

MAY 2017

AROUND FRANKE



LIGHT-WEIGHT-BEARINGS FOR RESCUE HELICOPTERS:

FIRST ORDER ON
LIGHT-WEIGHT-BEARINGS
WITH HOUSING PARTS
MADE BY 3D-PRINTING

PROJECTS

3D-PRINTED
BEARING FOR
RESCUE HELICOPTER

CT-BEARING 2020
MEETS FUTURE
SPECIFICATIONS

LOW-COST
CT-BARING FOR
CHINESE MARKET

COLLABORATION

FRANKE IS GROWING
NEW PLANT V

NEW TEAM
ORGANIZATION
PRODUCT LINES

NEW JOBS / NEW FACES

NEW

AROUNDFRANKE
CHANGES ITS CONCEPT:

WE CHANGED THE FORMAT
INTO MAGAZINE-STILE
AND WILL INFORM YOU
REGULARLY ON FRANKE
COMPANY NEWS.



SAVE THE DATE:

COME TOGETHER AT THE FRANKE
SUMMER BREEZE 15TH OF JULY

MANAGEMENT



Dear Colleagues,

Due to the good **order situation**, we have increased the expected order intake for 2017 to EUR 37 million. We were able to win numerous orders in the first four months, especially for bearing elements and customer-specific bearing assemblies.

Delivery reliability and productivity are developing positively. 3rd shift, Saturday work and temporary workers support us in fulfilling the very numerous requests of our customers. *Thank you for your commitment!*

The construction of new **plant V** is progressing according to plan and we will start installing the machines and workshops from mid-August. The new plant shall work at full capacity by the end of the year.

Recently, many new employees were hired at Franke. - *Welcome to Franke!*

With kind regards

Daniel Groz & Sascha Eberhard
Managing Directors

APPRENTICES



Dear Apprentices,

we received a DMC NEF 400 for our **training workshop** in plant II. It is equipped with a complex control system and offers the best possibilities to learn how to operate larger machines.

Mark Keller and **Patrick Hoffmann** have finished their training and are now working in their acquired professions: Mark Keller as an industrial mechanic in Lagermontage and Patrick Hoffmann as a machining mechanic in Factory II. *We wish both of you much joy and success for your future career!*



On the last weekend of April we were with all apprentices at the match of the local soccer club **VFR Aalen** in the Scholz Arena. The trip was a lot of fun and we would like to thank the management for the free tickets!

Kind regards, your trainers - Klaus Mayer & Stefan Szymanski

WORKS COUNCIL



Dear Colleagues,

also a warm **welcome from the works council to all new colleagues!** You will feel comfortable with us. If you have suggestions / questions to your workplace we support you gladly!

An **operating agreement** was concluded with the management of overtime in the night shift. By the end of the year, the procedure is to ensure that overtime is paid out as soon as the number exceeds 80.

The next **Annual General Meeting** will take place on Thursday 6 July during working hours. The survey after the last event showed that Saturday was the biggest obstacle to your participation.

The Franke sports program will be resumed in autumn. But this is not to prevent you from staying active in your free time. **Health care** not only increases the quality of life, but also pays off in cash - see our profit sharing of the year!

Your works council,
Gabriele DiNucci
Chairman of the Works Council

ENVIRONMENT



Dear Colleagues,

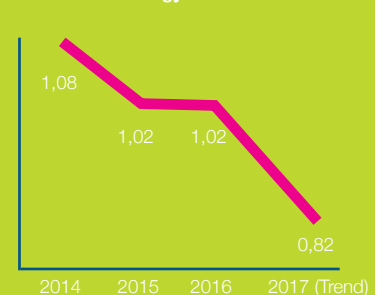
we are currently working on an **energy management system** based on ISO 50001, which is intended to cover not only current consumption but also potential for energy savings. To save energy and to operate ecologically is part of our corporate policy and is anchored in our mission statement. **Annika Hafner** deals with this topic in her Bachelor thesis and we are looking forward to her results.

