

- Always on top – Functional textiles allow roofs to breathe
- Successful duo – Primer and adhesive for PVC window profiles
- High-tech packaging – Paper bags for the building materials industry

Building with wood

On the way to tomorrow
with a traditional building material



Dear Reader,

Welcome to the new edition of our customer magazine “Progress”.

Editorial

Some of the major concerns around the topic of building are values like safety and security, durability, sustainability, and resource conservation. Buildings are – normally – constructed to last for a very long time.

One of the oldest natural building materials is a remarkable player in this field: Wood is continuously getting more and more important for this market, due to the fact that it makes buildings energy efficient and sustainable, while also allowing the creation of most sophisticated architectural designs and dimensions – all of this thanks to the most advanced methods of construction and manufacture, and perfectly connected with Jowat adhesives.

There are other areas where our adhesives facilitate outstanding structural performance. This covers window profiles with optimum durability in any design imaginable, as well as roofs that can withstand practically everything while never “losing their breath”, or the “old bags” that turn into high-tech packaging systems.

By the way: Jowat is also relying on corporate values like sustainability and resource conservation – not only when building new plants.

Good reading!

Gabriele Müller

Commercial Management Jowat Elsteraue

2013

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Building with wood

On the way to tomorrow with a traditional building material



High-tech construction in wood: Parasols over the "Plaza de la Incernacion" in Seville

Wood is a substrate with high strength data, and easy to work on. In a sustained forestry management the availability is good and in comparison to mineral and metal substrates, wood has a much better eco-efficiency rate. Around the globe, it is therefore valued and utilized as building material that offers technical, economical and ecological advantages with a high design potential. Based on traditions of craftsmanship, wood as construction material is used for raising buildings and monuments, and for the design of interiors.

In the recent past, wooden substrates developed into high-tech materials, which in consequence represent a major base for new ideas and methods in the construction industry. New materials in combination with modern construction principles and bonding methods permit the creation of buildings of dimensions and designs that

were so far unusual. New applications were opened up, and innovative concepts of construction could be implemented in actual practice. The high-tech wooden buildings of the Hanover Exhibition Centre, the Metropol Parasols in Seville, or the Centre Pompidou in Metz, are examples of international fame. But we can also find modern woodbased structural engineering closer to home, for example in factories, sports arenas, or bridges.

This natural building material has by now gained an importance which until a short time ago, even the expert community thought of as hardly possible. What caused this change was first of all the expanding know-how concerning the appropriate utilisation and processing of wood, the development of new substrates, and improved means and materials of connecting, bonding and coating; additionally, intelligent construction methods and prefabrication techniques are used. This development of materials – which has not reached its end by far – is mainly driven by the so-called wood-based substrates, but also by innovative hybrid structural components made of wood and other building materials.

The new concepts are not only found in the construction of buildings and bridges, but also in unconventional applications, like the roof system of the Plaza de la Encarnación in the old town centre of Seville. This is a wooden shade construction with a height of up to 28 metres. Six mushroom or parasol shapes are interconnected and a sunshade canopy is created over the plaza, covering an area of 70 x 100 metres. These wooden assemblies are mainly made of laminated veneer lumber, with additional components of steel and armoured concrete, used above all for areas with carrying and connecting functions. The parasol construction also contains an integrated panorama restaurant. These outstanding highlights are one thing – but the substrate wood also had to undergo further development in the more conventional areas of use. For instance, the number of wooden one- and two-storey family homes

continues to rise, not only in Central Europe. Multiple varieties of high-quality timber, woodbased substrates, and other building materials, are combined here into modern and energy-efficient structures. In addition, for some years now, even multi-storey homes are built of wood.

