

OTTO

International edition

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The magazine of OTTO-CHEMIE for trade, commerce and industry

4<sup>th</sup>

**BETWEEN FREEDOM AND RESPONSIBILITY.**

Family-owned businesses in a discussion on values.

**BEYOND ALL-PURPOSE ADHESIVES.**

Special adhesives for any application.

**IN THE LAND OF POETS AND LAMPS.**

Where OTTO is needed to make the world a brighter place.

This 4<sup>th</sup> international edition of OTTOprofil presents a choice of articles from the German OTTOprofil editions 10–14.  
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#### LEGAL NOTES

**Publisher:** Hermann Otto GmbH, 83413 Fridolfing, GERMANY, Tel.: 0049-8684-908-0, info@otto-chemie.de, www.otto-chemie.com

**Editorial team:** Dr. Volker Weidmann, Gisela Bechmann, Günther Weinbacher, Frank Bechmann, Sebastian Turner

**Conception, editorial, design:** WMW Werbeagentur, Alhring **Translations:** Wieners & Wieners, Ahrensburg, GERMANY

**Images:** depositphotos®, Mauritius Images, Fotolia, Pixelio, Institut of Anatomy and Cell Biology, Marburg, Courttech, Teambuctou, Anko Granites Pvt. Ltd.,

Palace Hotel Meran, Melbourne Museum, FH Joanneum, BSH Bosch und Siemens Hausgeräte GmbH, COO

**Printing:** F&W Medientcenter, Kienberg, GERMANY **Item number:** 9999880

# In Between.



**H**ave you ever noticed how important the little details that you find between the major cover stories can be? In this issue of OTTOprofil, we are making them our guiding principle, at both a philosophical and a physical level. Whether as sealants and adhesives between various materials, human relationships, design between form and function, or the way that enterprises act between freedom and responsibility. In between (!) you will find, as always, interesting reports and sidelong glances at innovations at OTTO, its partners and customers. Your OTTOprofil editorial team wishes you an exciting read.

FAMILY-OWNED BUSINESSES IN A DISCUSSION ON VALUES.

Between **freedom**  
and responsibility.



**M**ore than 1,000 German businesses are global market leaders. This is what Manager Magazin reported at the end of 2010. But only a few of them are really well known to the general public. These are the typical, large-scale global players, who need a certain amount of PR work and advertising – on the hand because of their status as stock-exchange quoted, public limited companies, and for marketing reasons on the other.

But there are many medium-sized, family-owned business that have specialised in special niche markets, typically without much ado, and established themselves with a great deal of success. Interestingly, many of these business have proved to be extremely resilient to crisis. A coincidence? Or the result of a quite typical way of thinking, feeling, planning and above all – acting?

The OTTOprofil editorial team wanted to look into these questions in depth, and put questions to the most logical candidate. To the owner of OTTO-CHEMIE, Herbert Nath, who is now preparing the next generation of his family for the responsibilities of its task.



## *'Embrace what you have inherited from your forefathers in order to truly own it.'*

Johann Wolfgang von Goethe

I was warned about this. Herbert Nath didn't actually want to talk to me about this topic. Is this a matter of principle, of not wanting to express his opinion publically? He sums things up right at the outset; the topic of the 'family business' is too much of a cliché for him, and too often used for political reasons. And above all, the ways of thinking and acting regarded as typical of a family business are simply a matter of fact to his mind.

In front of me sits a man who just shakes his head when he thinks about the people who control the way businesses act worldwide and in Germany. Despite this, he seems not to despair about the general stupidity and cheek that brought about the latest economic crisis, and is likely to have further consequences.



*'I have only borrowed the business from my children.'*

### **The man behind OTTO management.**

Herbert Nath, the grey eminence – no, this isn't really the right way to put it – let's say, the Grand Seigneur of OTTO instead. A lean sportsman, who looks to be in his late 60s, with lively blue eyes, a gift for shrewd analysis and the ability to sum up situations with just a couple of words. Little wonder. Nath is a lawyer. With heart and soul. And this explains why he makes a plea right at the start of our conversation for the lawyer as a freelancer who is governed by the law, but does not need to subject himself to any other person apart from this.

It is this interpretation of freedom that decisively characterised his understanding of entrepreneurship and, at the end of the day, is the path that OTTO has taken. Freedom is one side of the coin for him and responsibility is the other. The restrictions imposed on medium-sized business owners by a variety of political and financial measures are something that hurt him even more due to this. More and more regulations whose sense is difficult to comprehend, time-consuming obligations, taxes and duties – in short, the gradual migration of entrepreneurial responsibility, and thus also of entrepreneurial freedom, to the state. At the same time, he sees that the consequences of irresponsible activity by enterprise management – see the banking crisis – are just as shamelessly passed on to the general public. The consequences: separating responsibility and freedom.

## The dilemma facing PLC managers.

But why are there such obvious differences between classical medium-sized family businesses on the one hand, and stock-exchange listed PLCs on the other hand? This may be a consequence of the systematic separation of capital and management in PLCs, which reveal the different interests of the two groups. The shareholders demand maximum, and preferably short-term, profit, the managers are under huge pressure to succeed which is aggravated by the daily share prices on the stock exchange. In other words, they can scarcely take the freedom to plan and act in the long term. This relationship between the managers and the shareholders additionally causes a very single-sided feeling on appointed managers that they are only responsible to the cash providers. In turn, the shareholders reject any responsibility for failings in management. A vicious circle in which, at the end of the day, society, the state, the staff, the customers or the environment can suffer. The banking crisis is just one sad example out of many.



## Entrepreneurial ethics based on a Native American proverb.

How do you manage a family business successfully, while at the same time keeping your freedom as an entrepreneur? For Herbert Nath this is initially a question of your inner approach. 'I have only borrowed the business from my children', is how he words this, recalling an old Native American proverb. This sentence does not just relate to responsibility to one's heirs, but also firmly shifts the focus to the business and defines sustainable management. 'It is always a question of what is good or bad for the business in the long term. And never about following short-term, personal interests.' And if the 'OTTO loan' is kept in good condition in line with this, everyone benefits: customers, staff, owners. Adding more detail, Nath says that the equity ratio of the business can never be high enough – and OTTO does not create any debts. Instead, OTTO pays more tax. A practice that earns him disbelief from friends, but that is very much appreciated, not least by the local community in Fridolfing, where OTTO's head offices are located.



## ... et respice finem!

OTTO's owner virtually never gets involved with daily business. But he does like to help with advice and is always involved in important strategic decisions. What helps him here, is what at first appears to be a banal Latin sentence 'Quidquid agis prudenter agas et respice finem.' (Whatever you do, act intelligently and think about the end result.) A sentence that – especially when considered in retrospect – has a very important message. What PLC managers, who are not appointed to lifetime positions, in particular fail to do is to consider the long-term consequences in the various fields. It is this long-term view which, at an early stage, prompted OTTO to purchase the site on which today's forwarding warehouse is now located. Of course, this investment was not covered by a loan, but paid for in cash. Another example is OTTO's specialising in niche products that involve a good amount of consultancy. Where large-scale suppliers cannot, or do not want to, keep pace, OTTO wins extremely lucrative and loyal customers. A culture of listening plays a major role here. A culture that Herbert Nath will now also pass on to his children. Like their father, Matthias Nath and Claudia Heinemann-Nath both spend one day in the week on a tour of what has now become a large company. They listen to suggestions, develop their own ideas, discuss their views, and thus gain an insight both into professional questions and the private concerns and needs of the staff. This increases their sensitivity to what people commonly refer to as responsibility. And this is now being passed on to the next generation. ■

**Sick Buildings.** This is what they are commonly called: buildings that violate a normal sense of aesthetics. Oil was cheap when they were planned and built; the concept of the 'second rent' for operating and heating costs had still not been coined, and environmental protection and climatic change were words in a foreign language. As of 1970, reports under the heading of 'Sick Building Syndrome' about health problems and allergies affecting office workers, attributed in part to harmful vapours from building materials, started to accumulate in the USA. In many cases, tearing down the building was (and still is) the only meaningful way out of the dilemma. But even here, dangers lurk, for example, asbestos or other hazardous materials which can only be disposed of at expensive hazardous waste landfills.

# In the **name** of future generation

HOW TO FUTURE-PROOF BUILDINGS.

*Approved sealants and adhesives by OTTO were used in the building of the TNT office building in Hoofddorp, the Netherlands; they made a major contribution towards achieving LEED.*







# erations.



## Responsibility towards society, the environment and the economy.

Real estate developers, architects and authorities have learnt from the errors of the past, and now take their responsibility towards investors, the environment and society seriously. Without a green building certificate, it is virtually impossible to lease or sell a new building to a company or investor today. 'Green Building' means a building that takes a very responsible approach to the use of resources such as energy, water and materials, while at the same time reducing the impact on health and the environment to a minimum. These requirements apply to all stages of the building's life cycle. From deciding on the location, planning and building, through to operation, maintenance and demolition. But enhancements of buildings with a green building certificate are by no means just restricted to improving images. There are tangible, measurable benefits that support the current status of certification: an increase in productivity and reduced power and water consumption help to considerably reduce operating costs. The improved interior air quality has a positive effect on health, the subjective well-being and thus the performance of staff.

## Global leader: LEED®certificate.

In particular, the LEED®certificate is regarded on the real estate market today as an important indicator for the future-orientation and stable value of a property. A number of standards for environmentally and resource-friendly, and healthy buildings were defined for LEED® (Leadership in Energy and Environmental Design), which was developed by the US Green Building Council and has asserted itself with more than 5,000 certified buildings worldwide. It includes six different categories such as 'water efficiency', 'energy and atmosphere' and also 'comfort and interior climate'. The evaluation system is based on the four levels of Platinum, Gold, Silver and Certificate. A system of points is used to actually rate the building. The more points you earn in the individual categories, the higher the overall evaluation is.

## New opportunities with certified products by OTTO.

LEED®certification and the value this adds do not just help to improve a property's marketability. Specialist planning offices or building companies can also benefit from this trend, which has now been adopted up by the entire building industry. Sealants and adhesives used in the buildings can also contribute a share towards achieving as high a LEED® certification as possible. OTTO has thus had 19 sealants and adhesives tested in line with current requirements. All approved OTTO sealants and adhesives fulfil the required VOC limits for volatile organic materials and come with a test certificate to demonstrate their LEED®compliance. LEED® certified products by OTTO are perfectly suited for attracting new customers, or for drawing existing customers' attention to the new feature. In particular, companies involved in jointing can take this opportunity to qualify themselves and their operations and enhance their profiles in public tenders issued by planning offices.



# OTTO NEWS

The meeting place for holocaust survivors in Haifa.

## A SMALL CONTRIBUTION TOWARDS HUMANITY.

**Nobody is left unmoved by the holocaust, as a crime on an incomprehensible scale and what is probably the greatest human tragedy of all time. But gestures of remembrance by politicians are not enough to do justice to inter-human responsibility towards the few still surviving and heavily traumatised victims. There are only some 250,000 survivors today in Israel. Most of them are between 80 and 90 years of age and very often struggle to survive on a meagre pension.**

The Christian society 'Sächsische Israelfreunde' (Saxon Friends of Israel) thus swapped deeds for words and travelled to Haifa with 26 volunteer tradesmen to build a meeting centre, which was established next to a home for holocaust survivors. Working together with alike-thinking Israelis and meeting senior citizens on site, soon helped the people involved to break the ice and forget their prejudices.

