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**Interview with Silvester Tribus, CEO of  
TBM Automation AG; Urs Tobler, Head of  
Peening Controls, TBM Automation AG**

## Innovative Controls And Sensors For Shot Peening And Blasting Applications

**TBM** AUTOMATION AG  
*peening controls*

TBM Automation AG  
Bahnhofstrasse 48  
9443 Widnau, Switzerland  
E-mail: mail@tbn.ch  
www.tbn.ch  
Tel. +41.71.727 00 30  
Fax +41.71.727 00 39

## Innovative Controls And Sensors For Shot Peening And Blasting Applications

**MFN spoke to Mr. Silvester Tribus, CEO and Mr. Urs Tobler, Head of Peening Controls, of TBM Automation AG. Today TBM is one of the world's leading manufacturers of controls, sensors and flow meters for the aerospace and automotive industries. Premium products are offered that are used for shot peening as well as dry and wet blasting purposes. Recently, TBM entered a cooperative agreement with Roxor Strahitechnik.**

**(?) MFN:** With over 20 years of robust presence in the global market for shot blasting and shot peening applications, how have you experienced this journey?

**(!) S. T.:** TBM's journey began in 1991 as the supplier of controls for Baiker machines. Walter Terpetschnig, our co-founder, brought the expertise of shot peening controls into the company. The first machines equipped were CNC shot peening machines for Swissair. Only one year later, in 1992, the first process-visualisation system for a Baiker CNC shot peening machine had been developed for MTU Munich - the first of its kind marketed. Since then CNC, PLC and Robot controls for about 150 machines worldwide have been delivered. The scope has been wet and dry blasting

and peening, precision inside-peening systems and peen-forming machines.

**(?) MFN:** Let's talk about you personally. What have your personal career goals with TBM been?

**(!) U. T.:** I have been in control engineering for more than 30 years now, having joined TBM in 1996. At that time I started as a project manager for software development focusing on CNC controls and visualization systems for the aerospace industry. Since 2005, I have been working in management and have been promoted to the Head of Peening Control business.

**(!) S. T.:** After completing my studies in automation I worked for several years at Daimler Benz as a mechanical



**CNC control-cabinet of wet blasting machine**

designer. Then, I joined TBM in 1992 as a project manager for electrical design and software developments, in charge of aerospace projects for several years thereafter. In 1998 I was promoted to TBM's management team, and for nearly 5 years my focus has been in sales and administration. Currently, management consists of Mr. Hubert Mathis, Head of Ceramic Industry controls, Mr. Urs Tobler, and me.

**(?) MFN:** You said you have equipped 150 machines with your controls. Which companies use your controls in manufacturing equipment?

**(!) S. T.:** There are many of them. In the aerospace industry Airbus, Lufthansa, MTU, Rolls Royce, Liebherr Aerospace, GE, KSA, Bombardier and many others use TBM's controls. In the automotive industry Mercedes, VW, Opel, as well as others, use our controls. Our products are used from Switzerland to New Zealand.

**(?) MFN:** You have said that your process visualisation systems represent a core business of TBM. How does this look today and what are the requirements to stay in this business?