An outstanding example for this is the seven-storey apartment house in Berlin. The construction is based on load-bearing glulam made of solid timber, with composite flooring and ceiling elements of wood and concrete. Due to the static base frame without load-bearing interior walls, a free individual design for all rooms on all seven floors is possible. The building also implements new model concepts for fire protection. Thanks to an intelligent construction method, a level of safety comparable to the standard of solid wood buildings could be reached. To remain competitive, wooden buildings must also meet additional requirements concerning efficient production, quality of living,



Wooden construction also for homebuilding:
Seven-storey apartment house in Berlin

and heat insulation. The demands comprise short assembly times, a pleasant climate inside the homes, accompanied by high levels of home comfort and a good heat insulation. In contrast to building in masonry and concrete, wooden construction is a dry method of building. Therefore, buildings and other constructions

are possible by using prefabricated components that can be assembled in a very short time and weatherproof on site, and which then can undergo interior finishing. To take advantage of these aspects, intelligent and careful planning is necessary. Modern material finishing methods complete the prefabrication stages in the plant, leading to buildings of high quality even in very short construction times.

Another favourable characteristic of wood is that it will to a large extent create an optimum ambient climate even without necessitating involved technical measures. The wooden construction offers clear advantages with regard to heat radiation and a healthy interior environment, which also applies to the interior finishing work in ceiling, wall and floor areas. The welcome aspects of wood are, among others, the comfort, pleasant touch, surface structure, antistatic property, nice smell, plus a moisture-balancing effect. Beyond this, wood is an aesthetic building material and as such offers a multitude of design possibilities to create highly individual interiors.

Wooden buildings have always been superior in their heat insulating properties compared to similar buildings made of other construction materials, since the heat conductivity of wood is low. Wooden houses, in combination with modern ventilation and energy concepts, can therefore meet the current standards of heat and climate insulation to a high degree, and they allow to create buildings that will permit a largely energy-independent utilization. The importance of wood for the future of the building industry is due to factors like excellent technical properties, its advantages in efficiency, sustainability and functionality, but also in its continuing

availability when there is adequate forestry management. The huge variety of characteristics make wood not only an important material from the economic side, but also a building material and substrate with future viability. These advantages have to be seen in context with the challenges of sustainability, and environmental and climate protection. It is important to be aware of the fact that today's wood-based substrates allow



Photo: Huf-Haus, Hartenfels

Modern, efficient and comfortable:
Wood – more than a design element

ecologically compatible and sustainable building methods. Benchmark for the wood-processing building industry is to create exemplary and high-quality buildings and interior finishing components. Adhesives play a major role in supporting this progress. The structural use of wood also results in advantages for the place where it comes from, the forest. Everyone undertaking construction of a wooden building should be aware of the fact that in utilising this material correctly, they are to a large extent building with nature and for nature.

The author



Prof. Dr. Rainer Marutzky, born 1947 in Halle/Salle, studied chemistry at the Technical University of Brunswick. After his doctorate in 1975, he joined the Fraunhofer Institute for Wood Research in Brunswick. Following the completion of his post-doctoral thesis on the subject of "Wood Chemistry", he became Director of the Fraunhofer Institute in 1992, a position he held until the end of 2009. His scientific fields of research include above all environmental matters and the utilisation of wood-based substrates, and questions of wood bonding. Beyond this, he is also involved in standardisation activities on a national and European level.

Always on top!

Functional textiles allow roofs to breathe



The roof must “breathe” to maintain its substance for a long time. This is why a roofing process not only needs slates and insulating material, but also textiles that allow vapour evaporation: roofing liners and ridge ventilation. Modern industrial adhesives are used for manufacturing these functional textiles.

Long-term stability in wind and weather

Roofing liners are located below the hard roofing material – the slates – and act as second water-repelling skin. They have to be highly resistant and impermeable against driving rain and winds, high and low temperatures, and UV radiation. The UV stability is most important in cases where the liner materials remain exposed for an extended time as temporary roof covering mate-

rial. Modern functional textiles can stay uncovered for up to one year – without any loss of functionality.

Challenge diffusion capacity

The roofing material has to protect the wooden roofing frame against rain, snow, wind, sun, and dirt, by the impermeability of its materials, but additionally, the liners must also allow an exchange of moisture from inside

to outside. The key word is here: diffusion permeability. Excess moisture – for instance emitted from the wooden frame structures when temperatures increase substantially – must be able to diffuse through the textile. A faster drying process protects the substance of the structure and the heat insulating layers against moisture damage, for instance by mould growth. Any material used in the manufacture of textiles for construction purposes has to be able to withstand these stresses for an indefinite time – this also applies to the adhesives used. They ensure a high-strength material compound which at the same time allows vapour diffusion.

