful South Tyrolian region. Enjoy yourself discovering our world!

Finis Steyer

A real factory needs a chimney

Allow me to recap the history of our milling system. As I potteded about 27 years ago, in my very first laboratory in the basement of my parents’ house, I couldn’t imagine in my wildest dreams that my profession as a dental technician would lead me into running my own factory someday.





Perfection through handcraft

What always fascinated me from the very beginning and still does today, is the possibility to create something personal, to turn a vision only existing in your own mind into reality. I have always associated the realisation of my own ideas with a feeling of freedom.



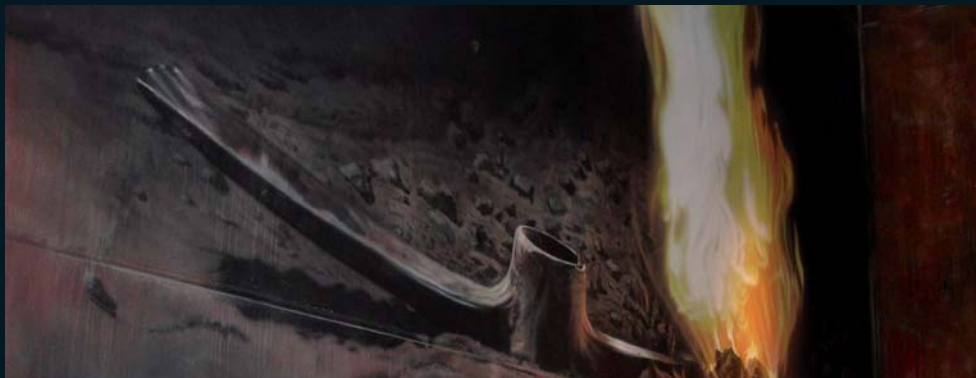
Perseverance – the best form of passion

The way from my own laboratory to my own factory is paved with an idea, two years of tinkering, many sleepless nights, thousands of working hours and endless joy about every little improvement.

The forge – cradle of progress

Like an artist, a dental technician creates unique pieces of art with his hands.

No passionate artist ever calls his work perfect. Instead, he strives for further improvement with each new creation. The self-imposed challenges bring him ever closer to the perfection of his craft.



The initial idea

One afternoon in August 2002 an idea suddenly struck me. I remembered the old pantograph we had at school – I figured, a tooth contoured zirconia body could be created by manually copying and enlarging a model of the same shape. Shortly after, on a holiday in Mexico, I bought a pantograph similar to the one I remembered. I grappled with the contraption the entire vacation. It was made of wood and had manual settings for enlargements. As soon as I got home I built prototypes of wood and later aluminium. By October my first device was ready for milling. Initial tests were conducted by milling plaster. I thoroughly researched the subject of zirconia, obtained zirconia blanks and worked out how to produce the latter myself. My search for knowl-

edge had turned to passion. Once I gathered all relevant information, I still needed to build a furnace.

I realised the equipment available back then, was too expensive for dental technicians. It led me to studying furnace technology and learning how to build one. Then there was the colouring to consider, but with the help of an experienced chemist we learned rather quickly about the subject.

When I realised that the available burrs all suffered from a lack of quality, the next logical step was to produce burrs. Finally, I gathered all system components to realise my dream of my own factory.



Organisation is half your life – so what is left for the other half?

Maybe not immediately obvious, values like good organisation, diligence and servitude should go hand in hand with innovation, creativity and development. We place great importance on these assets. I believe they make the difference between victory and defeat. Even the architecture of our company premises reflects those fundamental values. Office design is sleek with lots of integrated glass elements and cosy comfortable meeting places. All is conducive to an employee-friendly environment aiding good communication.



Teamwork – You can't run a ship single-handed

For such a fast growing company it is of great importance that all people pull together and flexibly carry out different tasks. Yet, besides precision and concentration, humour, fun and spontaneity should not miss out. To work with such a young and multi-cultural team such as ours offers inspirations every day anew.



Creativity means to turn chaos into organisation

We take an innovative approach when it comes to spontaneity and creativity. Our flat management hierarchy reflects this policy: Research with an open mind and passion for the unconventional while focussing on our clients' specific wants and needs.

Originality

It may be alright to follow the truth, but it is much better to invent it yourself.





Perfection

Perfection is our major objective. Again and again, we fight against mundane routine and negligence, led by the strong will to get closer to our vision of perfection.

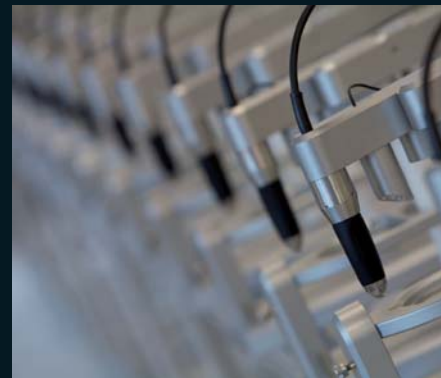


Organisation

Standardised production processes, accuracy and precision are part and parcel of what we do. Yet, this daily fight is far away from military diligence but is characterised by discipline, responsibility and reliability.

Perfection lies in the small detail - though perfection is by no means small

We take the 'shipshape' approach with regards to organisation and service which to us is fundamental for perfection and quality.





