News - Issue: 23/2006

TopSubject

FRITSCH forever

Why **FRITSCH forever**? There are many reasons!

Tradition. Since the founding of the company in 1920, FRITSCH has developed from a wholesaler for technical gemstones into a comprehensive provider of instruments for sample preparation and particle size analysis. It all started with the hand mortar for grinding and mixing powders. This was followed by the development of the automatic Mortar Grinder and Sieve Shakers, continuing all the way to today's revolutionary generation of Planetary Mills, the ***premium line***, and the ***ZOOMSizer***.

Quality. FRITSCH has always offered a two-year manufacturer's guarantee on all its products, even before it was a legal requirement. Thanks to many years experience and our constant advancement in technology, our instruments are very long-lasting and well-known for their reliability. Our internal development and production according to ISO 9001:2000 guarantee that this will continue in the future.

Longevity. FRITSCH laboratory instruments set the standard for longevity. We frequently receive requests for the operating manuals of instruments over 25 years old for example. Our mills are a purchase for life, making them a very sound investment.

Consistency. During the sixties, FRITSCH developed its own patented planetary mills for the first time. In subsequent years, this innovation was developed into an instrument series. In 1995 came the Planetary Mono Mill and in 2000 the Vario-Planetary Mill. In 2006 we were able to say with pride: we have further improved on the original. The new generation of planetary mills – the ***premium line*** – reinforces our global technology leadership in planetary mills.

The development of our particle size analyser range followed the same consistent pattern. The traditional Sieve Shaker became the Sieve Shaker with self-resonance control. The Laser Particle Sizer with convergent laser beam developed into today's ***ZOOMSizer***.

Innovation. Thinking "outside the box" is a tradition at FRITSCH – which is shown by the various patents we hold. The Mono Mill was the world's first planetary mill with one grinding station; the Laser Particle Sizer was the first with a convergent laser beam. The Vibrating Cup Mill with frequency converter control is the first of its kind in the world. And our smallest mill, the Mini-Mill pulverisette 23 also sets new standards in micro-milling technology.

Experience. With over 85% of our production exported, we receive feedback on our products from all over the world and this makes an invaluable contribution to our development agenda. Today, we are able to grind 99% of all samples found in the laboratory with FRITSCH mills. Over 4000 grinding reports carried out in our test laboratory offer impressive proof of this. We have the right FRITSCH instruments and accessories for your application as well.

Reliability. Supported by our innate competence and understanding of sample preparation and particle size analysis, we will continue to offer you top level performance in the future. Continuous further development and the integration of state-of-the-art technologies allow us to produce perfect solutions to meet specific customers-needs. You can rely on our competent employees. They are there to help you.

FRITSCH forever combines all these factors to the highest level. FRITSCH forever represents the philosophy of FRITSCH, its experienced employees, long-lasting products and, in particular, its long-term business partnerships. A rich trove of lasting value. Just like the Corbusier sofa of the Bauhaus era - simply **forever**.

Robert Fritsch, Managing Director

News - Issue: 23/2006

FRITSCH-TEAM

Wolfgang Simon takes over Sales Management

On April 1st, 2006, our employee of many years, Wolfgang Simon, took over as Sales Manager from Mr. Friedbert Schulz, who unfortunately left the company for personal reasons.

Mr. Simon, who holds a master's degree in physics, has been a member of the FRITSCH sales team since 1994. He is known personally by almost all our representatives and in addition to managing the domestic sales, he has also made visits to many of our international partner companies, especially for seminars and exhibitions.

The general management of FRITSCH is convinced that under the leadership of Mr. Simon our sales will be strengthened both through the continuing efforts of our employees as well as through new ideas and innovation in sales strategy.

Mr. Simon will be contacting all our representatives over the coming weeks and will take advantage of this year's ACHEMA to discuss the challenges of the future with our most important partners. Of course, you are always welcome to contact Mr. Simon at any time and look forward to hearing from you.

Robert Fritsch, Managing Director

IMPORTANT INFORMATION

ACHEMA 2006

The great event in the laboratory sector is on the horizon. At ACHEMA we plan to reveal the secret of our many revolutionary new developments. You won't want to miss it. You can find us from May 15th to 19th, 2006 in **hall 6.1, booth J10-J12.**

Here is a small foretaste of the new products being presented this year:

- in sample preparation
  a NEW planetary mill generation - *premium line*
  unique throughout the world in performance, operation and safety – a new reference standard!

- in particle size analysis
  the Laser Particle Sizer analysette 22 with entirely new features
  new software LaPaSS, new small volume wet dispersing unit, reversible measuring range up to 2000 µm, particle shape analysis and much more...!

