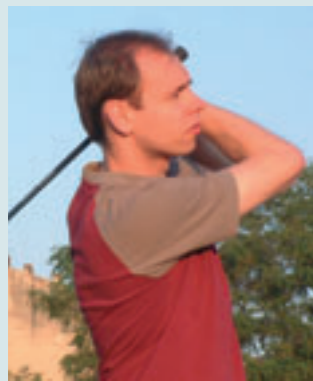


Who is Who @ FLEXIM



Mirko Blümke
Some drive a Golf...

... Mirko Blümke plays golf – when FLEXIM leaves him free time. Mirko likes to play this supposedly exclusive sport in a field right in the middle of the city of Berlin, dealing with ballistics and the law of conservation of momentum as a change from ultrasonic propagation. Mirko is a true FLEXIM kid. He became part of

the FLEXIM family at the very beginning of his university course with a first practical training. He later spent half a year in Southeast Asia, making FLEXIM's technology known there. Now, he is FLEXIM's new Product Manager Flow.

Rainer Wetzel Open-Minded Analyst

One is always on the move as Sales Manager for Europe but Rainer Wetzel, native of South Germany, has found a home port in Hamburg. He appreciates the relaxed and open-minded atmosphere of this city of Northern Germany. He has been working in the field of process instrumentation for twenty years now. He still enjoys the continuous traveling, although his passion for chess suffers from it. Fortunately, this year, there were more than enough occasions to cheer up by watching football.



Brigitte und Reiner Flieger Enjoy the sun for us!

With this issue of Update, things have changed a lot at FLEXIM: for the first time, Update was not produced by Flieger Design. For more than 10 years, Brigitte and Reiner Flieger have attended to FLEXIM in all design and graphical issues. Always with a strong commitment and a lot of patience. In their account books, FLEXIM has the customer number 4. With the FLEXIM logo, they have created a symbol which is now recognized worldwide.

Now, they want to retire from business and dedicate themselves to the things for which there was little time in the last years: Brigitte Flieger would like to write a second book, Reiner Flieger wants to illustrate children's books again. FLEXIM says "Thank You" – but actually, we do not believe that they will really retire!

Things are moving at FLEXIM Benelux

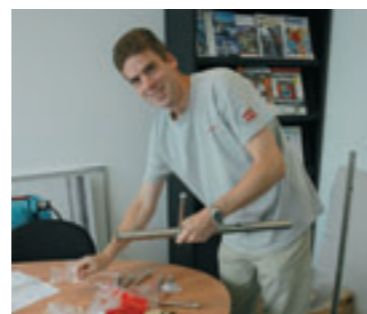
On July 28th, approximately one year after the last relocation, FLEXIM Benelux moved once again. Two new sales engineers and steadily growing activities had made a repeated relocation necessary. The new office was opened on July 31st and is located at:

Berkelse Poort 127
2651 JX Berkel en Rodenrijs
The Netherlands

Tel.: +31 (0)10 24 92 333
Fax: +31 (0)10 24 92 339

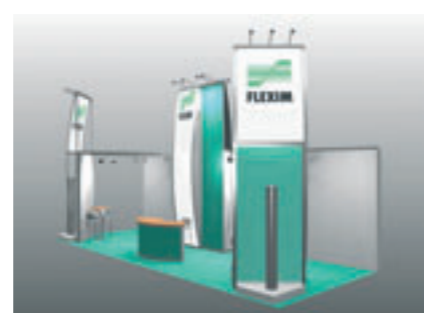
The relocation went all in all quite fast with no real bad surprise. Of course, not everything did work right away, and there was quite a lot of hectic. There were some e-mail and phone problems at the beginning, but in the office, everything was soon running again.

The whole FLEXIM Benelux staff was there to help. For Joost Claassens, just 4 days after taking up his new job at FLEXIM, this



was so to say his first on site service duty, this time with an easy non-flow application: mounting a coat stand. Joost Claassens is FLEXIM's new Sales Engineer for the north of Holland. Managing Director Joost van Parreeren was overseeing the whole operation, making sure everything runs smoothly, screwing or repairing this or that and worrying about important little details... like the mirror in the toilet.

