



**Flexibility, Opportunities, Innovations**

## EDITORIAL

Dear Friends of BIW,

Summer time, vacation time – and almost everything gone again. It must be stated positively that the market for our silicone seals, extrudates, and hoses has not had a summer break, nor has the automotive sector for our cable protection systems, and BIW has been able to secure constant, high capacity utilisation. Fortunately, the dark clouds of economic weakness have not reached BIW yet and the high performance materials of silicone and fibre glass are still a long way from conquering all applications, for which they actually have to be the most suitable material in view of the requirements.

This can be seen, in particular, in the international railway applications as well, for which BIW has developed more new components and therefore has successfully certified new railway standards. New silicone foam qualities with low densities of 0.25 to 0.35, also for contact with foodstuffs and fine-pored, closed-cell structures have been developed.

It remains exciting - have fun with our new edition of BIW COMPACT and with our latest news and development trends.

Ralf Stoffels

Dr. Markus Wiethoff

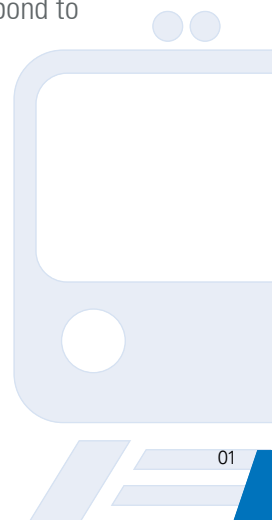


## HOW DOES A TRAIN DOOR ACTUALLY WORK?

Of course, BIW is involved with silicone processing for railways as well, with door seals that from August 2013 have to correspond to DIN EN 45545-2.

To this end, we have always thought of developing seals as a quite simple application: **door OPEN and door CLOSED.**

But there is much more behind every train door. It is the product of a complicated interaction between mechanics and electronics. Because train doors have to work precisely. They not only allow the boarding and disembarking of trains, they also seal the inside of the train against noise and weather. Taking a new generation of doors as an example, we have presented the basic functions in a simplified form:




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**Door weight:** Just the doors alone weigh 92 kilos, including the mechanics, the total door system weighs 240 kilos.

Each door is **2.52 metres** high and 1.12 metres wide. The door is made from an aluminium frame, two panels (inside and outside, each one 1.5 mm thick) and a 40-mm plastic filling. This ensures a thermal and acoustic seal. In addition, a sliding pack with LED display and a silicone profile seal are made by BIW.

Each door has **4 locks**. It has a gear motor, an upper and lower lock and two additional locks, which are activated all together via the door controls. There is an emergency system for opening the door manually, for example if there is a power blackout.

**Function:** The electronic door control sends a signal to open the door to the gear motor. It turns the locking shaft, releasing the upper and lower locks and the two additional locks. At the same time, the door is moved – the actual opening starts.

The door drive opens the door in two steps: first of all it turns a hinge outwards and then it moves it along a rail parallel to the train to its end position. Closing is exactly the same as opening, but in reverse.

All door controls are connected to a central computer in the train. If the driver has released all the doors, travellers can open or close them from inside or outside by pressing a button.

**Safety:** If something is between the door and frame during closing, two contact strips enclosed in the silicone profile touch each other. They trigger an electrical pulse – the door opens again automatically and moves to the end position so that the passenger or their luggage is not trapped.

— MICHAEL HAAS

## CONTACT PARTNERS

If you have any questions, please feel free to contact us directly at InnoTrans in Berlin between 23 and 26 September, Hall 8.1, Stand No. 323.



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## SILICONE FOAM FOR EVERY OCCASION

The variety of BIW silicone foams is as big as the variety of applications. Whether cold or hot, dynamically or statically stressed, whether chemical prevailing conditions or in contact with foodstuffs, whether thermal insulation or rattle prevention, whether fine-pored and closed-cells or simply for weight reduction, whether low-smoke/low-tox qualified or as a simple seal, BIW has an answer for every question.