Come and take a look – you will be surprised!

Andrea Köhler, Marketing

PRODUCTS AND PRICES

FRITSCH laboratory mills for RoHS-tests

- Extensive information and exact instrument configurations can be found in the current manual pages -

IEC TC 111 Working Group 3 has published procedures for tests within the framework of RoHS implementation. According to the **"Procedures for the Determination of Levels of Six Regulated Substances (Lead, Mercury, Hexavalent Chromium, Polybrominated Biphenyls, Polybrominated Biphenyl Ether) in Electrotechnical Products, chapter 5.4 Apparatus / Equipment"**, the use of the following FRITSCH mills is recommended:

a) Coarse Grinding or Cutting mill with 4 and 1 mm or similar stainless steel bottom sieve

Depending on the application, the Cutting Mill pulverisette 15, pulverisette 19 or pulverisette 25 should be used. The procedures permit the use of stainless steel sieves and blades. However, all cutting mills are also now available with tooled steel chromium-free tools.

b) Centrifugal mill with 250 µm tungsten carbide (WC) coated steel sieve, WC-coated rotor, (for uniform plastic material a 1 mm steel sieve is appropriate). In order to avoid any risks of impurities during milling a 1 mm titanium sieve and a steel/titanium sieve/rotor should be used

The Variable-Speed Rotor Mill pulverisette 14 with standard rotor and sieve ring made of stainless steel or TiN-coated rotors and sieves can be used. Since the start of 2006 we also offer a WC-coated rotor and the corresponding sieve.

News - Issue: 23/2006

c) "Freezer" bladeless cryogenic impact grinder / mill with self-contained liquid nitrogen tub, insulated case, speed control, programmable timer and safety interlock.
The pulverisette 0 with Cryo-Box meets exactly these requirements.

New universal support stand

A significantly less expensive stand is now available for our cutting and cross beater mills. This can be ordered using article number 45.5820.00 and used universally for all pulverisettes 15, 16, 19 and 25.

Control and evaluation programme AUTOSIEVE

We are now supplying with every sieve shaker (analysette 3 PRO, SPARTAN or analysette 18) the extended version of the AUTOSIEVE control and evaluation programme free of charge and with unrestricted usage rights. With this new service we aim to make it easier for users of sieve shakers to convert to software-supported sieve analysis and provide you with an additional argument when pitching for sales.

Wolfgang Mutter, Technical Director

INFORMATION

Laser marking

In order to offer our customers clear identification and classification of our products, we have put a laser marking system into operation. With this system, we can label large and small parts of various materials. The laser beam causes the colour of the material to change on the surface.

Laser marking system

Zirconium oxide grinding bowl

Grinding tools will in future be labelled with article number and material code. Various other parts will follow. This permanent labelling allows our customers to read the article number, manufacturer and material directly from our products, even after long periods of use.

Hermann Michel, Production Department

MARKET AND OPINIONS

Workshop in South Africa

At the end of last year, a workshop on the topic of “Sample preparation and particle size analysis in the laboratory” was held at Labotec headquarters in Midrand, Johannesburg with the support of our South African sales representative.

Dagmar Klein of FRITSCH led this very successful workshop, which was held on two separate days to accommodate the high number of participants. The object was to show users how to achieve rapid, reproducible results each time samples are prepared.

The participants were invited to bring their own samples, which were prepared on the FRITSCH mills and analysed with the particle sizing instruments during the workshop.

Both the theoretical principles of sample preparation and particle size analysis were covered as well as practical handling of the FRITSCH instruments. The interaction, practical demonstrations and discussions of the individual results were of great value to the participants, who each had the chance to present their company and its special processes.

We would like to thank Mr. Del Pires for the professional organisation of the workshop as well as the hospitality of Labotec during Dagmar Klein’s stay in South Africa.

Dagmar Klein, Area Sales Manager

INTERNAL FRITSCH NEWS

In the year 2006 there are once again several holidays that fall on a Thursday. As usual, we are taking the opportunities for long weekends and our company will also be closed on:

May 25th - 26th, 2006
June 15th - 16th, 2006

Summer Holiday
July 24th - August 04th, 2006

News - Issue: 23/2006

FRITSCH-PARTNER

C. GERHARDT UK LTD – FRITSCH sales representative in England and Ireland

"Macke's Garden" in Bonn, 1911, painted by August Macke, a member of the founding family of C. Gerhardt.

Founded in 1846 in Bonn, C. Gerhardt GmbH is one of the oldest laboratory suppliers in the world.