Comments such as 'I thank you for giving us the feeling that the descendants of our enemies are now our friends,' or 'It is fantastic to be able to do something so important here', are just fractional evidence of the deeply human commitment on one side and the heart-felt gratitude

on the other. Listening to Shimon Segev, the Israeli coordinator of the project, you can hear his enthusiasm for the commitment when he says: 'They asked me what I need, and I told them: bring me tradesmen – electricians, decorators, joiners, bricklayers.

After two weeks, the three teams that worked here for six weeks, were complete.' And the small contribution by OTTO towards this outstanding project was quickly in place: A donation of some 200 cartridges of silicon were picked up directly from the OTTO representative, Orantech Gator, in Caesarea (Israel) and used in the new meeting place.



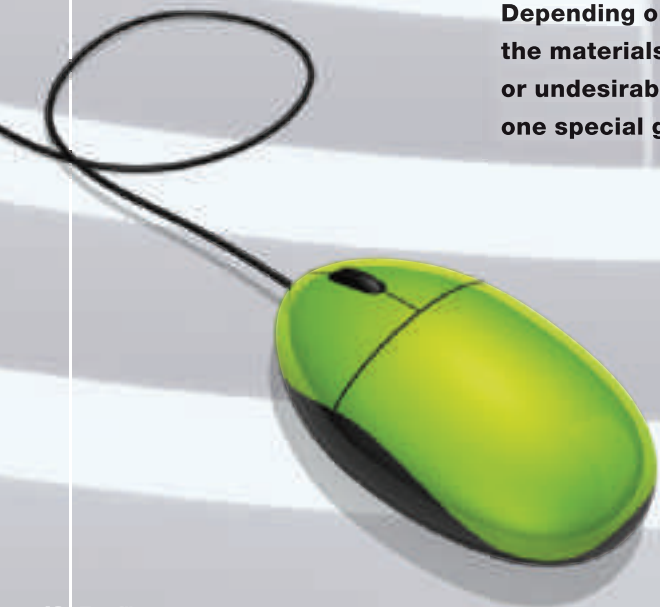


From

**uncertainty** THE NEW ADHESIVE COMPASS

to **choice.**

**I**f you do not use them every day, the world of special adhesives is a jungle, in which you desperately need a compass or a scout. Depending on the application in hand, the environmental influences, the materials that need to be joined, the curing times, or the desired or undesirable adhesive behaviour, the choices are often limited to one special group of adhesives.





But how can you find exactly the right adhesive without taking a huge amount of time, and without needing extensive professional knowledge? This is a question that we thought about intensively at OTTO and one that we incorporated into existing solutions. The printed catalogue offers the entire range of OTTO adhesives, but it does not guide the tradesman, and is intended more as a basis for placing orders and as a rough overview. A DVD would be a meaningful solution. But OTTO is continually releasing new products. DVDs would soon be out of date. This is why OTTO decided on an internet-based solution that systematically guides the tradesman step by step to the right adhesive.

### **Searching by application or product category.**

The search wizard is available on the OTTO website in the 'Product centre' section on the right-hand side of the screen. Initially, the choice is between searching by application or product categories. If you choose to search by application, you are then taken to an area with ten typical areas in which adhesives are used on a construction site. From tiles and sanitary ceramics, to industrial floorings. Additionally, visitors to the website can go to the 'Special applications' section (e.g., adhesivebonds in the foodstuffs industry) to see matching production suggestions or to the 'Primers & cleaners' section, and to 'Processing equipment & accessories' to find the right product. The individual application categories in the construction section are then broken down to different processing tasks. Finally, the tradesman sees one or multiple suggestions for OTTO products with specifications and data sheets available in the background. When searching via product categories, the customer is first prompted for the basic, desirable product properties (adhesion, sealing, foaming, etc.). In a second step, the customer is prompted for the desired sealant or adhesive base material (silicon, polyurethane, etc.) And finally, the visitor is again shown at least one OTTO product with the right basic information.

### **Complex conceptual solution for a simple search.**

The simple search in three steps is based on a concept that OTTO application engineers and programmers have wracked their brains with for some time. After all, they had to take both the various customer search techniques and the wide and in-depth product portfolio with overlapping applications into consideration. And finally, the whole thing had to be linked by the program to the OTTO product database and the technical data sheets on the back end.

Following months of discussion and programming work with many participants, this process led to a user-friendly tool that makes choice as simple as possible for the processor. And, all of this outside of normal business hours, as well. If you fail to find what you are looking for, you can always call OTTO application engineering for some friendly advice. ■



Web tip [WWW.OTTO-CHEMIE.COM](http://WWW.OTTO-CHEMIE.COM)

Home  
**cooking.**





CULTURAL FACTORS:  
KITCHENS IN CHANGE.

**W**hy do we even need our own kitchens today, as modern humans? People don't breakfast anymore, and they pick up coffee on the go. Lunch is delivered to the office by the pizza take-away, or people use the canteen. In the evening, they stop by the drive-in to pick up a hamburger, or visit their friendly, neighbourhood Italian restaurant. This lifestyle isn't much more expensive, but it removes the need to buy an expensive kitchen and kit it out with pans, cutlery and crockery. And you save a huge amount of electricity and time.

No way? Right!





*The kitchen in great-grandma's days: the stove was often the only heated place in the house.*

After all, the kitchen is more than just a place to grab and consume some food, to express the matter in less appealing terms. You could even call it an important part of our human identity. After all, nobody has ever seen an animal set itself apart by improving the taste of its food by cooking it on a stove, or even over an open fire. The kitchen was there before the home was invented. The campfire thus provided the initial spark for an exciting development in civilisation that has taken us today to state-of-the-art, high-tech kitchens cum living rooms.

The space around the hearth has always been one of the most important in the whole home. If for no other reason than that it was the only space you could heat, just 100 years ago in Germany's rural areas. Add to this the social function that kitchens fulfil right up to the present day, and which has imprinted itself on our

social memory. This is where we meet regularly, exchange gossip and treat our guests. This is where we have always cooked, eaten, laughed, argued, played, loved at times, or just simply lived. In former times, nearly always in the family circle, but today, increasingly all alone. With two breadwinners in the family, different working and school hours, an increasing number of singles, the shared meal as the glue that bonds together the family has become an end-of-the-line product that only exists in many households as a cliché or possibly at Sunday breakfast.

But now, things seem to be changing. Cooking shows from 'Rick Stein's Food Heroes' through to 'Ready-Steady-Cook' have taken TV channels by storm. Cooks like Nigella Lawson, or Jamie Oliver are celebrated as pop stars. And the simple fitted kitchen, which grew from the revolutionary Frankfurt Kitchen, has be-

come a lucullan temple, which often puts professional kitchens to shame. Because there is no longer such a thing as the 1950s housewife, and extractor hoods can contain what used to be considered unpleasant smells, the kitchen has again been promoted to the most important room in the home. You see men (!) enjoying (!! ) putting their technical skills to work with high-tech stoves and ovens. You can put away the model train set; the private gourmet event – mutual onion chopping included – is the place to be. Beside taste and quality of the ingredients, the latest generation of kitchen appliances are in demand. From side-by-side fridge/freezer combinations with integrated ice-cube makers and cold water dispensers, and different cooling zones, to fully-automated steamers, to touchscreen controls on induction cooking plates. The car now has some serious competition as a status symbol.





Today's kitchen: social room and communication centre.



Today's kitchen.



TV cooking attracts viewers.

The reasons for this change can be totally different, after all, the classical (large) family with its original style of living together is more of an exception today.

A return to the domestic stove may have something to do with the impact of the credit crunch and the uncertainty that it caused. What trend researchers refer to as 'cocooning', is a return to the cosy, safe nest with people that you really like. The 'family' is often put together selectively from friends, partners or even just good neighbours. Another factor in getting together at the kitchen table is the fact that the Facebook generation has many friends and can maintain these relationships at the click of a mouse: there is something missing in this case, the cosiness of the nest. And finally there is the general increase in body awareness ('you are what you eat') and innovative, technical op-

tions that make cooking to the highest standards an amazingly easy experience, with perfect results guaranteed.

Above all, computer technology and controls designed for human ergonomics have changed the face of cooking. From baking to washing up – perfectly designed programs exist for every activity, and they are also very easy to run. Even men are rumoured to be fascinated by the dishwasher as a high-tech toy. But the performance and efficiency behind the stainless steel fronts has also improved hugely. Steadily increasing electricity costs and growing environmental awareness challenge product developers to teach those who used to be energy hogs and mass water consumers both user-friendliness and frugality.

When it comes to longevity and functional safety, OTTO also makes a

small, but significant contribution. Sealants and adhesives from Fridolfing seal off the view windows in ovens, or the hotplates on ceramic hobs. Besides food safety, the OTTO product has to withstand high temperatures, compensate for different material expansion due to extreme temperature fluctuations, be safe in terms of food hygiene and support fast processing.



What is going on today's kitchen, and where is it headed? OTTOprofil talked to Gerhard Nüssler, chief designer at Siemens household appliances, and gained interesting insights into a market that could not be more human.

**OTTOprofil:** Mr. Nüssler, in general, what are the trends in designing kitchens and kitchen appliances?

**Nüssler:** Well, it's really quite exciting, because the design of kitchen always emanates from its focal point. And that is not the sink or the fridge, but the stove, or the combination of oven and hob. You can basically say that appliances have become technically more complex, but easier to use.

**OTTOprofil:** Could you give us a few examples?

**Nüssler:** Take the stove, for example. Formerly, coal- or wood-burning stoves had a single steel plate, on which you could move the pans back and forth as you needed. Depending on whether you wanted the content to boil, or just keep warm. That was a hot and sweaty task in the truest sense of the word. Then the large round hotplates arrived and we have now returned to a large flat surface without borders or defined cooking zones; only that the latest generation of intelligent induction technology is underneath it. In other words, the hob itself identifies the size of the pan, and accommodates the induction surface to match it. Only the pan's footprint is 'heated'. This is also a great thing from a safety point of view, as induction only heats up the metal in the pan. Controlling this is like using an iPad. You can set the power by swiping the smooth control panel with one finger; the controls are also located below the glass top.



*Siemens head of design, Gerhard Nüssler.*

**OTTOprofil:** What is happening on the refrigerator scene?

**Nüssler:** The trend here is towards appliances that fulfil a variety of tasks in the kitchen and also act like pieces of furniture with an attractive appearance. In other words, you have 0°C storage zones and Vitafresh zones for vegetables with a high moisture level on the inside. There are side-by-side appliances with chilled water dispensers, ice makers and, of course, a freezer zone. The refrigerator has capabilities and you are proud to show them off – it has become a genuine lifestyle product.

**OTTOprofil:** Has professionalisation in private cooking made its mark on the appliances too?

**Nüssler:** Yes, definitely. For example, the induction hob that I described earlier on. Professional chefs swear by induction because it keeps the kitchen from heating up and is far safer. And steam ovens also come from the professional area. Although the word 'steam' is a bit misleading. Because you can use the appliance to bake, cook, barbecue, heat up, thaw – and all of this in a food-friendly way. This keeps the meat or cake tender and juicy on the inside, and crisp on the outside. The taste can unfold to the full and vitamin content is kept far better than with a legacy oven.