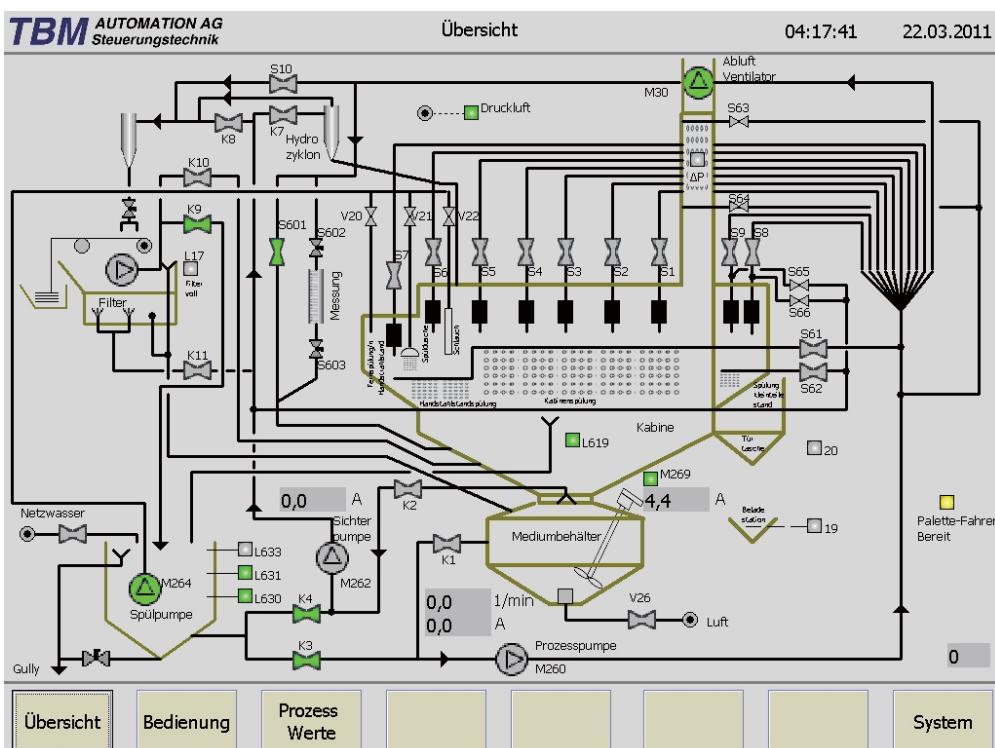
**(!) U. T.:** In general, our visualisation software meets the SAE AMS 2432C requirements for process monitoring, supervision of axis movements, alarming, reporting and storage. As



**Silvester Tribus, CEO of TBM Automation AG, with new generation flow metering**



**Urs Tobler, Head of Peening Controls, TBM Automation AG, with non-ferrous sensor**



Process visualisation of a wet blasting machine

well as maintenance tools, nozzle administration and other functions are implemented into the system. But each customer has personal requirements, like administration of CNC and robot programs, network archiving and automatic backup solutions. Our software system enables the visualisation to be customized within a reasonably short time. In addition, any dependence on a single brand of CNC or PLC control just isn't present, as TBM can connect its software system with any common brand available on the market. Additionally, for remote support our customers can choose between different types of teleservice, depending on what fits their IT-environment.

(?) **MFN:** In 2011 you acquired the flow sensor business from Anvil Developments. How has the purchase affected TBM's range of products?

(!) **S. T.:** Our target was to complete our scope with sensors and measuring techniques. Mr. Rudolf Bosshard, the owner of Anvil Development, has designed leading sensors for a wide range of ferrous and non-ferrous applications. So these products have filled TBM's product gap perfectly. Since summer

2012, we have been producing them at TBM and are readily able to supply them from our stock.

(?) **MFN:** You have a well-known reputation for your service level. How has this been achieved?

(!) **U. T.:** Customer satisfaction is of primary concern for TBM. I think one of the key factors is that our engineers understand not only the technical tasks, but our customers' needs just as competently. Furthermore, we know exactly what "machine downtime" means for customers. As well as support, we offer retrofits and upgrades for older machines. Renewing customer's existing equipment can extend the lifetime of their valuable machines without

risk of downtimes due to missing outdated spare parts. A good example is Lufthansa Technik AG in Hamburg, where we replaced the complete controls and drives of several machines of different brands. Additionally, we attach importance to co-engineering with our customers' engineers at an early stage of development. Thus, we can ensure that our products meet customers' expectations.

(?) **MFN:** Let's talk in particular about the technology itself. Mr. Tobler, you are responsible for engineering and R&D, so what have been the latest developments in this area?

(!) **U. T.:** Our latest development has been a new maintenance-free, non-wearing ferrous flow metering system. We can measure within a bandwidth of more than 1:20, e.g. 0.5 to 12 kg/min with a tolerance of less than +/- 1% of the set point – even at the lowest media flow. We do not just meet SAE AMS 2430 and 2432 requirements; most parameter are ten times better than the specified SAE tolerances. So this has been a perfect completion to our Anvil sensors for high-precision ferrous applications. The development was a real challenge; hence, we are very proud of this product.

(?) **MFN:** You are talking about premium quality equipment, but how competitive is it on the market?