An audit with the **TÜV SÜD** (Technical Surveillance Association) according to the Ordinance on Energy Saving (SpaEfV) and an audit according to ISO 14001 in July aim in the same direction.

With kind regards,

Thomas Hägele
Environmental Protection Officer

Costs for energy in % of Turnover



Franke International:

Meeting of all representations with talks about the right recipes for markets and mouths

Our export share is now around 50%, that is, half of our sales are made abroad. There also lies the greatest potential for the future. It is therefore all the more important to strengthen our international sales organisation and to support our representatives at their business.



Numerous representatives from North America to China, had followed our invitation to participate at the sales workshop in Aalen.

The focus was on the exchange of information on new products and strategies. Numerous development projects, examples of applications and, of course, the new construction of plant V impressed our guests and gave an impression of the innovative power of our company.

This is all the more important, as the export agencies are far away and take a picture of our performance.



The joint evening event was under the motto „Light Meals for Inspiration“.

During the joint preparation of the evening meal, further discussions took place in a relaxed atmosphere. Such events are a good way to promote cohesion and community spirit of the group and to add an informal, friendly touch to the meeting.

All together we had a fine event with each other, rounded up by a delicious set of dishes for a joint dinner.

Many thanks to all participants & The members of the Franke team!



Bearing Assemblies from 3D-Printing Manufacturer of Rescue Helicopter relies on Franke Light-Weight Technology

Designers of components for aviation use every opportunity for weight reduction. Nowhere else does every gram of weight have such a direct impact on the performance of the aircraft as well as on the costs for fuel.

Our customer was looking for a light bearing solution for the patient bed of a rescue helicopter. The bed should be swiveled to facilitate loading and unloading of the patient.

The technical requirements for the bearing are high:

1. The patient bed is swung by hand, so it must be able to rotate easily and evenly.
2. Weight of the whole unit: 46 kg, weight of the bearing assembly should be max. 1 kg.
3. The bearing must be resilient, it must cope with impacts, vibrations and ambient temperature changes.

A bearing assembly made of aluminum was out of the question. In the required size it would have weighed around 1,500g and was therefore too heavy for this application.

Christoph Gschwind from our Swiss representative company Vögelin presented the customer with a sample bearing from the 3D-printer which we had designed together with the specialists of our 3D-print supplier. Calculations had shown that a 3D-printed bearing weighs only 700g.

The customer agreed to test a prototype and **Franz Öhlert** from the construction set to work. Together with our partner specializing in 3D printing, the geometry of the bearing was designed and the printing realized.

Shortly afterwards the parts were in the house at Franke and could be equipped with a suitable wire race bearing. Extensive tests have confirmed the expectations:



Despite the low weight, the bearing assembly from 3D-printing has the same load bearing capacity as a conventional aluminum bearing assembly. Soon the first tests at the customer will start. We will be there and report it!



Precision work: The wire bed for the bearing rings is manufactured in a conventional manner on a lathing machine. The 3D-printed material can be processed just like a standard Aluminum ring. In the apprentice workshop, **Sven Mück** takes care of the correct fixation of the outer ring before he starts the machining.



Place of application: The 3D-printed light-weight bearing is used to swivel the patient bed of a rescue helicopter. The bearing will work reliably under full load and in rough conditions. The aluminum material used for 3D-printing can withstand both: large temperature changes and the vibrations that will occur during the flights.

THE DEVELOPMENT OF A NEW PRODUCT PROVIDES THE IMPETUS FOR EXTENSIVE ADVERTISING CAMPAIGNS. IN THE CASE OF OUR 3D PRINTING LIGHTWEIGHT CONSTRUCTION COMPANIES, WE ACCOMPANY THE LAUNCH OF THE MARKET WITH SPECIAL

BROCHURES, WITH ITS OWN WEBSITE AND THE PRESENTATION OF THE PRODUCTS AT INDUSTRIAL TRADE FAIRS, AS AT THE HANNOVER FAIR, WHERE MANY COMPANIES PRESENT THEIR NEWS.