**OTTOprofil:** Design doesn't just mean an elegant exterior but also ergonomic handling. What changes have there been in control convenience?

**Nüssler:** Computer technology allows us to program very precise cooking profiles, which then run fully automatically. This means that your oven knows exactly how long to steam your roast, and when to boost the temperature to give it a crispy crust. And all of this is driven by the weight and type of meat. This means that we do some of the work for the customer, but they still stay in control. If you like experimenting you can change the programs to give you that perfect feast and match your needs. Of course, it can take a couple of weeks in the test lab to define the various programs for the food in question. That can mean baking up to

1,000 trays of biscuits, until they are perfectly browned. We have set ourselves the target of precise reproducibility: you only need to push the biscuits into the oven, and can rely on the promised results being delivered at the end.

**OTTOprofil:** Let's return to the subject of visual design briefly. What do you need to look out for here?

**Nüssler:** The appliance needs to emanate its value from the outside. It is a promise that is then kept by the functionality. Our design is not driven by short-lived fads or trends. It is important to us that the appliance still looks good, even if the kitchen surrounding it has been replaced in the meantime.

**OTTOprofil:** And when will the internet conquer household appliances?

**Nüssler:** That naturally depends on the usefulness that innovations of this kind introduce. But networking is an important topic for us looking forward, and the future has already begun at Siemens. At IFA 2011 in Berlin, we presented a refrigerator with two integrated cameras as a pilot project. Each time you close the door, the cameras take a photo of the content and send it to your mobile. That means that you always know what is missing when you go shopping, and if your children have pinched a yoghurt in the meantime.

**OTTOprofil:** Two terms that are always current: efficiency and environmental friendliness.

**Nüssler:** There have been major developments in recent times. Electricity is becoming increasingly expensive and people are also trying to save water for environmental and cost reasons. The power consumption of the refrigerator has been reduced by up to 63% in the last 15 years.

And if you look at dishwashers, the water consumption used to be more than twice what it is today at about 16 litres. The story is similar for washing machines. Today, a washing machine uses almost 30% less water and up to 38 percent less electricity than a comparable appliance 15 years ago.

**OTTOprofil:** Are there any cultural and country-specific differences in household appliances?

**Nüssler:** Yes, that's interesting. In Northern European countries, people prefer fitted kitchens and thus fitted appliances; in Southern Europe, people prefer to combine and have more stand-alone appliances. In Italy, people prefer gas hobs to induction hobs. And in China, people tend to put refrigerators and washing machines on their balconies, because living space is scarce and expensive.

**OTTOprofil:** Do the brand and the origin play a role in the decision to buy a household appliance.

**Nüssler:** Made in Germany is still an important quality criterion – both abroad and domestically. Siemens has an excellent reputation worldwide. People have great trust in the brand. This is why we do not try to save money on the details and compromise the quality. OTTO is a good example here.

**OTTOprofil:** Mr. Nüssler, thank you very much for your time and the interesting insights into your work! ■



Siemens exemplary design  
by Gerhard Nüssler.

# OTTO NEWS



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Novasil® in depth.

## FROM THE HOB TO DENTAL RESEARCH.

### Challenges of the special kind.

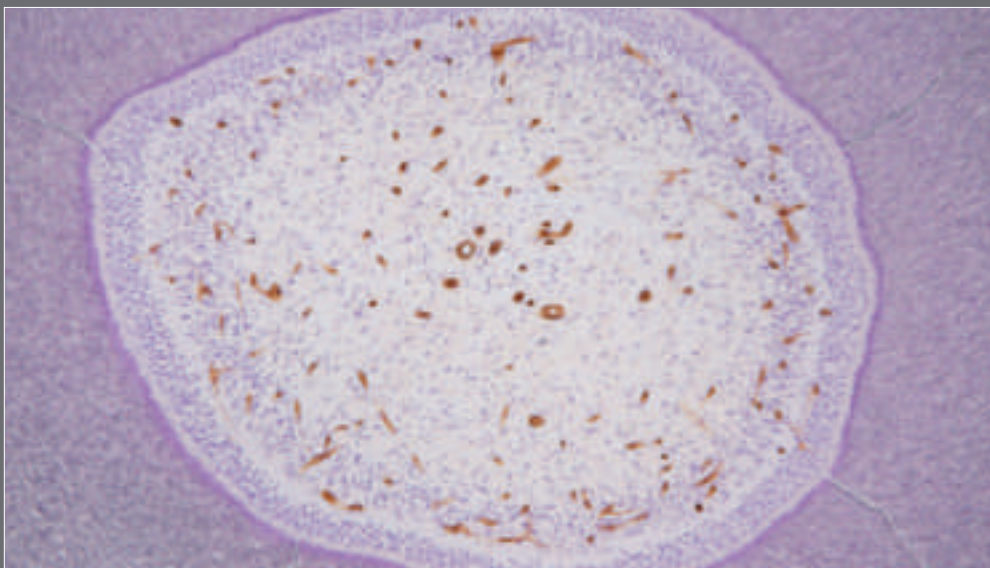
The right contact is not just vital in business. Contact problems also occasionally plague scientists. For Prof. Vitus Stachniss from the Dental Hospital and Prof. Birte Steiniger from the Institute of Anatomy and Cellular Biology at the University of Marburg, Germany, found themselves faced with an adhesive bonding challenge. The researchers were looking to represent proteins produced by special cells on the inside of the tooth in microscopic preparations of human teeth. The special challenge here was maintaining the hard substances of the tooth during the preparation process. Representing proteins in microscopic preparations normally isn't a problem for anatomists: you treat the pieces of tissue with formalin, remove the water, and embed the results in a block of paraffin to keep it stable. Then a special instrument is used to cut slices with a thickness of about 7 µm (seven-thousandths of a millimetre) of tissue and apply it to a glass object carrier prepared with silane. After removing the paraffin, you can then pre-treat with heat and pressure, and specifically dye

the proteins in the cross-section with immunological methods in order to make them clearly visible under the microscope. But this procedure does not work with a tooth, because it is made up of the hardest materials the body has to offer: enamel, dentine and cement. Enamel covers the crown of the tooth and cannot be cut due to its mineral content of approximately 98%. And the cells on the interior of the tooth posed problems for the researchers: they need to be preserved as quickly as possible. The only solution: the researchers cut the tooth into rough chunks and keep them in formalin for a whole day. They then embed the pieces of tooth in hard plastic (methyl methacrylate) instead of paraffin and glue the cut face onto the glass object carrier. Then the rest of the tooth is cut off, and the slice bonded onto the glass is reduced to a thickness of 10 to 20 µm using sandpaper. To reveal the proteins that need to be demonstrated, finally, the methacrylate needs to be removed from the ground preparation prior to high-temperature treatment.

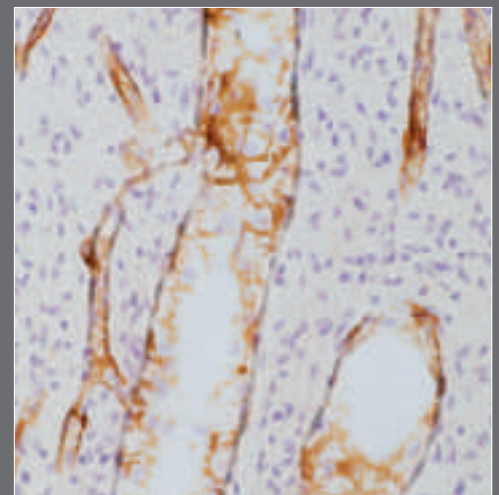
### Hard case: Novasil® SP 6364.

This exposes the adhesive to a fair amount of stress: it needs to be transparent at all times, and tough enough to avoid the slice of tooth working loose from the glass surface during sawing and grinding. Following this, the adhesive has to survive a multiple hour treatment with a plastic solvent (methyl oxaloacetate) and must not give way when heated to 121°C under 2 bar pressure for 20 minutes. Finally, it must be ensured that the subsequent immunological verification of the proteins is not impaired by potential chemical properties of the adhesive.

The special product, Novasil® SP 6364, turned out to be unbeatable under these conditions. It kept its adhesive force and helped the researchers to produce impressive imagery of the inside of the tooth. For example, small veins were revealed in the special cells in the wall. Enamel, dentine and cement remained intact while demonstrating the proteins – a truly innovative method. Thanks to Novasil® SP 6364, totally new contacts are on the cards for planned research into tooth implants.



Connective tissue (dental pulp) on the inside of the tooth surrounded by preserved dentine (dark blue stripes) in a ground section bonded with Novasil SP 6364. The cell cores in the dental pulp are visible as blue dots. Dentine producing cells (odontoblasts) lie flush against the inside of the dentine. Shown in brown, a glycoprotein (CD34) in the cells that coat the blood vessel (endothelial cells) in the dental pulp.



Small veins (venoles) in the dental pulp at larger magnification of a ground section glued on with Novasil SP 6364. The brown colour shows a protein of the cytoskeleton (smooth musculature alpha actin). This protein occurs in heavily branched cells (pericytes) which surround the venole wall with their appendices outside of the endothelial cells.





# How **new things** enter the **world.**

INNOVATIONS  
BETWEEN OPPORTUNITY AND RISK.

**W**hen were you last annoyed  
about something?

**Congratulations! Perhaps this was  
precisely the moment that opened  
up an opportunity to change the  
world and make you a millionaire.**

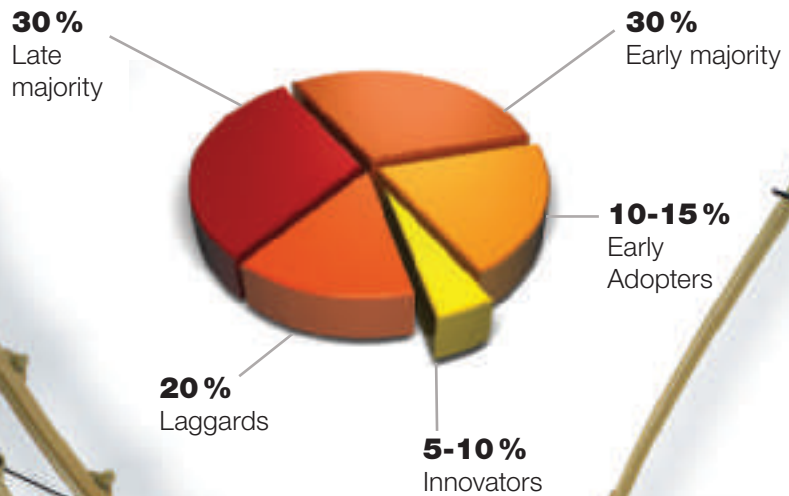
**Dissatisfaction and  
inquisitiveness – these  
are often the be-  
ginnings for major,  
seminal developments,  
or small improve-  
ments.**

Need an example? When you send an email, you always forget to send the attachment. A simple reminder 'Forgotten the attachment?' could help you here and save many hours of valuable working time in the process. Or: you are waiting at the supermarket and can't remember what foods you have at home. The potential solution: a small camera in the refrigerator that lets you take a photo – triggered by your mobile phone, in order to check the content from a distance. Two examples that show how daily problems can become products. But need has also been the mother of many an invention.

But how do you convert what seems to be a crazy idea into a product that thrills millions? What distinguishes a hit from a flop?