(!) **S. T.:** For TBM high quality and cost effectiveness belong together. With an intelligent design, you can create cost-optimized, attractive functional solutions. Of course, quality has its price when purchasing state-of-the-art technology. But the total cost of ownership is the sum of various factors; such

**I think one of the key factors is that our engineers understand not only the technical tasks, but our customers' needs just as competently.**

**Urs Tobler, Head of Peening Controls,  
TBM Automation AG**

## SR Technics

We are one of the world's leading providers of technical solutions to airlines. Through our integrated service solutions we make sure our customer airlines have airworthy aircraft ready and available to fly. To and from any destination. Around the clock, around the globe.

To support our Team in the Engine Department, we are looking for a:

### CNC/NC - SHOT PEENING OPERATOR (m/f, Ref. OERBM)

#### You will be responsible for:

- rays of engine-and 3rd parts (according to regulations)
- preparing the blasting process: Cover and prepare the machine
- monitor the blasting process (Almen- test, machine monitoring)
- follow the blasting process
- time and attendance on the working papers
- safety Management System (SMS) live
- integrate CI (Lean Six Sigma tools such as 5S/FWD/VSM/7 wast etc.) in daily business
- support other teams, within the SC (if necessary)
- maintenance of machinery
- creating of beam programs (if needed)

#### Your profile:

- Completed apprenticeship with a technical background
- Technical knowledge and understanding
- Willingness to change
- Logic thinking skills
- Willingness to 2-shift operation
- readiness for new, additional training
- PC skills (Word, Excel, SAP)
- very good NC and CNC knowledge
- fluently in German and English

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Direct applications are preferred.

as machine process-quality, machine performance and uptime, long-term spare part supply, support, energy consumption and other criteria. If we count the advantages and costs during the product's lifecycle, you will see it is worthwhile. Also, we have a clear focus on "tailor-made" solutions, not mass production, so individual customer's needs are met satisfactorily. Furthermore, we are not dependent on a short-term payback of our developments. This has been a long-term business for us, of more than 20 years, and will continue to be one.

**(?) MFN:** We have read recently that you have found a new partner in Roxor Strahltechnik and together are presently providing complete peening and blasting equipment. How did this partnership arise?

**(?) S. T.:** This partnership is not really new. For more than 20 years, our ceramic-industry controls business unit has been working with Freymatic Group, which is the owner of Roxor Strahltechnik. As we have started to widen our peening and blasting scope, we have likewise extended our long-term partnership. The company has been well-known and respected for its Swiss high-quality machinery and service level worldwide since 1923. As an experienced machine manufacturer of complete automated production lines, they have the infrastructure such as the assembly hall and machine outfit that are required. Furthermore, they have the logistics for worldwide support and spare part supply. Our business requirements have been met by this partnership.

**(?) MFN:** What current activities are you working on together? Could you give us some details about the synergies?

**(?) U. T.:** TBM and Roxor have a powerful engineering and design team with decades of experience connected to short decision-making processes. In less than one year, Roxor developed a new dosing system that had set standards. Together with TBM's ferrous flow meter, we are able to control media dosing of all ferrous media with a tolerance of less than +/-3% of set point. Even higher



**R&D peening system developed by Roxor and TBM**

requirements can be realized when requested by customers. Therefore, we have been able to reach a maximum repeatability of the peening process, which has led to an improvement of machine performance. First systems have already been placed in the field.

**(?) MFN:** What are you planning for the future? What are the perspectives in your view?

**(?) S. T.:** TBM's focus is not on a component business - we concentrate on a system business. For example, we do not plan to sell our ferrous flow meter as a single part. We only want to provide it as an integral part of a system consisting of dosing, measuring and control. Together with Roxor, we have established a complete peening system for R&D, customized testing and presentation. With this equipment, we can also pre-calibrate our media flow controls for our customers' media. So today, Roxor can provide fully completed top-quality peening machinery equipped with TBM's controls and sensors. We are ready for takeoff!

*We at MFN would like to thank Mr. Urs Tobler and Mr. Silvester Tribus for this interview.*

#### For Information:

TBM Automation AG  
Bahnhofstrasse 48  
9443 Widnau, Switzerland  
Tel. +41.71.727 00 30  
Fax +41.71.727 00 39  
E-Mail: mail@tbm.ch  
www.tbm.ch