COMPETENCE

**3D-Print
Light Weight**

FUTURE





OUR COMPANY IS IN A STATE OF UPHEAVAL. AN UNMISTAKABLE EXTERNAL SIGN OF THE FURTHER DEVELOPMENT IS THE **NEW CONSTRUCTION OF PLANT V**. THIS IS ACCOMPANIED BY GREAT INTERNAL CHANGES. IN PRODUCTION. IN THE LOGISTICS. IN TEAMWORK.

THE **FRANKE 2020 PROJECT** IS BASED ON THREE PILLARS:

- 1. INVESTMENT** IN BUILDINGS, MACHINERY, TOOLS
- 2. ORGANIZATION** OF THE TEAMS AND COMPANIES
- 3. CULTURE** AND COMMUNICATION IN THE COMPANY

IN ALL AREAS WE ARE ACTIVE, EVERY SINGLE EMPLOYEE AT FRANKE IS PART OF THE CHANGES. AND ALL TOGETHER WE WILL ADVANCE THE COMPANY.

Franke 2020

INVESTMENT	ORGANISATION	CULTURE
New plant V Machinery Workshops Technicum PL/PM shops Canteen Office space Entrance	Product lines: - LE / LD - LEC / LDC - F Shopfloor Matrix / Teams Employees	Leading culture Communication Appreciation Brand values

Franke CT-Bearing 2020

We develop for the Requirements of Tomorrow

The requirements for computer tomographs continue to grow. X-ray images with even higher resolution give doctors the opportunity to make more accurate diagnoses in order to heal people. The performance of CT bearings plays a central role in modern diagnostics.

Still, most manufacturers of computer tomographs are satisfied with speeds of around 200 rpm. But the first voices are already to be heard, which demand the double speed in the near future. No problem for us - we will be prepared.

Product development can be triggered for two reasons:

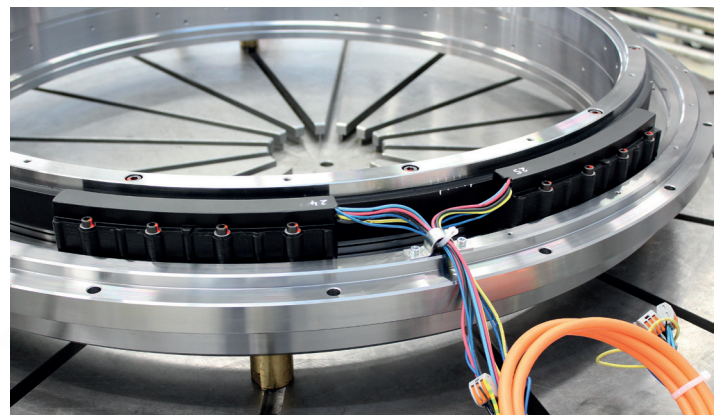
1. by a request from the customer who is looking for a special solution
2. by foreseeing and assessing future market requirements.

The **Franke CT project 2020** is an example of forward-looking development. In order to meet future requirements in medical technology, computer tomographs will have to deliver even better images. The quality and resolution of X-ray images depend strongly on the rotational speed of the tubes and detectors. Higher rotational speeds therefore enable better X-ray images on which, for example, rapidly flowing liquids in heart-tight blood vessels can be recorded in detail. Our development project aims exactly in this direction.

The development goal was 400 revolutions per minute with a constant noise level of 65 dB (A). Our team was supported by the specialists of the engine manufacturer FISCHER, who is our competent partner for all applications with directly driven bearing assemblies. Through this cooperation, we have significantly increased our consulting competence in the use of complete bearings with drive systems.

The CT bearing 2020 is driven by a segment motor. It is placed in an accurate manner in the upper part of the bearing and exerts an attractive effect on the inner ring of the bearing, together with all the X-ray electronics, due to its strong magnetic force. The magnetic attraction compensates the weight of at least 800kg of the mounted inner ring, which leads to the bearing running almost without a load very low wear.