## This is how society receives inventions.



Reproduction of a horseless carriage by Carl Benz – the start of a revolution.



### From the idea to commercial success.

Walt Disney is rumoured to have had two chairs in his office. One on which he dreamt up the maddest ideas, and another in which he analysed these seemingly nonsensical ideas and decided whether to implement them, and how. After all, an idea is no guarantee of success. Society has to be mature enough for the new product or the new service. And, the innovative leap from the accustomed to the new must not be too big; otherwise, the effort of winning over customers for the innovation takes too much time and money. In the beginning, there

is always the creative process. Roger von Oech, a Californian creativity consultant, defines three characteristic types which the ideal inventor should combine in order to be genuinely successful: the clown who simply comes up with crazy ideas. The judge who analyses these ideas, sifting out the ones that cannot be realised, continually questions the good ones, and develops plans. And finally, the fighter who can enthusiastically sell these ideas to co-workers, investors or customers, against all odds.



## 'Is that supposed to be new? I have never seen that before!'

Resistance is totally normal when it comes to innovations. If there was no resistance, then the idea is not really new. Whether one is a Leonardo da Vinci, Carl Benz or Konrad Zuse, nearly every inventor was considered mad at the start, and only a few were considered to be geniuses – after producing their inventions. There is a very thin line between fear of the unknown, laziness that keeps us from changing our habits, and the childish joy of discovering something new. Its characteristics are different for every human. Market researchers distinguish parts of society by how fast they adopt innovations.



## Patenting: Legal protection for ideas.

An innovation that has a good chance of commercial success is not just confronted with resistance, but also faces aggressive competition. To keep your nose in front in this field, you can keep your idea to yourself for as long as possible, and hope that you corner the market more quickly than your competitors, who will, of course, immediately copy and exploit your idea. When it comes to innovative technical methods, inventors can thus protect their ideas with patents for a certain time, thus ensuring their competitive advantage on the market. You can sell the patent, or issue licenses, in order to recover your development costs, and reel in the desired profits. After the patent has expired – a maximum of 20 years – any company can use your invention for its own business. Some 60,000 patents are registered each year by private persons and businesses in Germany alone.

## Inventing, researching, developing together.

The development of technological innovations is extremely expensive and time-consuming today. A community of specialists in the research departments of high-tech companies, institutes (such as the famous Fraunhofer Institute), or more loosely knit communities and partnerships is often a very meaningful answer to this dilemma. Another benefit of this workload distribution: marketing, another major component in the success of an innovation, remains in professional hands from market research through to advertising and sales in this setup. OTTO also invests money, and its many years of application know-how, in collaboration with partners such as education establishments or sealant and adhesive processing companies in a variety of research and development projects. Additionally, OTTO researches innovations itself in a specialist department in order to test new product ideas.

## From silver sealants to innovative solar houses.

Although OTTO's share in research and development work may only be a small piece in the large mosaic of innovations in the construction trade and in industry, progress is clearly identifiable in these niche areas for the stake holding processors and users. Whether sealants for sanitary applications with mould restricting silver ions, or OTTO's commitment to the development of wood-glass composite elements; whether testing of special adhesives for photovoltaic modules; or new PU adhesives which are beyond legal marking requirements: the bandwidth of innovative effort at OTTO encompasses the entire product range. One other example out of many: in sponsoring the international Solar Decathlon, OTTO contributes towards developing an innovative and energy-independent house that is particularly suitable for the hot regions of the earth.



*Sketch block – indispensable aid for creative spirits, helping them put volatile ideas to paper.*



*Patent certificate for the automobile engine whose design is still in common use today..*



*Apple systematically corners markets through innovation.*



# OTTO NEWS

OTTO at the Palace Hotel Meran.

## ON THE SUNNY SIDE OF THE ALPS.

South Tyrol – just hearing the name raises connotations of holidays and Tyrolean hospitality, with an excellent glass of wine, walking in a breathtaking landscape with glorious mountain panoramas and a mild, Mediterranean climate, Törggelen with friends. South Tyrol as a vacation destination: this development started at the end of the 19<sup>th</sup> century, and is closely connected to the Palace Hotel in Meran.

Entrepreneur Peter Delugan bought Castle Maur, built in 1285, along with its estates in the Belle Époque at the end of the 19<sup>th</sup> century. The expansive park included a glorious, botanical garden, a vineyard and a nursery and vegetable garden. He had a hotel built in just 18 months, and it was soon to become the favourite destination for Austrian nobility, high society and the K&K monarchy. The style and architecture of the 'Palace' are reminiscent of the neoclassic style of luxury hotels on the Côte d'Azur, and it attracted the 'big names' of the time like a magnet, who sought to relax in the Mediterranean climate with opulent service. The glorious lobby was decked out with marble and crystal. To this day, the room furnishings exhibit a perfect mix of antique and modern, precious materials and contemporary details.

### Fall and rebirth of a legend.

But the times of glory and high society were soon a thing of the past for the Palace. During the Second World War, the hotel became a military hospital. This was the saddest hour of what was formerly a proud hotel. After the end of the war, business owners and citizens of Meran founded a company with eight shareholders to keep the former jewel of tourism out of the hands of real estate speculators and restore hotel activities.

Due to the many inquiries by wealthy tourists and customers, who were interested in the wellness offerings, comprehensive refurbishing started in 1972. The panorama floor was heightened, the kitchens were extended, spas in the basement and a swimming pool were built and new rooms and suites were added.

Web tip [WWW.PALACE.IT](http://WWW.PALACE.IT)



### From the spa hotel to the wellness centre.

But the complete reconstruction of the spa centre did not start until the 1990s with Dominique and Henri Chenot. The building of a pavilion for the wellness centre in the year 2000 was a milestone for the Palace Merano: the Espace Henri Chenot became one of the most innovative and popular wellness centres in the whole of Europe. At the end of 2005, entrepreneur and majority shareholder, Cav. Geom. Pietro Tosolini, bought the Palace. The most noteworthy investments can be attributed to him and ensured the detailed restoration of rooms, suites, social areas such as the pool and gym, and the hotel's own famous spa. And, if you look closely, you will also see old friends from Fridolfing: OTTOSEAL® S 70 was used in the baths and pools.



Evolutions from Australia.

## A SMALL HISTORY OF TIME.

In its exhibition '600 Million Years – the Evolution of Victoria', the Melbourne Museum in Australia brings the fascinating landscapes and life forms of the past back to life. The exhibition transports the visitor to a world in which they can experience evolution, thanks to extraordinary prehistoric landscapes, scientific exhibits of flora and fauna, and fossils. One of the most exciting exhibits is certainly a large aquarium with a lung fish, a living fossil. This fish is already 'equipped' with lungs that helped animals to survive in dry periods with a low oxygen content. If the oxygen supply via its gills is insufficient, the fish swims up to the surface twice an hour to breathe. Thanks to this property, the animal marks the point in time in the history of the earth when water dwellers became land-bound animals. The makers of the exhibition used OTTOSEAL® S 28 to build the aquarium.

Web tip

[WWW.MUSEUM.VIC.GOV.AU](http://WWW.MUSEUM.VIC.GOV.AU)




SPECIAL ADHESIVES FOR ANY APPLICATION.





# Beyond **all-purpose** adhesives.



**E**verybody knows it: Uhu, the all-purpose household adhesive in the yellow and black tube. It has become something of a synonym for gluing. But why doesn't OTTO have an all-purpose glue, a solution for everything? A question that can easily be answered with four words: alternatives instead of compromises.

To avoid making compromises in terms of the various quality requirements that a professional poses for an adhesive, OTTO offers highly-specialised alternatives with different property profiles. Their range of applications extends from fully-automated processing in industrial operations, to use on the construction site. The correct choice of a suitable adhesive depends, for example, by the consistency during processing (flowable or stable), the curing time, compatibility with and adhesion on specific materials, the elasticity and the adhesive strength. 

## A matching property profile for each application.

OTTOCOLL® adhesives can be classified in four groups based on their material content: adhesives on the basis of polyurethane (PU), acrylate, silicon and hybrid adhesives. Each of these groups has a very individual profile and is thus suitable for very specific applications. Exactly the right adhesive is available, depending on whether the adhesive is protected on the inside, or exposed to sun, rain and temperature fluctuations on the exterior, whether rigid and fixed, or flexible adhesion points are required that can withstand movement and loads.

## Silicon adhesives: flexible, tough and resilient.

Silicon adhesives are characterised by their excellent flexibility, but also by their resilience to water, sunlight, temperature and temperature fluctuations, chemical influences, and aging. This makes them ideal for applications in environments in which other adhesives fail: on exposed facades, in sanitary applications, and even under water. Their resilience makes them the adhesive of choice wherever adhesive joints are exposed to movements. However, their maximum adhesive strength is fairly low compared with other adhesives.

## Between two worlds – hybrid adhesives.

In areas where silicon cannot be used, hybrid adhesives are regarded as an elastic alternative with similar, stress-compensating properties – even though they have a lower performance profile all told, and are not as resilient to high temperatures as silicon adhesives.

## The low-budget alternative: acrylate based adhesives.

Acrylate adhesives on a dispersion base are characterised by good adhesive strength and paintability. However, they are not very robust when it comes to load such as high temperatures. Additionally, they require an absorbent mating surface, which considerably restricts their potential applications. Due to their properties, acrylate adhesives are a low-budget adhesive alternative for specific applications only – and mainly in interiors.

## Uncompromising in terms of bonding force: PU adhesives.

Structural PU adhesives are the adhesive group of choice for professionals, where frictional locking with the highest adhesive bond is required. One-component PU adhesives foam slightly when applied, thus filling smaller cavities or rough surfaces, thus offering optimum conditions for bonding. After curing, they can easily be ground and painted. Due to their low UV and temperature resistance and limited weather fastness, these adhesives should only be used for interior applications that are not exposed to water.