Innovation and inventive talent

With perfection and refinement of our ideas in mind we readily cooperate with universities and research institutes worldwide. Therefore, latest scientific findings are directly translated into product development.

Product range

A zirconia copy-milling system, zirconia abutments, colour liquids and matching brushes, special milling burs and a CAD/CAM system are part of our ever expanding product range.





Product durability

Our worldwide presence and our uncompromising quality approach implicate that all Zirkonzahn products meet international quality standards and guidelines.



Quality standards

Zirkonzahn has been ISO 9001 and ISO 13485:2003/CAMCAS certified since 2006. Our diverse testing methods ensure flawless quality control.

Quality makes customers return, not the products

Our zirconia is tested for hardness, milling capability, flexural strength, veneer porcelain bond-strength, long term durability and dimensional stability characteristics.





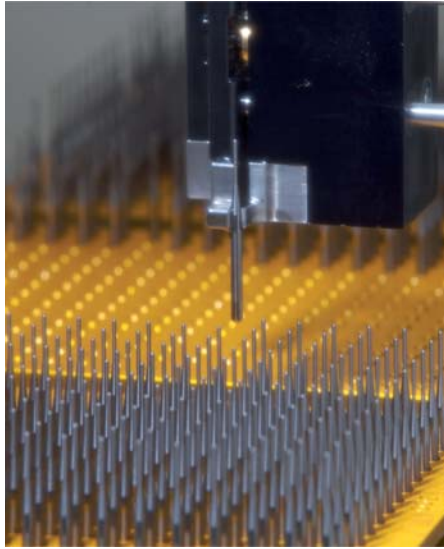
From dental technicians for dental technicians

Me, being a dental technician with heart and soul, I aim at offering our customers a product portfolio meeting all demands concerning quality, precision and user-friendliness – at competitive prices.

Milling burs manufactured in-house

In our own grindery we produce special carbide milling cutters for zirconia-milling systems on diamond grinding disks. Therefore, we are able to flexibly react to adjustments in the milling.





Reliability

For us, reliability first of all includes all products made by us, delivery in time and technical support.



Partnership

Yet, reliability also stands for our strive to establish a customer-relationship which is a partnership at the same eye level characterised through active mutual interchange.

Growth is only limited through imagination

Today almost 70 employees, speaking 12 different languages, are in charge of exporting our products to over 2,000 customers in 78 countries. In addition to this, Zirkonzahn has its own subsidiaries in 15 countries.





100% white

Zirconium ($ZrSiO_4$) belongs to the mineral group of silicates and was discovered in 1789 by the German chemist M. H. Klaproth. Zirconium dioxide (zirconia ZrO_2) is a natural composition of the element zirconium and has been used in the dental field for 10-15 years. Due to its excellent durability, zirconia is expected to widely replace metals in dental technology. The excellent biocompatibility of zirconia makes it a particularly attractive material of the future.

Not all zirconia is the same

When evaluating the quality of zirconia, consideration must be given to flexural and compression strength, hardness, Weibull-modules, dimensional characteristics and colouration.





Premium quality zirconia

Drawing on our own state-of-the-art refinement technologies we are one of the few companies worldwide producing zirconia blocks for dental prostheses. They are partially stabilised with Yttrium and enriched with aluminium. This results in positive features such as flexural strength (1,400 Mpa*), hardness (1,200 HV*) and a Weibull-module of 15.84* (* Zirkonzahn ICE Zirconia data).



Consistent shrinkage

With our advanced processing technology we are able to guarantee a consistent shrinkage factor, which again forms the basis for greatest precision possible. Offering flexural strength of up to 1,570 MPa (University of Munich study, Dr. Beuer, Feb 2007), our zirconia not only differentiates from traditional dental replacement materials but is also known as one of the firmest materials available.

Pressing process

The raw material is mixed with additives and through various processes a so-called “green body” is produced. When iso-statically uni-axially pressed or manufactured by cold casting, the green zirconia blanks show no change in quality after sintering in terms of dimensional stability, hardness or crystalline structure. We use biaxial pressing which ensures consistent pressure throughout the block. For special applications we also use iso-static pressing.





We believe that routine is the opponent of progression

We persist in exploring and testing zirconia as a material in our in-house research laboratory which is located close to our premises and connected to a network of international zirconia experts. With them we constantly try to explore and to overcome the limits of zirconia as a material. Our findings are shared with customers worldwide through ongoing courses, seminars and lectures.

The sound of milling at our Palazzo Verdi Education Centre

Our training laboratory is well utilized by technicians from all over the world, hungry for knowledge and eager to work on patient case studies. Our team of skilled dental technicians is always at their disposal with practical advice until even the last challenge is mastered. No matter, whether beginner or expert – they will all be able to improve their know-how.





Aldo Zilio, Italy

- Ceramic- and zirconia expert
- Own dental technology laboratory in Creazzo since 1982
- Close, long-term collaboration with Zirkonzahn
- Internationally renowned instructor in aesthetics and veneered zirconia restorations
- Several publications in renowned dental magazines



Xavier Balmes, Spain

- Ceramic- and zirconia expert
- Own dental technology laboratory in Sabadell since 1996
- Close collaboration with Zirkonzahn for many years
- Internationally renowned instructor in veneer ceramics and implant prosthodontics
- Several publications in renowned dental magazines

ICE Zirconia Ceramic

Work made of 100% zirconia



ICE Zirconia Ceramic

Work made of 100% zirconia



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