This type of drive construction is a novelty and technically so interesting that we have applied for a patent. In individual discussions with our customers, we are now presenting the project. First interest was already aroused.



The patented segment motor of the CT bearing counteracts the gravity. On the inner ring of the CT instruments with a weight of 800kg are mounted.

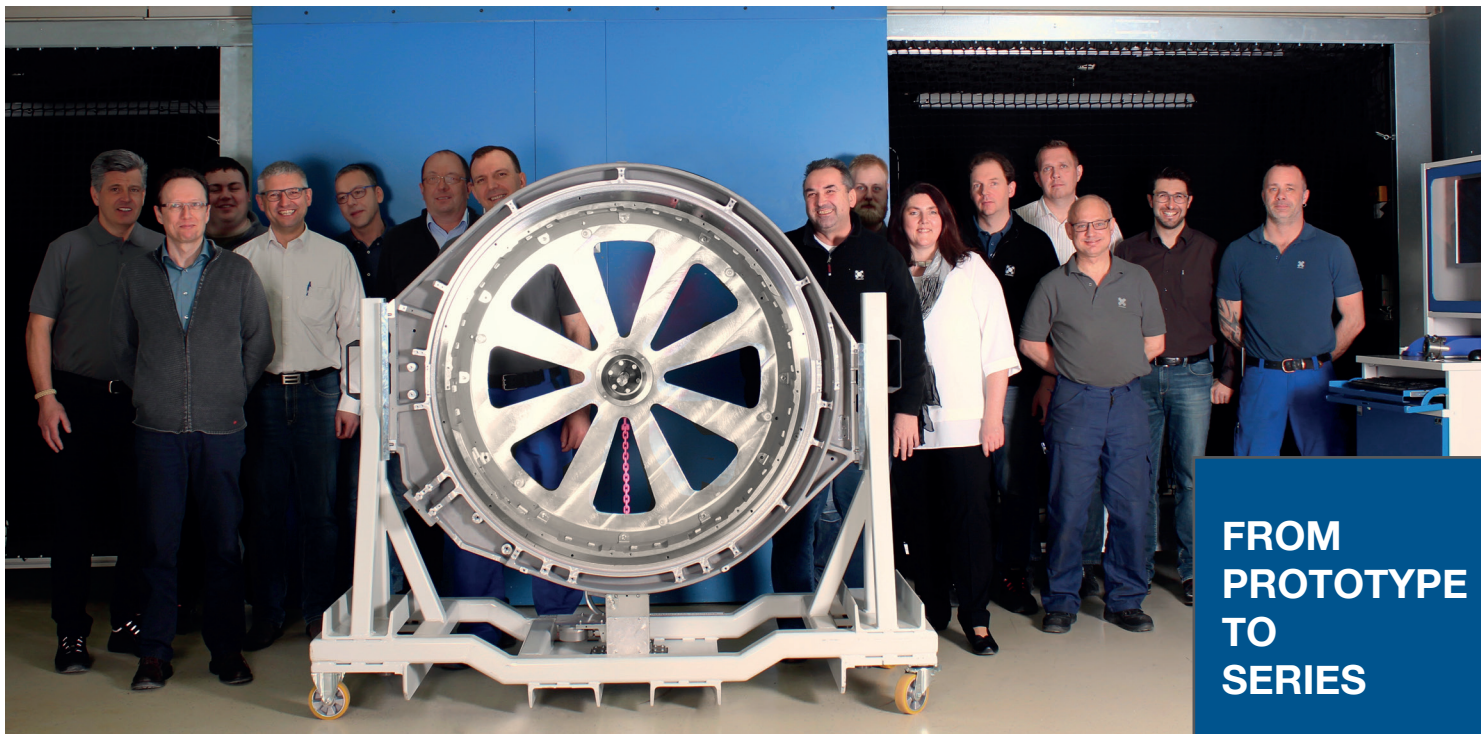
**FROM
PROJECT
TO
PROTOTYPE**

The prototypes are thoroughly tested in our test stands for CT bearings. All loads and velocities can be simulated. The CT bearing of the future was also tested here. Speeds up to 400 rpm have already been achieved.