Adhesive: Strong partner in manufacturing

The challenge which the adhesive has to master in the manufacture of these textiles, is the lamination of breathable membrane and textile fabrics, without impairing the diffusion to the outside. Up to four layers of different materials are laminated with adhesives, to create the compound laminate. The new PO (polyolefin)-based products from the Jowat-Hightherm® adhesive family have proven to be most suitable for this bonding process. Apart from a wide adhesion spectrum, they offer excellent long-term adhesive durability on ma-

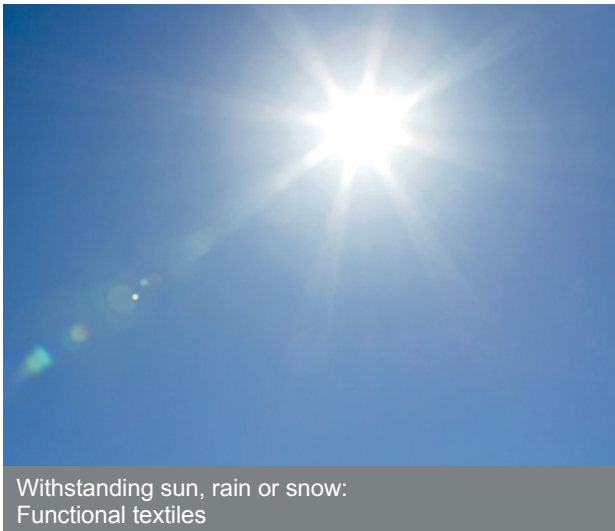
terials like breathable membrane, fleece, foil and PE netting. Roofing liner materials are manufactured at high line speeds, an output of 200 metres per minute is not uncommon. At the point where all materials to be joined are simultaneously fed from the reels into the laminator, the adhesive used needs to be compatible with the applicator system, and permit a clean application. Whether applied by slot nozzle or by curtain coating methods, the surface of these bonded substrates should remain as open as possible, to maintain vapour diffusion at a maximum rate. This is where the new Jowat-Toptherm® adhesive comes in: It reaches the highest compound strength with a low adhesive grammage. Additionally, high green strength and good wetting of the substrates makes production processes very efficient.

On site: Builder's needs

Considering the priorities of architects and builders, their first and topmost requirement would be the long-term prevention of any possible damage due to weather effects. They also want a vapour barrier which is still permitting adequate diffusion of moisture. If you ask a roofer what he expects from the quality of a roofing



Guaranteed ventilation: Ridge venting membranes allow diffusion



Withstanding sun, rain or snow:
Functional textiles

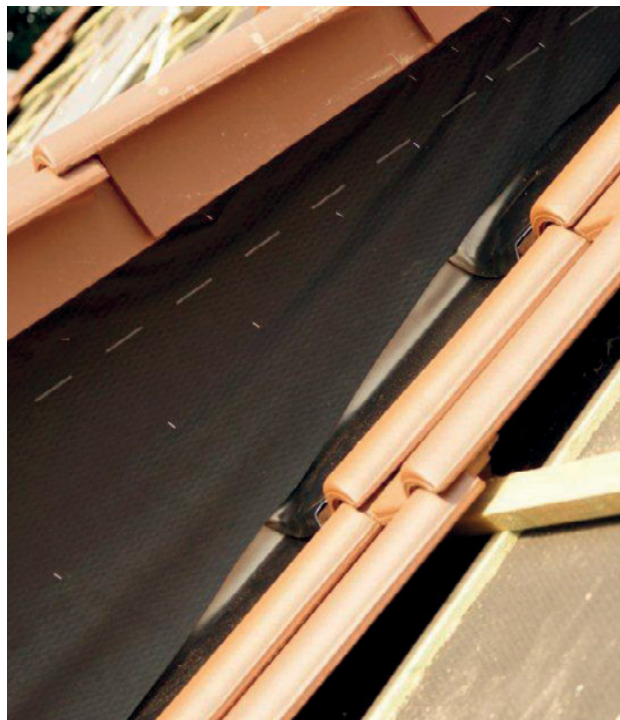
liner, he would emphasize that apart from the functionality, he needs material that is easy to work with. "The lighter the weight of the textiles, and in consequence the rolls, the easier they can be handled on the roof during installation", is the comment from Christian Willenbrink, a German master roofer. "When we install the webs, they are exposed to mechanical stress. They have to provide stability and strength when stepped on and may not rip, while at the same time being easy to cut with a knife". In consequence, the ease of handling during installation also covers the occupational safety aspect during the construction phase.