Although the outside of the office still looks like a building site, now, inside, everything is organized and works as usual. The FLEXIM Benelux team is now preparing the **Het Instrument** exhibition which will take place in Utrecht from October 30th to November 3rd.



On the FLEXIM website www.flexim-instruments.nl, you have the possibility to get a free entry card.

We would be happy to welcome you on our booth in Utrecht (Hall 7, Stand B-104) in November!!

Impressum

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Although utmost care has been taken in collecting the information given in this publication, FLEXIM does not assume any responsibility as to its correctness and completeness.

07/2006

Update



Off into the wild blue yonder

Update interviews Stefan Kranz, FLEXIM's International Sales Manager

Even outsiders have noticed that there is a lot going on at FLEXIM. In May 2006, FLEXIM took a big step towards improved customer service and customer relations. A new R&D and service center was opened on Long Island in New York. The new location on the East Coast compliments Oakland, CA and Houston, TX as the third FLEXIM location in the North America.



Update: What motivated you to open an additional office and a new subsidiary in the USA?

Stefan Kranz: We have experienced considerable growth during the last years in our home markets in Europe. The next logical step for us was to expand into a large market which until recently we had not yet been able to service.

What made you choose a location on Long Island in the state of New York?

There were many positive factors to select Long Island. Every company is only as good as its employees, and this was exactly what we found on Long Island. FLEXIM had the opportunity to win over some personnel uniquely experienced in ultrasonic flow measurement technology. In addition, the Northeast of the USA is an important business region. From here we can reach many important clients. And of course with a time difference of only 6 hours Europe is not very far away.

What exactly takes place at this new location?

Our distribution and service company, FLEXIM Instruments LLC., as well as our new research subsidiary, FLEXIM Labs Inc., are both housed in the same location. Up to now, we have implemented an ERP system and stocked our warehouse with rental equipment, standard instruments and spare parts. We are now able to shorten our deliveries considerably to all parts of North America – even with overnight deliveries. We can also service our customers better with our 800-number extended-business-hours technical support. We can visit customer sites within hours if need be. In our R&D department, American and German engineers and developers are working together to adapt German technology and the German art of engineering to the American market. In a few months, we will open a calibration facility traceable to the American NIST standard. Our office space might seem a bit oversized for now but it allows us to expand as planned.

What else is FLEXIM doing in the American marketplace?

On the Sales side of things, our next step is to hire additional Regional Sales Managers for the Great Lakes and Western regions. We are also looking at a presence in Canada given

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High temperature flow measurement

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PIOX refractometer for purity control

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Poster
Map of the world

the size of the gas and petro-chemical projects going on there and FLEXIM's fit into that particular industry. R&D is looking forward to finishing the FM and CSA certification process for our ultrasonic flowmeters. There are other projects, but I can not reveal them right now.

There are other important markets besides North America. Can we expect FLEXIM to go there too?

Stefan Kranz: Certainly. The world is a big place. FLEXIM subsidiaries are already semi-present in two other important locations. But again, much of this is still in the planning stage and remains confidential for now

Long gone are the times when non-invasive ultrasonic flow measurement was a true insider's tip. Today, clamp-on measuring technology has a significant share of the market – and it is predicted to have the highest growth rates. Your competitors are not sitting by idly either. How does FLEXIM plan to stand its ground or compete in this market?

We must stick to our company philosophy. Our goal is to develop and distribute first rate products on a large scale and to always keep our essential measurement technology one step ahead of our competitors. You're not going to find any other manufacturer of clamp-on ultrasonic flow meters in the world market that offers the same wide range of applications. We offer a solution for every measuring task: from 6 mm to 6 500 mm (0.2 in to 256 in), from -190°C to 400°C (-310°F to 752°F), for very precise measurements or very short reaction times. Because of our years of experience in the field of ultrasonic flow measurement, we are now among the leaders in non-invasive gas measurement. Process analysis is another exciting field which we are developing at a rapid pace – utilizing both sound- and light measurement. Our developers have lots of reserves to tap into.

That sounds very promising. Thanks for talking to us.

Fast and easy diagnosis for hot processes

Tallant Industries Inc. manufactures in Fredericksburg, VA corrugated asphalt roofing panels. The latter consists of paper impregnated with bitumen for water resistance.