Start of Serial Production of CT-Bearings for our Customer SIEMENS China

CT-Bearings Type aCTivate® in Production

In the series production of the new CT-bearing series aCTivate®, which is now beginning, many years of meticulous project work are taking place. Together with our Chinese partner XREB, it is our task to ensure performance, quality and delivery reliability.



**FROM
PROTOTYPE
TO
SERIES**

The close cooperation between the participating teams enabled us to successfully implement the project. Also the close contact to our representation in China XREB was decisive for the success. Many thanks to all who have contributed their part to the success!

The SIEMENS aCTivate® CT bearing is a special bearing for computer tomographs, which is integrated into the enclosing design.

Since April 2013, the project team has been working on the realization of the bearing. The project was started at SIEMENS in Forchheim. In the course of the development a shift to SSME (Siemens Shanghai) to China took place instead. Our customer SIEMENS had several suppliers to choose from and ultimately decided for Franke. Convincing was the Franke package of development, product quality, price and service.

aCTivate®-CT-bearings are manufactured in two versions: LP and HP. LP stands for low performance with speeds of 75 rpm. HP series bearings are designed for speeds up to 180 rpm. The series start has now been carried out for the bearings of the LP series. The computer tomographs equipped with these bearings are exported from China to the whole world. The main requirements on bearing assemblies are reliability and maintenance-free operation over the entire service life.

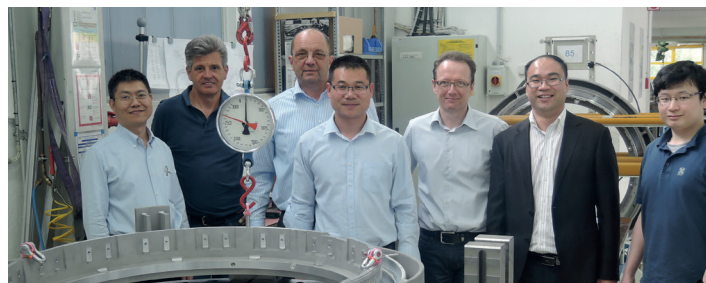
For logistics and cost reasons, our Chinese partner XREB carries the bulk of the production. Here about 90% of the planned **1,000 bearings are built per year**. The core competence of wire race technology comes from Franke, Germany: here all bearing elements are manufactured and delivered to China. As a result, the guarantee for the quality and performance of the bearings lies also at Franke in Germany.

We are responsible for our bearings, regardless of whether they are mounted in Aalen or in far away Xuzhou. This makes it all the more important to have a close co-ordination and training of our Chinese partner so that the production processes in China meet the same standards as in the Franke facilities.

XREB employees paying a visit at Franke. In our CT assembly, Chinese colleagues are given comprehensive training courses on the assembly of the bearings.



Production hall for CT bearings at XREB in Xuzhou, China. Mounting aids, gantries and test stands come from Franke and guarantee top quality.



XREB employees paying a visit at Franke. In our CT assembly, Chinese colleagues are given comprehensive training courses on the assembly of the bearings.