Ridge venting textiles

Just like the roof insulating liner textiles, ridge venting membranes have to provide their input to a positive climate effect of the roofing construction. These materials also act as ventilation for the roof, meaning they also must allow vapour diffusion. Ridge venting materials offer at the same time protection against driven snow and splash water, besides being UV stable. The adhesive used in the assembly of this structural component must meet the challenge of bonding different materials like wovens or nonwovens of mineral fibres and similar to aluminium, a substrate not easy to bond. The aluminium foil undergoes deformation when installed, to adapt to the shapes of the roofing material – the compound therefore needs to have superior strength. Jowat adhesives provide sophisticated solutions with excellent green strength, and achieving superior, durable bonds.

Forecast

The demands on roofing textiles in regard to vapour diffusion are permanently growing. Energy efficiency is increasingly becoming a top priority in planning and implementing building projects, heat insulation for roofs is taking up space. The space planned for the ventilation systems in an attic will in consequence be limited. At the same time, construction schedules are constantly tightened for economic reasons, which leads to increased moisture trapped in the new buildings. The answer is more powerful heating systems that can drive out more moisture in a shorter time from the building, provided that an adequate diffusion system was installed. The manufacturers of functional structural textiles are therefore demanding adhesives which create robust material compounds, while at the same time allowing optimum ventilation of the roofing construction.



Optimum compound guaranteed: Jowat-Toptherm®

The author



Jaroslav Hellwig, Jowat AG
(Applications Manager
Industrial Division
Automotive | Textile | Electrical)

Successful duo

Primer and adhesive
for PVC window profiles



Light and airy rooms with excellent indoor climate often create the impression of living without barriers between indoors and outdoors, a pleasant atmosphere for homes which is created by large window walls. Windows today not only provide heat insulation but also soundproofing, are easy to open and close, and their attractive looks will last for many years.

Foil-laminated plastic profiles enable the window industry and craftsmen to create endless design variations, in shapes and looks of the window frames. Whether metal effects, striking colours or conventional wood surface design – plastic window profiles can be laminated with the most diverse foils. Innovative bonding systems, a combination of primer and moisture-curing

PUR hot melt adhesive, ensure durable material compounds of high value.

Dr. Matthias Staudt, Applications Manager of the Industrial Division Wood | Furniture | Construction, is providing information on innovative bonding systems for the foil-lamination of plastic window profiles.

Dr. Staudt, can you give us a general idea of the situation on the window market?

Dr. Matthias Staudt: Of course, let's have a look at the German market as example. The growth in production for the year 2012 counting completed window units amounted to 2.6 percent. The total annual production volume of the industry was 13.2 million window units. About 57.4 percent were plastic frames, of which about 30 percent were foil-laminated – and this percentage is increasing¹.

No separation of foil from profile – over years, no matter what the weather. This is a tough challenge for an adhesive product.

Dr. Matthias Staudt: That's right. Windows are generally expected to last for 25 to 40 years. Above all, windows located in house walls where they are exposed to heavy weather impacts have to withstand serious stress factors: pelting rain, hail, snow, long frost periods, direct sun exposure, or alternating temperatures. The material compound must also prove resistant against differences in temperatures between the inside and the outside of the window – these may vary by up to 50 °C. PVC has a high expansion coefficient, so when the temperature rises, the adhesive system has to be able to compensate for the expansion of the PVC frame and the foils which is also usually based on PVC, without loss of bond strength.

Windows are – also internationally – evaluated according to RAL standards and quality assurance. What role does the adhesive play in this?