Inspired by the publication of Kjeldahl's revolutionary new method for determination Nitrogen in organic substances (1873), the world's first digestion and distillation system for Nitrogen Analysis was brought onto the market, firmly establishing the company's international reputation for innovative instruments.

Gerhardt UK was established in 1987 in Crewe. Aided by the continuous development of state-of-the-art systems and the committed UK sales team, C. Gerhardt quickly became successful in England resulting in the need to move to a larger facility in Brackley, Northamptonshire, the current head office of the company.

The UK team consists of two Sales Managers (Paul Campbell in the North and Mike Newell in the South), a FRITSCH Product Manager (Paul Bishop), one Service Engineer (Dave Ewer) as well as Accounts (Wendy Peake), Administration (Sue Wright) and Marketing (Stephanie Lloyd-Berry). The premises include a fully equipped Technical Laboratory, a Service Workshop and a modern Warehouse.

In recent years, collaboration with other instrument manufacturers, such as Kern GmbH (balances), Schott (Titration equipment) and CPI Netherlands (digestion blocks) has expanded the product range. Since the start of 2006, Gerhardt has taken over representation of FRITSCH mills and particle sizing instruments in England and Ireland. Paul Bishop, a dedicated product manager with many years of experience with FRITSCH products, offers customers and dealers comprehensive on-site technical support. Two demonstration tours with the FRITSCH laboratory bus will take place this year in Great Britain (April and October) and one in Northern and Southern Ireland (July). These will offer customers and sales partners the opportunity to learn more about and test the full product range of FRITSCH. Participation in three exhibitions is also planned. In all of these sales events, we will enjoy the help and support of the competent FRITSCH area sales manager, Dagmar Klein.

The UK team is dedicated to providing rapid customer-oriented assistance as well as comprehensive technical service.

Paul Bishop – Gerhardt UK
Sales and Product Manager for FRITSCH

YOU ASK, WE ANSWER

What are the actual advantages of the convergent laser beam of the Laser Particle Sizer analysette 22?

FRITSCH is the inventor of "Inverse Fourier Optic" for analysis instruments for particle size determination through laser diffraction. Thanks to the patented movement of the measuring cell within the convergent laser beam, the analysette 22 is the only ***ZOOMSizer*** on the market. In the initial presentation in 1986, we were forced to hold discussions similar to those of the inventor of the automobile. At that time, experts predicted the death of all passengers from speeds greater than 100 km/h. To date, no one has ever died from high speeds alone and the "Inverse Fourier Optic" has been implemented by renowned manufacturers in England, USA, France and Japan – good ideas always win out!

Normally, such instruments consist of a laser that is directed through a measuring cell at a detector. A dispersion module transports particles to the measuring cell and through the laser beam. The measurement takes place within a parallel laser beam, and the diffracted light is projected onto the detector by a convex lens behind the measuring cell. The particle size distribution can be calculated from the distribution of diffracted light with the help of complex mathematics. Because each lens only covers a relatively small measuring range, it is necessary to change the lens, very much as in a camera, to examine other measuring ranges.

The "Inverse Fourier Optic" from FRITSCH positions the convex lens in front of the measuring cell. The measurement takes place in a convergent beam, the measured light distribution is the same as with the measurement in a parallel beam. Instead of the focal distance of the lens, the measuring range is now determined by the distance between the measuring cell and detector. Through the unique movement of the measuring cell, the measuring range of the analysette 22 can be adapted to your sample like a zoom lens (FRITSCH patent). A sample with a particle size distribution greater than 80 – 120 µm, for example, can be measured with the analysette 22 in a selected measuring range from 1.3 to 180 µm with 59 channels. In instruments without a zoom function, the entire measuring range is always detected, meaning that only a portion of the measuring channels are available for the sample. As a result, the resolution of the particle size distribution is lower with such instruments.

IMPRINT

PUBLISHER:

Fritsch GmbH Manufacturers of Laboratory Instruments, Idar-Oberstein

EDITORS:

Andrea Köhler, PROumwelt Werbeagentur GmbH

PHOTOGRAPHS:

PROumwelt Werbeagentur GmbH, Völklingen; Fritsch in-house

EDITORIAL ADDRESS:

Fritsch GmbH, Industriestrasse 8, 55743 Idar-Oberstein, Germany

Phone: +49 6784 70 0, Fax: +49 6784 70 11

Email: info@fritsch.de, INTERNET: http://www.fritsch.de

CONCEPTION, DESIGN, PRODUCTION:

PROumwelt Werbeagentur GmbH