NEW COLLEAGUES



← **MARIO KAPP**
Marketing
Customer Care

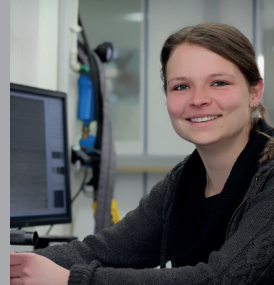
→ **WADIM WITT**
Linear Systems
Production



→ **THERESA MAIER**
Student
International
Sales



↓ **ALEXANDER KERN**
Wire Race Production



← **TAMARA PREIS**
Student
Quality Management



← **MARTINA GAIER**
Entrance / Reception



→ **DIRK BECKER**
Wire Race Production



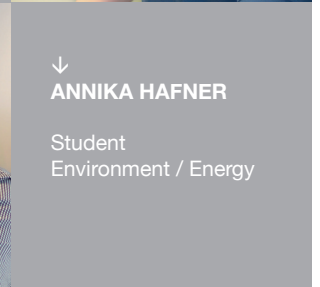
→ **HAKAN ERKAN**
Production
Development



→ **PHILIPP ENGERT**
Technical Sales



↓ **ANNIKA HAFNER**
Student
Environment / Energy



← **PAUL MARTIN**
Bearing Assemblies
Production



← **FABIAN HIRSCH**
Technical Sales
Franke Expert Center
USA



WE WISH ALL THE NEW COLLEAGUES A GOOD START AT FRANKE AND MUCH JOY AND SUCCESS IN THEIR TEAMS!

→ **DENNIS SCHNEIDER**
Bearing Assemblies
Production



OBITUARY



We mourn for our former colleague **ERICH GLEINIG**, janitor.

Anniversaries JAN to MAY 2017 - Thank you for your loyalty!

Klaus Mattasits	Work preparation	5 years
Daniel Groz	Managing Director	10 years
Christian Burghard	Technical Sales	10 years
Thomas Hägele	Purchasing, Environment	10 years
Concetta Fricano	Room Cleaner	10 years
Waldemar Milke	Stock	20 years
Artur Mittelstadt	Linear Systems Production	20 years
Christiane Schiele	Purchasing	20 years
Werner Bieser	Dispatch Department	30 years
Johannes Baier	Wire Race Production	30 years
Peter Hommel	Bearing Assembly Prod.	30 years
Roland Hoffmann	Stock	30 years
Ralf Maier	Wire Race Production	30 years



**FRANKE
TRADITION**

Graham Moffatt retires
Franke Bearings Ltd. will lose its Head

A pioneer in selling Franke products in the United Kingdom, Graham Moffatt is setting sails for a new chapter in his life. His company Franke Bearings Ltd. will be sold to the next generation.

For 25 years Graham Moffatt has been our partner as a representative in the UK. A specialist for linear systems from different brands, Graham knew very well about the benefits of Franke light-weight linear systems and bearings.

Sales in the UK have never been too high for Franke linear-systems due to the price situation. However, Graham has always been a man of ideas. He developed a system of accessories to turn Franke linear guides into camera sliders and founded the company SLIDESHOT to sell these products. This market niche is growing and the SLIDESHOT camera slider has received best reviews from professional photographers and film crews. www.slideshowot.co.uk

A man of ideas, Graham Moffatt surely will have plans enough to shape the life that lies ahead of him. We wish him all the best for the future and will always remember him as a profound representative who always brought some British style into our meetings, sometimes accompanied with a glimpse of black humor.

Now Dave Dobson and Phil Worden will take over, to be our future team at Franke Bearings Ltd. in Great Britain.

Thank you very much Graham & all the best!