## PU adhesives with new cautionary obligations?

In terms of strength, PU-based adhesives are regarded as unbeatable by professional tradesmen and in industrial applications. However, they need a material that can cause allergies in sensitive persons in case of frequent skin contact or frequent inhalation through the respiratory system: Methylenediphenyl diisocyanate (MDI). Additionally, some suspect that MDI – although this is currently unconfirmed – can be carcino-



*The origin of all adhesives in the world around us: tree resin.*

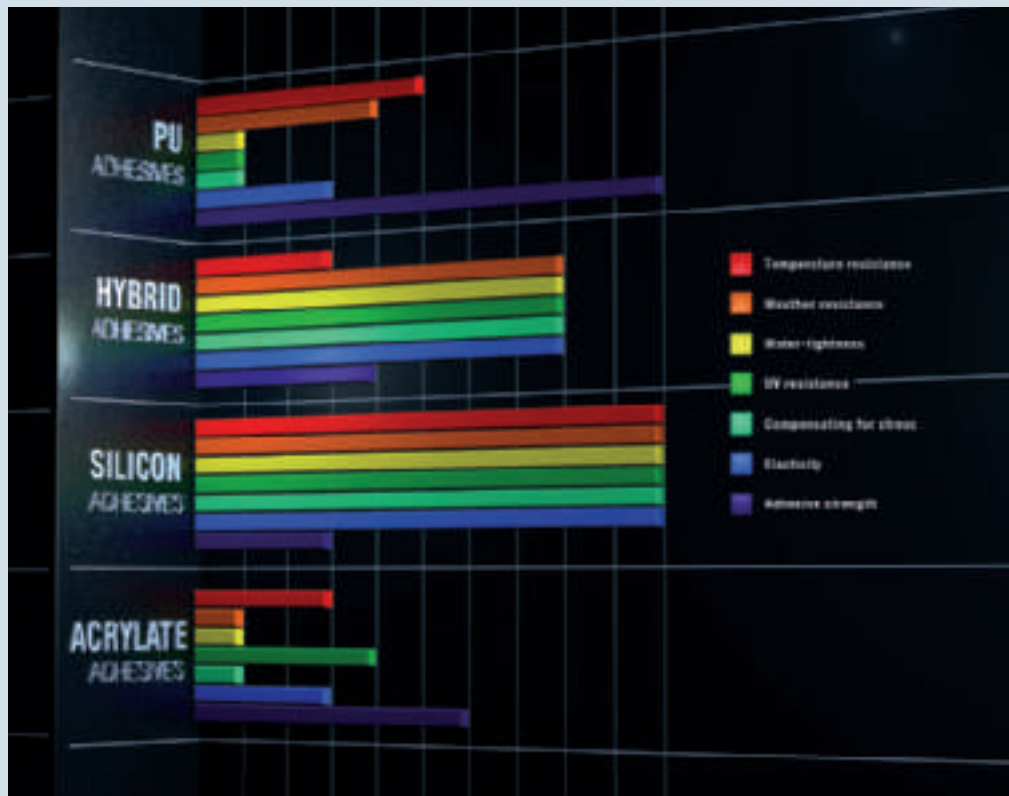
genic. This worry mainly applies to processing in aerosol form (e.g. by spraying over a large surface) in industrial applications, and has not been conclusively demonstrated for humans in the studies that currently exist. Even the Federal Ministry of Health states that 'there is no evidence for a human carcinogenic effect'. But to be on the safe side, and to at least inform the public about the potential risk, the lawmakers in the European Union and the Federal Republic of Germany have decided on a course of action to introduce mandatory labelling and apply the chemical prohibition ordinance for materials with an MDI content above a certain threshold. This means that specific obligations apply for manufacturers, processors, and resellers in terms of labelling, storage, application and sales to consumers.

### Research at OTTO as an innovation driver.

The health risk involved in the use of pasty PU adhesives is thus extremely slight compared with other materials used in professional applications, and can probably be ruled out entirely, assuming that the safety regulations are complied with. Additionally, there is no alternative to this proven class of adhesives for professional users.

### The Adhesive Guide: A useful aid to making choices by OTTO.

If you are looking for exactly the right adhesive for your application, you do not just need to be familiar with the different performance profiles of the adhesive types, you also need to know how they behave chemically and physically in specific environments and situations. With our professional guide, OTTO now provides an initial orientation aid for the world of adhesive, thus helping professional users to find the OTTO product that perfectly matches the desired application. Once more, this sees OTTO offering alternatives instead of compromises. ■



Property profiles of various adhesive types.



The new legal framework for PU adhesives at a glance

# OTTO NEWS

Squash professionals CourtTech bring on OTTO.

## GAME, SET AND MATCH.

As a comparatively recent sporting discipline, squash started to assert itself as of 1975 as an uncomplicated leisure activity. CourtTech from Seebruck on Lake Chiemsee set out to continue this path to victory by producing and providing comprehensive consultancy on the topic of squash courts. In cooperation with Rosenheim University of Applied Sciences and Regnauer Fertighaus, Seebruck, CourtTech developed a high-tech squash court wall system based on building technologies of the 21st century. To guarantee fast installation, CourtTech builds the individual system walls at the Regnauer works and delivers them to the site.

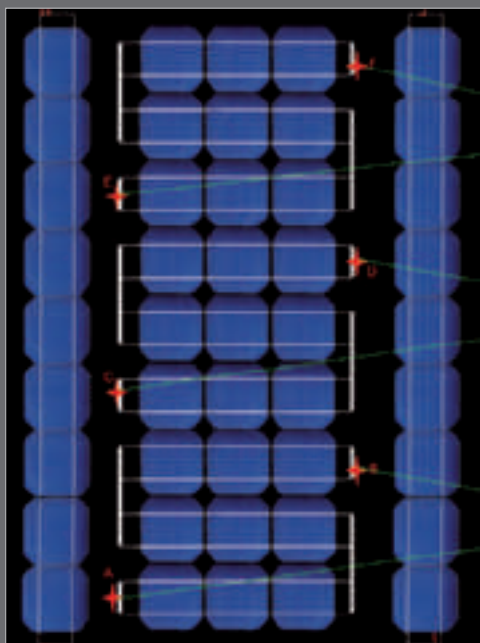
Then, OTTO enters the game. On site, the butt ends of the dual wall elements are glued together with OTTOCOLL® P 520 at their place of destination. Besides purely planning and construction-related support, CourtTech offers operators and investors detailed advice in business matters, up to and including the development of business plans and feasibility studies. The CourtTech Team based its approach on the squash ball that is later powered around the courts: small, fast and flexible.



Web tip [WWW.COURTTECH.BIZ](http://WWW.COURTTECH.BIZ)

A solar roof for vehicles.

## FULLY POWERED.



Why not use the roof of a car to reduce the load on the alternator and thus save fuel and CO<sub>2</sub> emissions? Okay, solar modules on the car's roof? Not a bad idea, if the practical implementation was not so complex! After all, a solar cell only delivers maximum current and voltage under specific conditions. This is known as the Maximum Power Point (MPP). To allow the serially-connected cells to work effectively at all times, especially on curved surfaces, a small electronic unit the Maximum Power Point Tracker (MPPT) adjusts the voltage to an optimum level.

In a research project by the Joanneum University of Applied Sciences in Kapfenberg, Toyota



Prius has now been equipped with the new solar module. To allow this to happen, the first task was to discover the optimum arrangement of the solar cells and MPPTs and then integrate it into the specially curved roof. In this special solar module's case, it is not just the entire module that is controlled by MPPTs, but the individual cell strings. Highly-efficient circuitry, the integration of the modules on and under the roof, and in the headliner in the interior were the challenges that the engineers faced. At least, fastening the modules was no problem: for an initial demonstrator vehicle, the modules were glued with OTTOCOLL® M 570 directly onto the car's roof.



Web tip [WWW.E3CAR.EU](http://WWW.E3CAR.EU)

Web tip [WWW.FH-JOANNEUM.AT](http://WWW.FH-JOANNEUM.AT)



Natural stone facades by Anko Granites.

## **BUILT ON STONE.**

Granite from India has a variety of hues and textures. And, it is often used in Germany – not least because of its low price – in many public buildings, shopping malls or office buildings as a flooring or facade material. Little wonder that, for OTTO, the Asian subcontinent has become a market for premium natural stone sealants, and one that is becoming increasingly important.

In Anko Granites from Mumbai, OTTO has found a partner that has similar quality requirements. The company specialises in manufacturing and installing grout-free natural stone walls in interior and exterior applications. And from A to Z. From consultancy and planning, development and manufacturing the fastener system, to delivery, accommodation of the natural stone plates, and finally installation on the building skin.

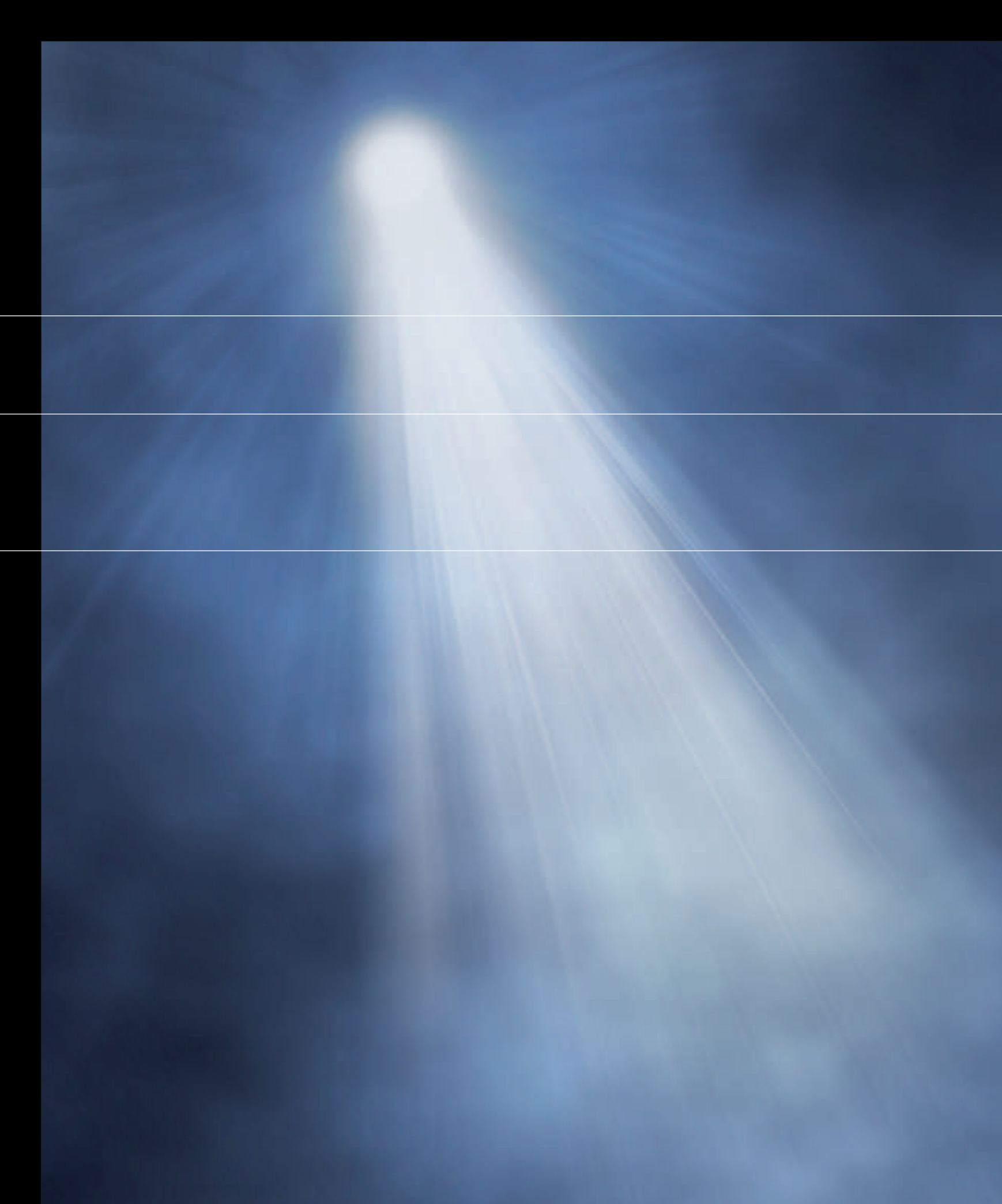
As one of the first companies to deploy grout-free facade systems, Anko Granites has been among the market leaders for installing large-scale natural stone facades – whether with or without grout. This has meant that Anko Granites has played a major role in utilising India's enormous natural stone reserves with the aid of innovative technologies in manufacturing, processing and fastening for building interior and exterior facades.