Dr. Matthias Staudt: The durable strength of the material compound is a quality criterion which is very crucial, and has lately been included in the quality assessments. For the first time this year, the thermal and hydrolysis resistance of the adhesive systems used are specifically tested. Our bonding systems for PVC profile wrapping are certified for exterior applications according to RAL standards. They consist of a combination of primer and reactive PUR hot melt adhesive. This "successful duo" easily passed hydrolysis testing, simulating the ageing process of the total compound.

Key word "primer" – what's the function of the primer in this "successful duo"?

Dr. Matthias Staudt: The primer acts as a kind of

washing primer. It cleans the surface of the PVC profiles, removing foreign substances that might impair the development of adhesive properties. It also creates a favourable surface polarity which improves the physical adhesion on the profile surface. Apart from the well-known primers that are low in VOCs, Jowat has recently developed the first primer on an innovative solvent basis free of any hazard labelling requirements. Both products reach practically equal performance results in comparison to conventional solvent based primers. The benefits of these new products are lower gram-mages and a clearly reduced impact on humans and the environment.

Now we come to the adhesive ...

Dr. Matthias Staudt: Right, because we are now at the point where the thermoplastic foil and the profile are joined in the production process. First of all, the foil comes off the reel and is coated with the adhesive in a slot nozzle application process, which should result in an even and homogenous coating. Any flaws here would later on have a detrimental impact on the quality of the windowframe surface. The foil is then pressed onto the profile by rollers, creating a permanent wrap.



Window profiles: Trend to variety of designs

Both foil and profile enter this process after preheating, or were stored under controlled temperature conditions, giving the materials the ideal properties necessary for wrapping. Appropriate temperatures are very important in order to allow the adhesive to wet the foil completely and evenly.

¹Press release by the VFF 04/13



Large windows for a pleasant atmosphere

Our hot melt adhesives are tailored for their specific purposes. Their performance spectrum is the result of a successful interplay of viscosity, application temperature, open time and chemical composition. For example, when foils with high resilience properties are used, the adhesive needs to provide a superior level of initial strength. The “green” strength develops immediately after transfer of the adhesive from the foil onto the profile. It increases continuously during the following lamination process while cooling down to ambient temperature. Cohesion will then build up in the course of the subsequent crosslinking, which is triggered by humidity. Within 24 hours, the fastest adhesive systems will have undergone almost complete cure. The downline finishing steps of these foil-laminated PVC profiles may then be carried out after a very short time. The windowframe assembly itself usually takes place in industrial shops. The profiles are here cut and welded to specification. The reactive adhesive system will keep the foil bonded to the profile, even under the extremely high temperatures developed in these processes.

What future challenges must be met by an adhesives manufacturer?

Dr. Matthias Staudt: Over the past years, the window market has noted a steady growth. We see that this trend is also resulting in a positive effect on the market for plastic windowframes. The number of foil manufacturers is rising. The foil materials are also changing.

Apart from PVC foils, we see acrylates and polyesters as bases. This wide material range is not a problem for Jowat adhesives – we can easily keep the pace. When the pressures caused by economic efficiency considerations result in the expected higher line speeds – our products are already formulated with the adequate potential. And we are of course focusing on the topic of reduction of hazardous substances. We are the leading company in marketing a solvent-based primer with low VOC emissions which does not require hazard labelling.

All components must fit perfectly: raw materials, formulation, processing characteristics, environmental compatibility, occupational safety, and economic efficiency. Our bonding system, the “successful duo” for PVC profile wrapping, makes us a major league player on the field of innovation.

Editor Judith Kapteina talked to:

Interview partner



Dr. Matthias Staudt, Jowat AG
(Applications Manager
Industrial Division
Wood | Furniture | Construction)

High-tech packaging

Paper bags for the building materials industry



Building sites need them and they are transported daily via road and rail: Bulk goods for construction, like mortar, cement, lime etc. Large volumes come without packaging materials, for instance in trucks or railcars – so-called bulks, smaller amounts in flexible packages like Big Bags, sacks and bags.