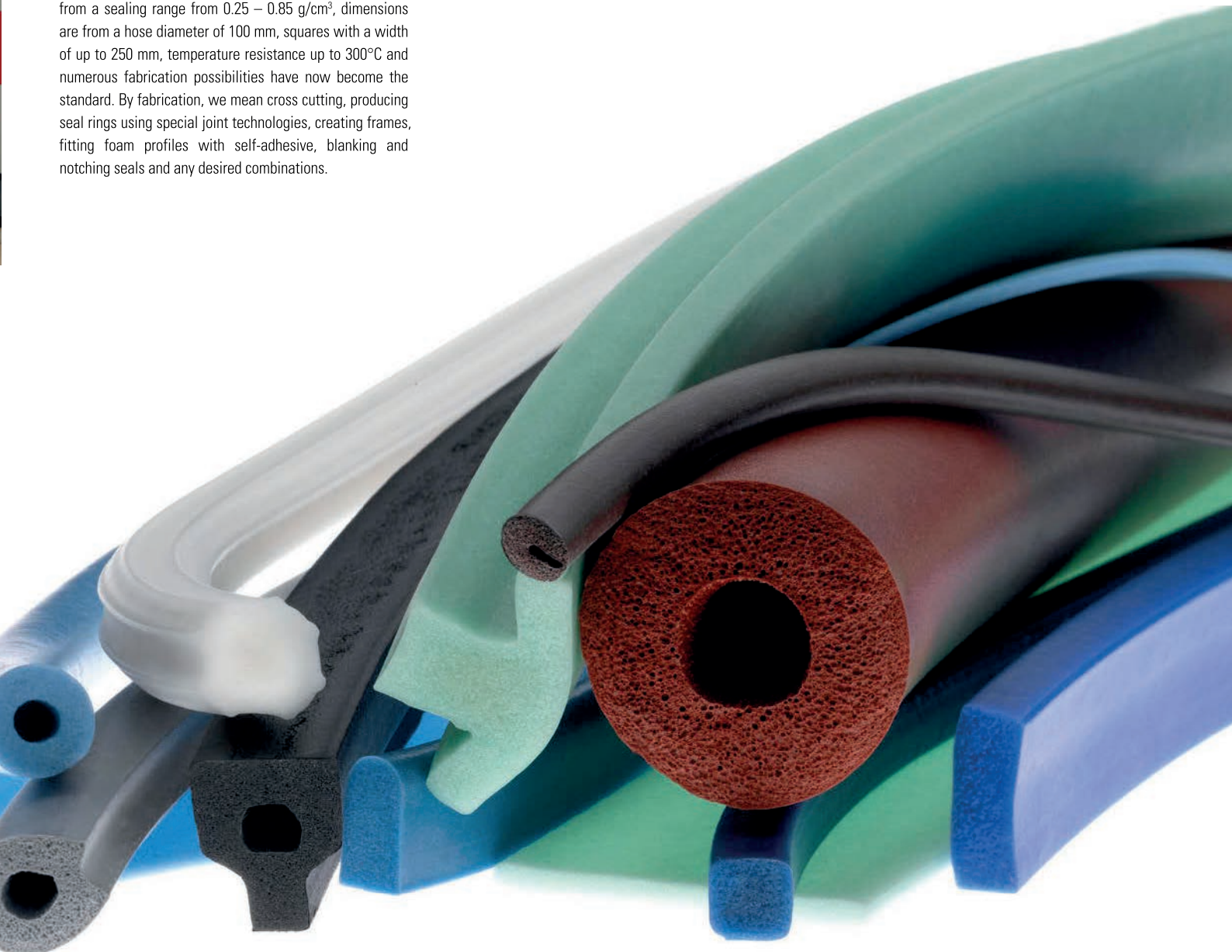
The product range of BIW foams is constantly developing. Our application engineers are constantly generating new variants with our customers and the entire technical support in production and our technology centre. Apart from a sealing range from 0.25 – 0.85 g/cm<sup>3</sup>, dimensions are from a hose diameter of 100 mm, squares with a width of up to 250 mm, temperature resistance up to 300°C and numerous fabrication possibilities have now become the standard. By fabrication, we mean cross cutting, producing seal rings using special joint technologies, creating frames, fitting foam profiles with self-adhesive, blanking and notching seals and any desired combinations.

Because of the constantly growing market requirements, more and more foam qualities are being created. Apart from the range of foam thicknesses, the non-flammable, or at least flame retardant variants for aviation and railway technology are worth mentioning. The corresponding material approvals and certificates at international standards, in particular with regard to low-smoke/low-tox specifications, exist for several BIW foams. Silicone foams for contact with foodstuffs, including accompanying validations, are also available. Please ask for the desired documents from your customer advisor.

If edge protection with metal inlay as co-extrudate and silicone foam is technically realised and qualified, and the external testing body confirms the customer specifications for the material in respect of temperature resistance and fire behaviour (smoke density and toxicity), we have successfully fulfilled another particular challenge faced by BIW silicone foams.

Tell us your challenges, we are looking forward to them.

— DR. MARKUS WIETHOFF



## BIW AT THE MEDTEC 2014 IN STUTTGART

With great success once again, BIW presented its portfolio specifically for the health industry from 3 to 5 July 2014 at the Medtec in Stuttgart. Customers, who repeatedly like to claim the support of our competent team of developers, took the opportunity to discuss existing projects locally. But our support was also requested for new projects. As a result there are exciting new projects coming up.

**Challenge us! Our team of developers is looking forward to your task.**



## MEDTEC Europe



## BIW AT THE CWIEME 2014 IN BERLIN

We can look back once more on our successful participation in the Coil Winding in Berlin Exhibition - CWIEME for short - in 2014. Our portfolio of different insulation materials was once again in great demand from the large number of existing and potential customers who visited our booth.

**We would like to thank everyone who visited us and made the exhibitions so successful.**

## APPRENTICES GRADUATED

After successful training in process engineering and rubber technology, we welcome our new professionals Hasan Cirak and Tim Brunheim to our team and hope they enjoy their jobs. Mr Cirak is employed in the fibre glass department and Mr Brunheim in the silicone extrusion department.

**We welcome our new apprentices  
and wish them all the best. We also  
congratulate our past apprentices on the  
successful end of their training.**

## BIW WELCOMES EIGHT NEW APPRENTICES



From left to right: Thomas Perian, Daniela Lombardi, Mathias Perl, Pascal Leinweber, Jean Luca Lange-Klaus, Tim Brunheim, Hasan Cirak, Sarah Grimm, Nils Berghöfer, Justus Wiethoff, Michal Koszyk

On August 1, 2014, eight new apprentices started their paths towards a new career - four apprentice process engineers in plastic and rubber technology, three apprentices in mechatronics under the leadership of the apprentice manager Thomas Perian, and

one industrial business apprentice under the leadership of apprentice manager Daniela Lombardi.



## GOODBYE TO LOTHAR CRAMER VON CLAUSBRUCH

BIW said goodbye to its colleague Lothar Cramer von Clausbruch, who retired aged 65 after almost 20 years working for us. We thank him for his dedication and wish him all the best, especially good health for his well-earned retirement.

## IMPRINT

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