## **Individual stone facades, Made in India.**

Due to the many years of producing and exporting granite monuments to Europe, the Indian natural stone specialist can supply granite even in complex shapes and unusual dimensions. Due to Anko Granite's enormous experience in installing stone, and in-depth knowledge of the unique properties of natural stone and its fastening technologies, the company can offer consultancy for any requirement and a full set of matching services required to convert the dream of a natural stone facade into a reality. Fulfilment of international standards, constantly high quality, and economic feasibility have led to the results of Anko Granite's work being on show in the most prominent buildings in India today.



The Mumbai Hyatt-Hotel, with OTTOSEAL® S 70



In the land of  
**poets** and  
**lamps.**

Where OTTO is needed to make the world a brighter place.

**'In the beginning, God created Heaven and earth. And the earth was without form, and void; and darkness was upon the face of the deep. And the Spirit of God moved upon the face of the waters. And God said, Let there be light: and there was light. And God saw that the light was good.'**

Genesis 1.1 – 1.3

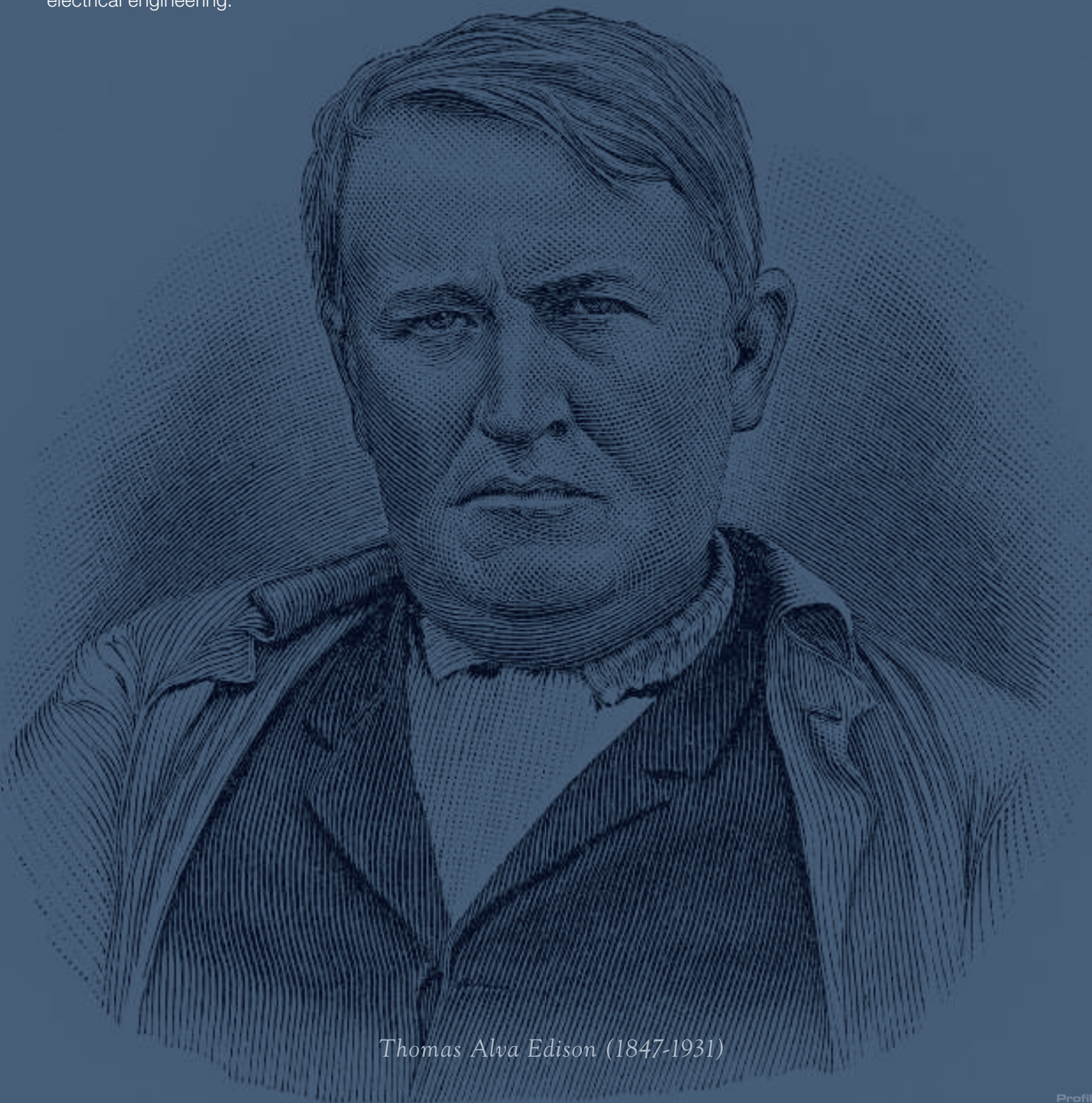
This is how the Bible describes light entering the world at the beginning of the story of creation. Today, all we need is a switch. Or a motion detector. But the Bible quotation shows quite clearly how greatly we humans have feared the dark since ancient times. And how important light is.



On another, metaphorical level, light was equated with knowledge and perception. There are many figures of speech from 'enlightenment' to 'seeing the light' that refer to this. In other words, light dispels the darkness caused by a lack of knowledge. One of the greatest inventions of the industrial age thus became a symbol for ideas and innovation: the light bulb.



Born on the 11<sup>th</sup> of February, in 1847, in Milan, Ohio, as the seventh child of Samuel Ogden Edison, who held various jobs and was a free thinker and political activist, and Nancy Matthews Elliot, a teacher. He only received regular school education for a few months and was taught by his mother after this. After many years of working as a telegraph operator, he became a successful inventor in the field of electricity and electrical engineering.



*Thomas Alva Edison (1847-1931)*

Since 1901, a bulb has been lit without interruption at the Livermore Fire Department in California: The 'Centennial Light'.

### The light bulb – a symbol for conquering ignorance.

Although the light bulb should really be known as a filament bulb, who would want to take away the charm of this illuminated fruit? While the fruit from the tree of knowledge drove mankind out of Paradise, it was this self-invented bulb that at least made life more convenient east of Eden.

We owe the fact that we can use it today to a whole army of inventors, led by, – no, not Thomas Alva Edison – but by Briton, Joseph Wilson Swan. He patented the first practically usable light bulb in the year 1878, that is, two years before Edison. This first led to dispute, and later to cooperation with the purported inventor of the light bulb. But Edison continuously improved the light bulb against all kinds of physical and economic resistance, and thus rightly enjoys his fame.

Twenty-three years after Edison filed his basic patent under number 223898, a totally unknown person screwed a light bulb that had already been in use for two years into the socket at the Livermore Fire Department in California. This would be nothing special if the same light bulb had not been shining virtually without interruption until the present day, thus going down in industrial history as the Centennial Light. The fact that this living fossil of technology only outputs four watts instead of the intended 60 can, in no way, diminish this fantastic performance.



### Innovation market Lighting industry

After 130 years, the light bulb – once an innovation – is regarded as obsolete today. The service life and the energy efficiency in this form of light are no longer compliant with many requirements. And – depending on the application – there are numerous alternatives with specific advantages and disadvantages. From the neon tube and the halogen filament bulb, to compact fluorescent lamps, to LED lamps. While the compact fluorescent lamp known in the EU and to Europeans by the euphemistic name of 'energy-saving lamp', and made more attractive by a prohibition of the light bulb, now has a very poor reputation due to its mercury content, the LED (light emitting diode) is now set to conquer all as the new light source.





## Lamp or light?

It's a bit like spines and thorns, or horns and antlers: total Babylonian confusion between what the layperson means and the expert says. Thus, a short explanation at this point: lamp is the correct designation of the light source, as represented by the filament bulb. This may sound contrary, but it's a fact. The proverbial bedside table light thus goes by a false name and should be called a bedside table lamp. The lamp thus serves to hold a light source (or a bulb if you prefer). The bulb can be (as with an LED module) fixed in place or easy to replace due to a socket, e.g. by screwing it in or unscrewing it like a light bulb.

To make bulbs more perfect in terms of service life, effectiveness, efficiency and safety, they are fitted in lamps. The lamp protects the bulb against external influences such as moisture, vibration or stone impact, and achieves the best possible performance, or focusses the light due to its optical shape.

You can forget this horrible term 'light source' for the time being, unless you are an exporter or bureaucrat.

## Light into the darkness of the world.

You should think about the areas in which light is needed: from interior and exterior lighting on buildings, advertising and decorative lighting, streetlamps and traffic signs such as traffic lights, headlamps on vehicles, vessels and aircraft, to position lights on tall buildings and at airports. In many cases, light has a very great significance in terms of safety. If it fails, accidents or delays with major economic impact are more or less inevitable.

At the same time, bulbs and lamps have enormous energy saving potential, both in terms of operating costs and in the energy involved in their manufacture or disposal. There can thus be no doubt that we need to regularly look closely at the topic of 'artificial light' and continually improve the solutions.

## Special adhesives and sealants as key products.

With any innovation in this exciting field of application, adhesives play a role that should not be ignored; and OTTO started to respond to the requirements here many years ago with production solutions. The requirements for adhesive bonding and sealing of products are anything but banal. First of all, the adhesive must bond well on a variety of materials without influencing them. They include glass, metal, plastic or paint. Whether on the road, on the high seas, or even under the water: extreme temperatures, temperature fluctuations, moisture, salt water, acid rain and UV radiation, must not affect these adhesives. And, there are special product properties that are important to facilitate economic production of the lamps (consistent curing time) or comply with applicable standards (e.g. fire protection, emission protection). Today, adhesives by OTTO are found in a variety of applications, and go the distance despite tough conditions. For example, bus lamps are glued with OTTOCOLL® P 520 SP 5477. Or they are found in recess mounted floor lights in exterior applications for illuminating buildings. OTTO already has products for the life-saving lighting on off-shore wind power generators and oil drilling rigs, that fulfil all the required parameters in these highly-sensitive fields of application. And thus, you might find that OTTO is involved if you see the light somewhere in the world.



# OTTO NEWS

OTTO at the Baltic Sea States Conference.

## AMONG THE BIG SHOTS.

We have become used to finding OTTO 'in the thick of it' with our specialist products. But it is not so often that everything revolves around OTTO. For example, at the meeting between the Baltic Sea states which was chaired by Germany this year in Stralsund. MWB Theater- und Veranstaltungen GmbH from Berlin had the task of creating the central installation and created an attractive eye-catcher with a fountain at the centre of the circular arrangement of conference

desks. The fountain, whose central column was vaguely reminiscent of a lighthouse was sealed with OTTOSEAL® S 610. Because the conference took place at the Oceanium of the Maritime Museum, life-sized exhibits of whales hung above the participants' heads, thus providing attractive motifs for international reporters.

Big shots amongst themselves, so to speak. And OTTO in the middle.



Web tip

[WWW.MWB-BERLIN.DE](http://WWW.MWB-BERLIN.DE)



OTTO at the Oval Office in Cologne.

## ROUNDED OFF.

The Cologne Oval Offices at the Gustav-Heinemann-Ufer in Cologne just go to prove that office buildings today are increasingly more than just a conglomeration of workplaces. The impressive facades of the two ecologically optimised buildings emanate corporate identity and are today an unmistakable element of the Cologne landscape. The high quality design in terms of shape, colour and function is consistently continued in the interior, and has a positive effect on staff motivation. OTTO made a small contribution here with OTTOCOLL® M 500, which was used to glue the glazing in the bathrooms.