Bags are among of the oldest packaging systems known to mankind. Where in former Ages, man used animal hides, modern bags are today made of paper, plastic foils or wovens, or combinations of the respective materials. Adhesives are converting this tried and proven packaging system into a super modern high-

tech packaging unit. Among the bags, the paper bag continues to be a material with low cost and with high functionality. Bulk goods like building materials that come in pulverised form are preferably packaged in paper bags today. What the paper bag has to achieve – just like any other packaging material – is to protect the



Bag, sack or pouch: Quality for packaging units

content against potential damage from exterior factors. Paper bags resist mechanical stress and moisture mainly due to their assembly in several layers, thereby protecting materials like mortar or cement for instance from hardening prematurely. When lined with plastic foils, this also extends the shelf life for the building materials – another major criterion for manufacturers who frequently use the cold season for producing large volumes of these materials as stock reserves.

Bags come in various unit sizes – ranging from 5 kg bags for the DIY trade, to 50 kg bags for construction sites. They are closed by sealing tape or valve, often equipped with outer antislip coating to facilitate safe transport. The cuboid shape also ensures good stacking of the filled bags.

Manufacturing process: “High-tech paper bag”

To what extent a paper bag is a high-tech product becomes clear very soon when examining its manufacturing process: The materials used are papers that are optimised for strength, foils on polyethylene (PE) basis, and powerful industrial adhesives. The bags are manufactured on high-tech machines which usually operate in two-stage processes.

The first step is to join flat paper and PE webs coming from the reel, to form a tube. The PE web here forms the bag inlay, and this is attached to the paper web using an adhesive. It prevents slippage of the inlay during production while also ensuring a tight seal of the bag in the filling operation. The bags are then cut to the specified dimensions.

The adhesives of choice for this step are dispersions. They achieve a reliable bond of paper and foil, are fast setting and cost-efficient, and guarantee the safe downline processing of the sack blanks in this high-speed manufacturing process.

In the second production step, the tubular blanks now are closed at top and bottom. The typical method of creating a closed paper bag from the tubular shape is to fold a bottom made of the flat tube material itself. These bottoms are reinforced using another patch of paper, to increase the weight resistance of this part of the bag



Whether stack pressure or weather risks: Bags withstand stress



High line speeds: Manufacture and filling

which will have to withstand the heavy load of the filling material. In the same production step, the top of the bag is then folded and the valve closure is patched in. The closing systems are valves with heat-sealing properties. They are bonded into the bag and first of all shut under pressure from the inside, which is exerted by the product when the bag is filled. This is followed by heat activation of the sealable area of the valve, thereby ensuring a permanently tight seal.

“High-tech” at “High-Speed”

A paper bag is manufactured within fractions of a second. The most modern production lines are capable of an output of up to 360 bags per minute. This means for the adhesives: High initial strength is needed, equalling fast setting, accompanied by a short open time. The dispersion and hot melt adhesives made by Jowat that are used for the manufacture of paper bags are very effective due to their powerful performance especially in this high-speed production process. They match all production requirements perfectly. An excellent processing performance of these adhesives minimizes the required maintenance and cleaning operations, also the production waste. The processes run with perfect reliability and efficiency.

Forecast

When tried and proven packaging systems – like for instance the paper bag – are reinvented because of new bases for packaging materials and surface structures, a comprehensive know-how in application technology is required.

The cost of the raw material paper can run up to 60 percent of the entire manufacturing cost of a paper bag. Therefore, other materials like polypropylene wovens are more attractive due to lower cost and higher load resistance.

When the surfaces are difficult to bond, special adhesives are required to provide a durable and reliable end-product. These challenges are already mastered today by Jowat adhesives – e.g. high-speed production processes combined with high reliability and superior quality results.

The author



Paul Diakonow, Jowat AG
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Industrial Division
Paper | Packaging)

Modern production sites

Major factors for non-varying adhesive quality – worldwide

Product quality is one of the crucial factors that determines the success of a company. Processors expect industrial adhesives which have the same standard all over the world. Whether manufactured in Malaysia or the United States – a comparable quality is the requirement that any individual package of adhesive supplied must fulfil. Jowat AG meets this challenge for instance by building modern production sites.