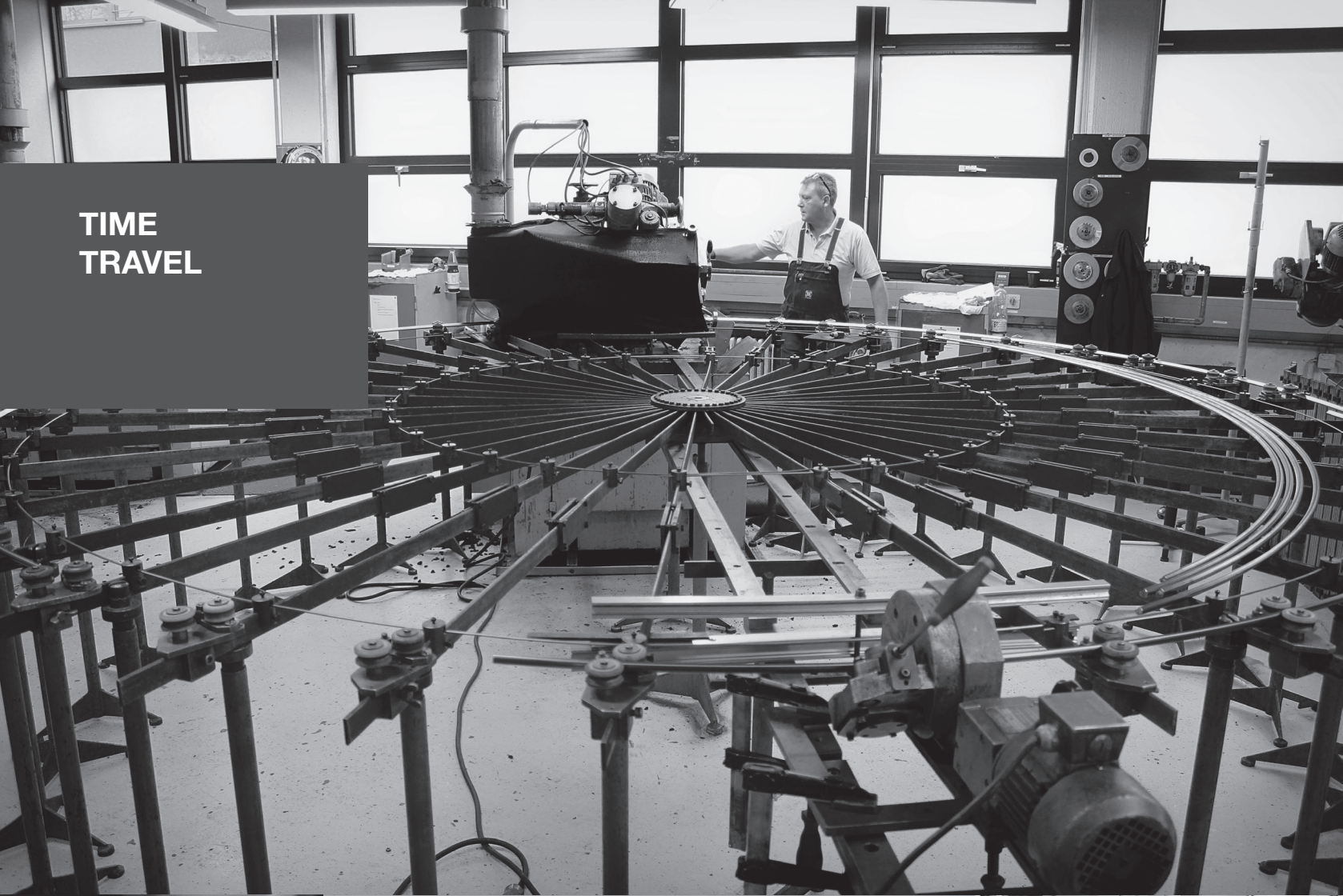
 
 Daniel Groz Sascha Eberhard



**GOODBYE
GRAHAM**



TIME TRAVEL



ONCE A YEAR, THE CLOCKS RUN BACKWARDS. THEN THE OLD CONVENTIONAL GRINDING MACHINE WILL BE AWAKEN AND THE GREAT RING WILL BE INSTALLED. AFTER THAT THE THICK WIRE SEGMENTS RUN THROUGH THE ROLLERS AND THE SPECIALISTS IN THE TEAM OF RING GRINDERS TAKE ACTION. SOME DAYS AGO THIS TIME HAD COME AGAIN.

ONCE A YEAR, WE GRIND THE HEART OF A LARGE BEARING, WHICH WILL DO ITS DUTY AGAIN FOR ANOTHER YEAR. WITH 15MM WIRES, 45MM BALLS AND MORE THAN 4 METERS BALL PITCH DIAMETER.



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