Web tip [WWW.COO.DE](http://WWW.COO.DE)

The renovated Castle Sonnenstein.

## ELEGANT ADMINISTRATION.

In former times, Castle Sonnenstein, above the River Elbe, in the town of Pirna, protected the trade routes from Stolpen to Prague and from Königstein to Meißen. The Saxon Switzerland district administration has now found new premises in the newly renovated castle. In addition to the administrative offices, at what must be one of the most attractive locations in Germany, the three-winged building also houses a memorial for Nazi euthanasia victims and event rooms.

The 740 wooden windows in Pirna's new monument were built by Fenster & Türen Brettschneider. On the upper floors, the glass rebates were sealed with OTTOSEAL® S 120. The round arch windows on the ground floor were equipped with break-in protection to the new resistance class RC2. The window builders from Großschirma used OTTOSEAL® S 81 to seal the windows here.



TRADE FAIRS – MEANINGFUL OR MEANINGLESS?



# Market economy

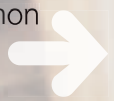
from human to human.

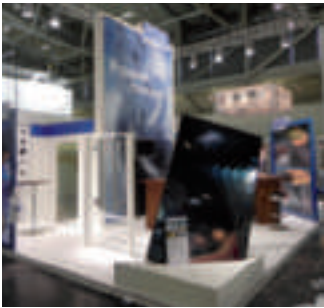
**E**urope in the 21<sup>st</sup> century. The internet has conquered every aspect of business. Purchasing, communication, production, sales, retail. Only one small oasis steadfastly resists: the trade fair.

Trade fairs cost a lot of money, are hard work for the exhibitors and visitors – and are quite obviously successful! But what is the reason for this? The answer is just as simple as it is complex: trade fairs are about humans.

Ever since people started to specialise in their professions and learnt to appreciate the benefits of job demarcation, there have been markets. But a market was never just about exchanging goods and money. It was always a place of communication, for getting to know people, for discovering and for interaction. Trade fairs are basically nothing but markets; it's just that modern trade fairs are not about exchanging goods, but simply about presenting and ordering. Still, the basic idea of the market remains: people meet people, get to know and – in an ideal case – like one another, hold talks, answer questions and negotiate. All of this seems to be impossible on the internet.

Even though trade fairs cost a huge amount of money for both sides in terms of travel and hotel expenses, booth building costs and booth rents, and although companies need to save money, and even if the internet or in-house events are increasing competition, the trade fair, as an institution, has survived for 15 centuries. Even catastrophic events like the terrorist attack on the World Trade Center on the 11<sup>th</sup> of September, 2001, cannot affect this phenomenon for more than a little while.





*The OTTO booth at the INTERSOLAR EUROPE fair in Munich, June 2012.*

## BUSINESS FACTOR FAIR ON A LARGE AND SMALL SCALE.

Germany is the leading international venue for trade fairs and exhibitions with an average of 150 events, some 170,000 exhibitors and up to 10 million visitors. Half of the ten largest trade fair organisers in the world come from Germany. Together they achieved a turnover of 2.85 billion euros in 2011. For OTTO, each of our 15 or so trade fairs in the year is an indispensable opportunity to attract new customers, maintain relationships to existing customers, and make the OTTO brand something people can experience.

The platform for this is the new trade fair booth, which saw its grand premiere this year. It is the result of much experience in booth building, plans, models and many coordination meetings. As it will be deployed at a variety of trade fairs, the OTTO trade fair booth has a modular design, is easily transportable and can be adapted quickly and easily in terms of floor space and shape, and to match the theme of the fair. At the same time, the booth was tailor-made to reflect OTTO's brand personality. Clear lines, dynamic and the combination of technical and natural materials reflect the product application fields as well as the enterprise philosophy and quality policy.

## FOUR ZONES FOR AN OPTIMAL PRESENTATION.

A trade fair booth is like a small building project. And again, everything starts with three words: location, location, location. This is why it is important, from the outset, to ensure that the trade fair booth is located in a place that most visitors need to pass on their way through the halls. This explains why the ideal position for the booth is near the main entrances or the 'main traffic routes' of the fair. But the type of booth is important too, as it improves contact opportunities and underlines independence. A distinction is made between a single row booth (only open on one side), a corner booth (open to two aisles), a head booth (open on three sides) and an island booth. But the best position is useless, if you fail to attract visitors to the booth. Above all, those who are not yet customers or prospects need to be attracted by the products and services and can then talk to staff at the booth in person for more information. Aside from the booth lighting, a clear-cut design and an 'eye catcher' that sends signals over a longer distance are important to attracting visitors. Interesting demonstrations, exhibits and images have the task of slowing down the visitors walking by and making them curious about more details. This is why the trade fair booth is typically divided into three public zones. The first zone, directly on the aisle is for orientation, the second for presentation, and the third for meetings. The fourth zone is the reserve of booth staff as a storeroom, cloakroom or kitchen. In the presentation zone, visitors can look for information autonomously and are addressed by a member of staff if they are clearly interested or seek information. In case of more in-depth questions, the member of staff invites the visitor into the interior of the booth, where they can clarify details in a calmer atmosphere. At the end of each contact with a prospect, it is normal to exchange business cards.

They are used later on by customer advisors to follow up trade fair contacts; after all, the aim is to convert 'leads', that is potential customers, into customers.



*OTTO also exhibited at BAU 2013 in Munich with our new booth.*

## LIGHT ATTRACTS PEOPLE.

Light plays an important role in trade fair design. It does not just put products and exhibits in the spotlight in the truest sense of the word, but also contributes towards the booth's dramaturgy. While the orientation zone needs to be well lit, without glare and shadow, where possible, spots are recommended to guide visitors in the presentation zone. In contrast to this, the meeting zone should not have lighting that is too bright and harsh, to avoid an uncomfortable atmosphere. Indirect light is recommended here, for example.

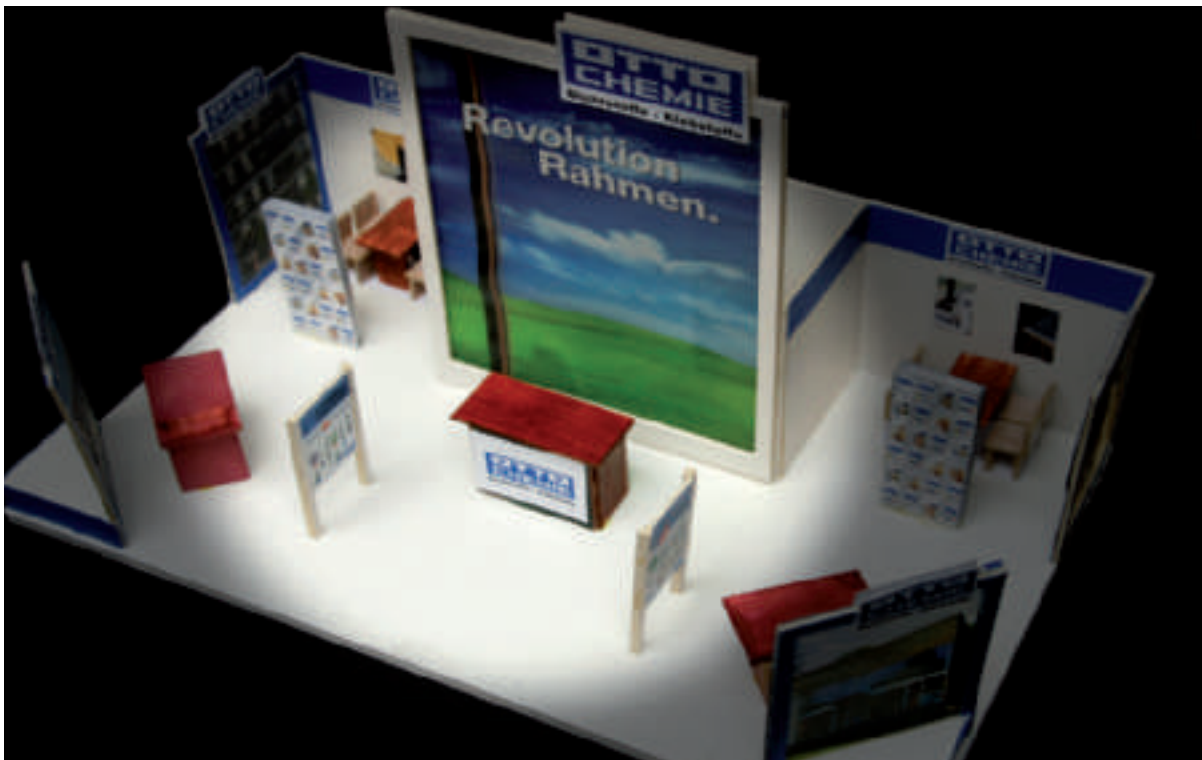
'Our new trade fair booth is the perfect ambassador for the OTTO brand. With its openness, clarity and quality, it communicates both our products and our enterprise philosophy.'

Dr. Volker Weidmann, Managing Director

## FROM THE FIRST SKETCH TO THE LAST MINUTE.

Successful trade fair presentation must be planned minutely and put in the hands of experienced professionals, unless you prefer to learn from your own expensive mistakes. In addition to sketches and scale models, a trade fair booth builder will also use computer-based CAD models to test a variety of deployment and illumination alternatives from various perspectives. After selecting the materials, the individual modules and the final decision on the trade fair booth, it is a question of implementation on site, for which typically very little time remains. The important thing in terms of the installation is a contact person who understands the various trades and always keeps their cool. And who knows when the right time has come to react and improvise if needed.

Despite perfect planning: most installation work is completed at the last minute. Shortly before the fair opens, staff then Hoover the carpet at the booth, or put the brochures on the shelves provided for them. But you will not see any of this the next time you visit OTTO at one of the numerous trade fairs. ■



## OTTO at trade fairs in 2013.

**Stone+tec 2013,  
Nuremberg**  
29<sup>th</sup> May – 1<sup>st</sup> June 2013  
[www.stone-tec.com](http://www.stone-tec.com)

**Intersolar 2013, Munich**  
19<sup>th</sup> – 21<sup>st</sup> June 2013  
[www.intersolar.de](http://www.intersolar.de)

**Marmomacc Verona**  
25<sup>th</sup> – 28<sup>th</sup> September 2013  
[www.marmomacc.it](http://www.marmomacc.it)

**MadeExpo Mailand**  
2<sup>nd</sup> – 5<sup>th</sup> October 2013  
[www.madeexpo.it](http://www.madeexpo.it)

**Bondexpo Stuttgart**  
7<sup>th</sup> – 10<sup>th</sup> October 2013  
[www.bondexpo-messe.de](http://www.bondexpo-messe.de)

**Batimat Paris**  
4<sup>th</sup> – 8<sup>th</sup> November 2013  
[www.batimat.com](http://www.batimat.com)



It may be that the age of migrations, adventurers and explorers is in the past. But still today, nearly every one of us has the primeval instinct for leaving behind what is familiar and seeking the unfamiliar, the wider world beyond the horizon. For most of this, the dream remains unfulfilled.