Bitumen is always quite a challenge to process. It is viscous, abrasive, highly flammable, and must be maintained at constant high temperatures. During the process at Tallant Industries, bitumen must be moved from a heated vessel to a smelter where it is heated to 375°F shortly before it is used for impregnation. Vessels and smelter are heated by 2 inches pipes flowing heat transfer oil at 540°F. The oil flow rate is critical for maintaining the bitumen at the correct process temperature.

Tallant turned to FLEXIM to solve a burning problem causing delays in the production. Using FLEXIM's WaveInjector® to measure the flow in the heat transfer oil circuit, Tallant could establish that the problem was not located in the HTO circuit as supposed first. It was rather caused by a build-up of coke from the bitumen on the heat transfer coils.

Non-intrusive flow measurement was the ideal diagnosis solution here. Actually the only reasonable solution. Who wants to interrupt the process and cut into a pipe for diagnosis work?



Installing the WavelInjector® at Tallant Industries

Nobody, especially not in the case of a flammable medium at a high temperature.

"The basic problem in measuring the flow of gases or liquids at high temperatures is survival of the transducers that generate and detect the ultrasonic signals", says John O'Brien, Business Development and Operations Manager at FLEXIM Instruments LLC.

FLEXIM's patented Wave-Injector® makes non-intrusive ultrasonic flow measurement at high temperatures possible. This special mounting fixture permits standard temperature rated transducers to be used at temperatures as high as 750°F without degradation of reliability or performance. The transducers send the ultrasonic signal into the pipe via optimized coupling fins. The heat radiating area of these fins is several hundred times greater than their heat inducting

surfaces. This leads to a significant temperature gradient between the pipe wall and the transducers coupling surface.

With the WaveInjector®, even when the temperature of the surface of the pipe is very high, the temperature of the transducers will be less than the specified maximum temperature of the standard flow transducers. High temperature measurement can thus be realized with standard general purpose flow transducers. The FLUXUS ADM system has got even more flexible, non-invasive ultrasonic flow measurement is now available at temperatures ranging from 32°F to 750°F.



The WavelInjector® on the HTO pipe



The PIOX® R300 refractometer sensor

PIOX® R refractometer helps purity control

The Donaldsonville Nitrogen Complex in Louisiana is the largest and most modern nitrogen production facility in the United States. The complex covers over 200 acres. Highly skilled employees keep the plant running 24 hours a day to produce three major nitrogen fertilizers – ammonia, urea and nitrogen solutions – in world-scale quantities. One of the principal products in the nitrogen fertilizer business is urea ammonium nitrate solution, or UAN. The UAN concentration needs to be maintained at precisely 32% in order for the end product to have the right properties.

To obtain this concentration measurement, a conventional in-line critical angle refractometer had been employed for some time. These readings were backed up by periodic product sample tests conducted in the plant's laboratory. One of the problems Quality Control had to deal with was the refractometer's drift.

Refractometers use speed of light comparisons to determine density and concentration. Direct light speed measurements are virtually impossible because of the small distances involved. Instead the light bending power of different substances is being compared as a measure for relative density. This measurement is expressed as a substance's Refractive Index (or RI).

Conventional so called "critical angle" refractometers measure the RI by sensing the transition (= the critical angle) from refracted to reflected



light on a prism. Each medium has its own characteristic critical angle. The inherent problem with this method is that prism coatings will cause the critical angle to change, thus leading to erroneous measurements. This is what happened in this case: UAN tends to deposit a film on the refractometer's prism so rapidly that it had to be cleaned daily. Various self-cleaning methods had been tried without success.

The plant's Instrument Superintendent became interested in FLEXIM's PIOX® R transit light refractometer after hearing that it employs a different approach. Instead of being reflected or

refracted on a prism surface the light beam is refracted only after having traveled through the entire liquid sample. Coating of the prism can be tolerated and drift and maintenance issues are avoided. Furthermore the accuracy compared to the critical angle method is improved by a factor 10.

After a test lasting several months, the plant gave FLEXIM its stamp of approval for the instrument – saving maintenance costs and helping to avoid reject batches.