Jowat AG has two production sites in Germany, and additional plants in Switzerland, the United States, Malaysia and Australia. The manager in charge for building the plants around the globe is Uwe Lehmeier, who has been the Plant Manager at the Detmold location for 20 years. He provides information on the challenge of “international production”.

Mr Lehmeier, Jowat is manufacturing in six locations and on five continents. How is it possible to ensure that the quality of the adhesives produced remains equally high everywhere?

Uwe Lehmeier: Two factors play a major role here: First of all, our production sites are also locations where adhesive development takes place. Our Directors of R & D with their teams are responsible to a large extent for the compliance with quality standards, ensuring this throughout the production processes. They are therefore maintaining constant communication with their colleagues in research and production in all parts of the world. Secondly, innovative adhesive formulations need production sites that match high standards in technology and logistics. Building new production sites must also be backed by extensive experience.

Where did you gain this experience?

Uwe Lehmeier: First of all, we were able to draw on our experience with construction projects here in Germany. The major strategic decision “to grow under our own steam” was made in the mid-nineties of the past

century. A key incident was the fire that burned down one of the production halls which was rebuilt on a larger scale and according to the most advanced standards, also completed by a high bay warehouse facility. The year 2001 saw a cooperative project with the University of Applied Sciences in Lemgo getting under way, conceptualizing an additional production site. Plans for new production halls in Elsteraue – formerly Zeitz – used this as blueprint, adding facilities for warehousing and administration, for analytical and technical labs. The experience gained from these two construction projects was systematically analysed, and we were, and are still, profiting from this for further production site concepts.

How do you proceed when focusing on a new location, a new market?

Uwe Lehmeier: Of course, any planning of a new production site requires prior strategic decisions by the Board of Directors and the Shareholders. They answer the major questions concerning the adhesive products, and concerning the quantities in which these will be manufactured at the new site.

The decision-making process with regard to the actual location on the map then involves analyses and evaluations of many criteria. These conceptual activities take place in a Jowat AG team where the specific competencies are bundled, so that the decision agreed upon in the end will be the right one.

Which are the actual criteria that are examined?

Uwe Lehmeier: We are manufacturers of chemical products and as such we move tons of raw materials daily and manufacture adhesive products; space considerations are therefore very important. There must be adequate square footage for logistics and distribution as well as for the administrative and development departments. When a market experiences a rising demand for adhesives, this location also has to have space reserved for expansions. Of course, the infrastructure of a country also plays a major role. Factors like capacities of local energy suppliers, connections to transportation networks, but also the quality level of the local workforce, political, legal and social aspects – all of these are relevant criteria.

When the actual site for a new plant has been determined, the next stage first of all requires know-how of all details involved in an implementation of the building plans. In cooperation with local consultants, authorities and insurance companies, we make sure that the country-specific regulations and laws are observed, and that our building plans can become reality as scheduled. After all, a plant construction can only be considered to be a successfully completed project when attractive jobs are created on the new site, and when adequate resources for modern plant technology and production logistics are available. Under these conditions, adhesives of superior quality can be manufactured against the background of uniform global standards.

What are the specific Jowat AG quality characteristics for a new production site?

Uwe Lehmeier: For Jowat AG, the concept of quality is always tied to the Corporate Values. Sustainability and resource conservation are important to us. When building new production sites, we focus on “energy-efficient construction”. The latest example for this is the new logistics building in Detmold, which was completed in 2011. We succeeded in building with high energy efficiency, also due to the insulation measures we implemented, to achieve a result that is even 30 percent better than the official standards. A newly installed heat regeneration system allows to use the warm exhaust air from the factory to heat our offices. In Switzerland, we followed a similar principle. An integrated system utilizing a groundwater-heat pump technology serves



Competence pooling: Teamwork

to climatise the buildings. The list of examples, where Jowat implemented sustainability and resource conservation measures, could even be longer.

Sustainability and resource conservation, production environments planned for efficiency, and global quality standards are certainly important – how is Jowat succeeding in filling these demands with life?