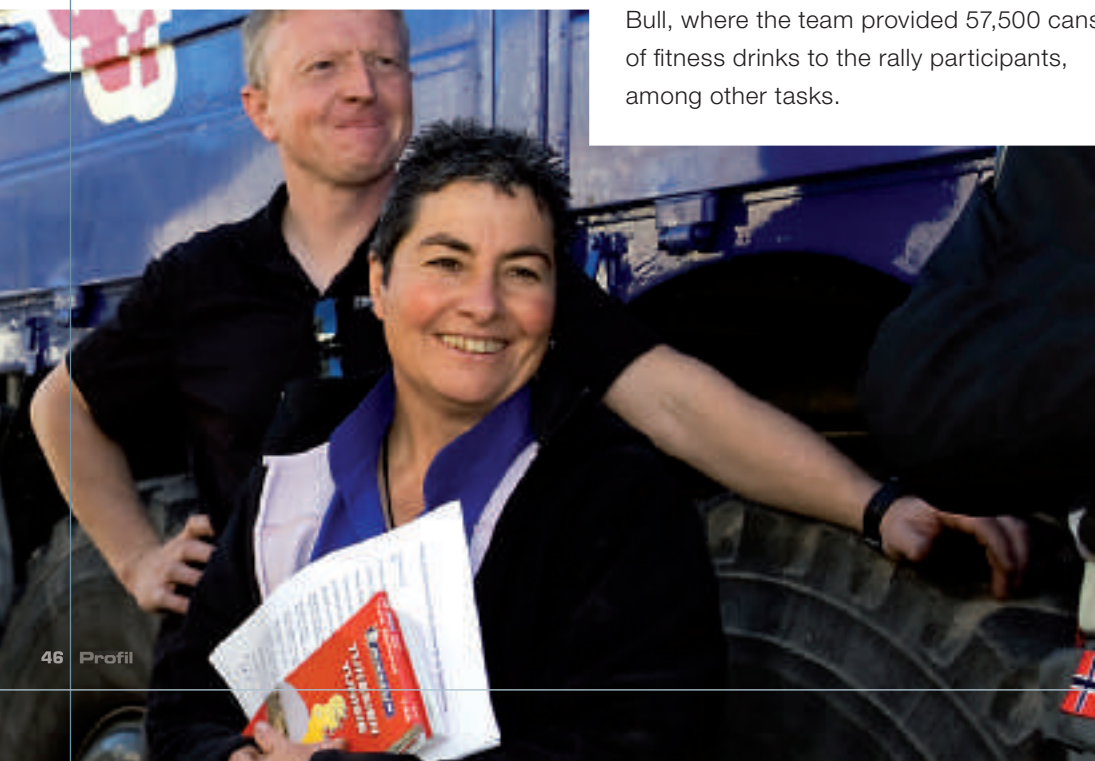
# OTTO offroad.

HEADING INTO THE WILD, WIDE WORLD WITH TEAMBUCTOU.

A dream that Uta Baier, the owner and team leader of Teambuctou, made into her dream job. Teambuctou organises guided off-road trips by motorcycle or off-road vehicle to landscapes that most of us only know from television. Thus far, the off-road adventurers have visited Mongolia, Tunisia, Morocco and Libya. In addition to this, Teambuctou offers its experience as a rally support team and has proved its value many times in the Dakar. Uta Baier herself was a rally motorcycle mechanic for BMW and KTM. And she has had to eat a fair amount of dust and dirt in her life.

## 57,000 cans of Red Bull in the desert.

In terms of mobile equipment, Teambuctou cooperates closely with 4Wheel-CustomZ from Petting in Chiemgau. The company's owner, Michael Zerwer, specialises in custom conversions of off-road and 4x4 vehicles. He maintains the team's vehicles and accompanies them on trips and rally outings as mechanic. Zerwer knows what he can rely on. This explains his choice of adhesive and sealant for the aluminium sheet in the bodywork of the Teambuctou-truck, a four-wheel driven Paris-Dakar three-axle truck by MAN: OTTOCOLL® M 500. Among other things, the truck was used for a Dakar promotion tour of South America by soft drinks manufacturer Red Bull, where the team provided 57,500 cans of fitness drinks to the rally participants, among other tasks.





MAN KAT 1A1 6x6  
Three-axle vehicle with permanent four-wheel drive  
Engine/output: six-cylinder straight engine 12 litres capacity, turbocharger and charge air cooling with a total of approx. 500 bhp.



# Prejudice

in the back of your mind?

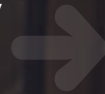
SILICON AND THE  
AUTOMOTIVE INDUSTRY:  
WHEN WORLDS  
COLLIDE.

**C**ompared with the relationship between the automotive industry and silicon, the relationship between the devil and holy water seems to be quite cosy. An exaggerated comparison? Perhaps, but it does neatly paraphrase the contact angst of a whole industry with a versatile material, without which – if you look more closely – nothing would work in state-of-the-art vehicle manufacturing today.





Anyone who has joined materials in an automotive plant will know that much store is set by the use of silicon-free sealants for joint seals. The reason for this is the property of silicon, especially silicon oils as a lubricant or separating agent. They can cause flow defects in fresh paints and coatings and impair the adhesive ability of paints and other coatings.



## Throwing the baby out with the bath water.



In other branches, too, there have always been objections against the use of silicon, e.g. in the solar industry.

There was a simple and surprising reason for this: the managing director of one of the major manufacturers came from the automotive industry...

These objections have long been resolved in the solar industry, and scepticism has given way to excellent cooperation with the best possible results. In the automobile industry, the strict ban on sealants with silicon content aims to prevent silicon entering the paint shop and causing damage during the body painting process by wetting the body shell. But safety measures often take this even further. For example, staff are forbidden to use hair care products that contain silicon to avoid any risk of contaminated paint surfaces. Using only silicon-free sealants in the paint shop and neighbouring production shops seems to be pretty reasonable in this context.

Whether or not this requirement to do without the benefits of sealants that contain silicon in other areas such as the administration buildings of automobile plants is meaningful is debatable, however.

## The myth of rogue silicon vapours.

In the past, myths about rogue silicon vapours in the air, and other statements not backed up by technical evidence, were spread, thus contributing to a strict ban on the use of silicon as gap sealants in all areas of the automobile plant.

However, silicon in the form of sealants, adhesives, sealing compounds, seals and silicon oils have been used in the automotive industry for a variety of automotive applications for many years. Due to their special benefits, which vehicles very much rely on, such as extreme temperature resistance, vibration damping and insulating properties, and resilience against many aggressive chemical media, they cannot be replaced by products based on a different material.



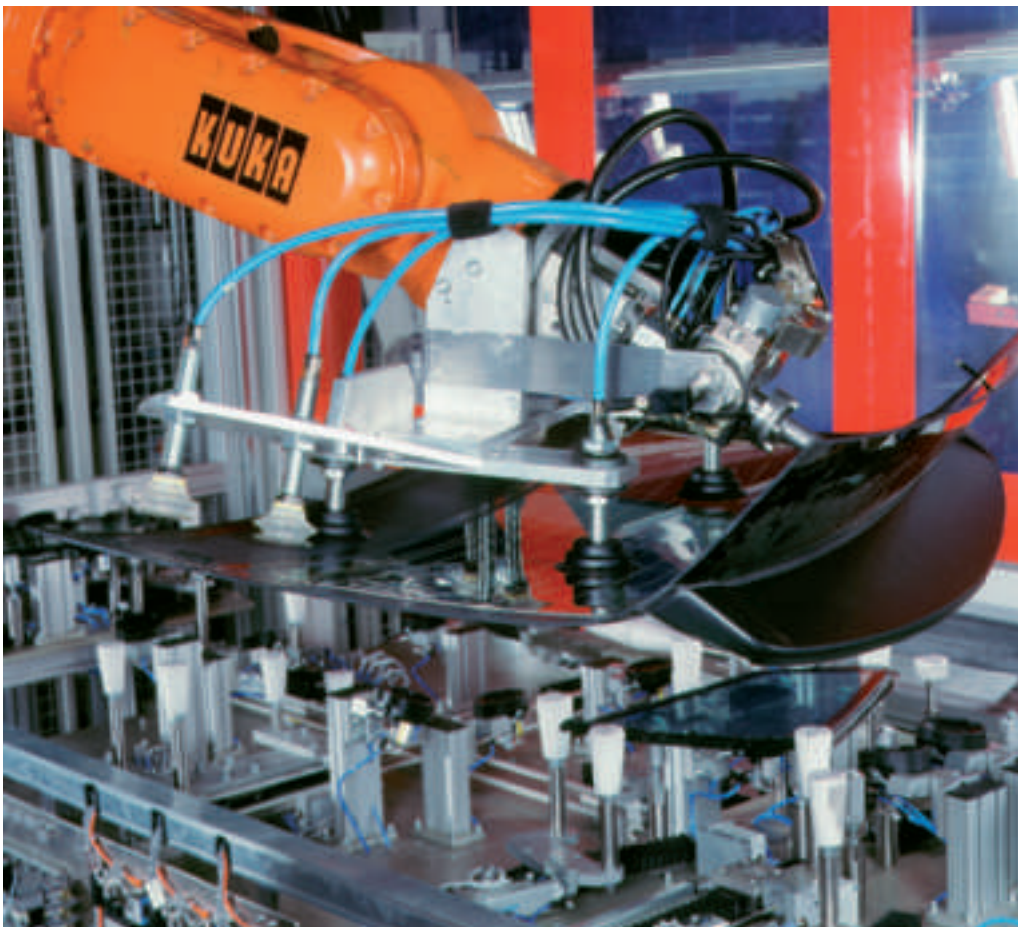
## Silicon – indispensable in modern cars

Today, a variety of silicones are used in automobiles: for example as cylinder head gaskets, radiator seals, radiator hoses, turbocharger hoses, oil sump seals, vibration dampers, gearbox seals, viscous couplings, ignition cables and spark plug connectors, in headlamp seals, as wiper blades, as coatings on electronic parts, in airbags and many other areas. And, without causing contamination of surfaces that need to be painted or coated. If you consider the fact that pasty silicone sealants are even used in highly sensitive cleanroom production facilities, the ban on this material in, for example, sanitary installations in the automotive industry seems fairly bizarre.

## Care without hysteria.

But what is decisive at the end of the day is the way silicone products are handled in automobile plants. It is important first of all to ensure that no material containing silicone, but primarily no silicone oils, enter production shops in which bodies are painted or prepared for painting. Ensuring this means careful handling of all materials and auxiliaries containing silicone in order to rule out silicone sealants being spread during processing, or entering paint shops or neighbouring production areas due to soiled clothing, tools or by other means. Outside of the production areas, and in areas of automotive plants that are not next door to the paint shops, there are no technical reasons for not using silicone sealants, e.g. to seal joints in sanitary rooms, offices and stairwells of administrative buildings.

However, it is important to seek approval for the sealing material to be used from the purchaser or planner for the specific area of use at the automobile plant, in order to avoid disputes later on. The use of silicone sealing materials for sealing joints offers benefits in many cases compared with silicone-free sealants: for example, a variety of colours, smooth, non-sticky, and easy to clean surfaces, good mechanical and chemical resilience, good abrasion resistance and prevention of fungal growth in sanitary facilities. ■





**Sealants • Adhesives**

Published by  
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