Uwe Lehmeier: Our understanding of quality is implemented on all sites around the globe by an awareness of responsibilities, and commitment. We as plant and production managers have the responsibility to conceive and manage production sites that offer a humanitarian working environment, to ensure efficient production processes, and to supply products matching the requirements of our customers. Each and everyone of us is providing his or her personal input, and cooperates with all colleagues in an interdisciplinary and target-oriented manner. Whether produced in Malaysia or Germany – we supply our customers around the globe with adhesives of uniform high quality.

Editor Judith Kapteina talked to:

Interview partner

Uwe Lehmeier, Jowat AG
(Plant Manger)



Building on a strong customer focus

Robert Rutkowski has been employed as Export Director of Jowat Polska since 2007, where the graduate wood technologist, together with his team, signs responsible for the business relations with distributors and direct customers in Poland and Eastern Europe. The adhesive specialist is most interested in contacts with people from a variety of diverse cultural and national backgrounds. This is how he gets to know the different mentalities and economic challenges of his customers. “In the emerging markets of Eastern Europe, technologies and customer requirements change daily,” states Robert Rutkowski (44). “With our superior application know-how and our comprehensive product range, we can offer fast solutions to our customers that fit their needs perfectly”. The special advantage of working in a team operating on a global scale is evident for Mr Rutkowski: The global exchange of information with colleagues is the key that allows him to provide superior consultation services, for all adhesives and industries.



News

Good response at the Filtech 2013 in Wiesbaden

Jowat products for filter bonding are highly valued

With a new adhesive programme especially tailored for the manufacture of industrial filters, Jowat has attended the trade show Filtech for the first time. The innovative product range covers adhesives for laminating and pleating filter materials and also for bonding the filter frames. The hot melt adhesives are specially formulated for adapting to the specific application requirements. With these products optimum results in filter bonding are achieved at comparable processing costs.



“The demand is huge for adhesive systems that clearly enhance the functional aspect of these high-value technical textiles. This is also supported by the good number of contacts we had at our fair booth,” reports Timm Schulze, Director Industrial Division Automotive | Textile | Electrical. “Interesting, very specific technical discussions with processors, concerning their individual conditions of their production, have confirmed that the development of these innovative adhesive systems is already a match for future challenges from the technological environment “filter manufacture”. For the application “filter bonding”, Jowat is supplying comprehensive consulting services around the globe.

Trade Fairs and Events



November 18th to 22nd, 2013
**ZOW Moscow, Moscow
 Russia**



February 10th to 13th, 2014
**ZOW Bad Salzuflen, Bad Salzuflen
 Germany**



January 22nd to 23rd, 2014
**Verpackung – Packaging
 Innovations & Logistics, Hamburg
 Germany**



February 21st to 25th, 2014
**Indiawood, Bangalore
 India**

Preview

Wood | Furniture | Construction Industry

Surface quality:
Reduction of application amounts



Paper | Packaging Industry

Small drinkpacks:
Accurate adhesive application



Automotive | Textile | Electrical Industry

Trapping the smallest particles:
Adhesives for filter bonding



Jowat in summary

Being close to our customers

We provide service and solutions with technical support on site around the globe. Our products are successfully used in over 60 countries, on all continents.

Products

Adhesive product range:

- Dispersion adhesives
- Conventional hot melt adhesives
- Solvent-based adhesives
- PUR hot melt adhesives (moisture-curing)
- POR hot melt adhesives (moisture-curing)
- 1K PU prepolymers (moisture-curing)
- Pressure-sensitive adhesives (PSAs)
- Other adhesives (urea resin, cyanoacrylate, casein etc.)
- Special products (primers, release agents, cleaners, hand cleaning paste etc.)

Areas of application:

- Woodworking and furniture industry
- Paper and packaging industry
- Building and load-bearing construction in wood
- Upholstery, mattress and foam industry
- Graphic arts and bookbinding
- Vehicles, automotive and subsupplier industry
- Technical textiles and textile industry
- Electrical Industry
- Other applications, also general assembly

Company

Business year 2012

Turnover €: approx. 235 mil.

Employees: approx. 850

Production

Polymerisation: 7,000 tons

Dispersion adhesives: 12,000 tons

Hot melt adhesives: 45,000 tons

Solvent-based adhesives: 5,000 tons

Jowat – Your partner in bonding



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