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moment®

EJOT France
Solar project with a big impact

EJOT Croatia
Production plant for ETICS profiles opened

The new CAPITOL
Cinema, Hotel, Restaurant in Bad Berleburg

EJOT TEC CENTER

Campus for Innovation and Knowledge

EJOT® Magazine

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Editorial

Dear partners of the EJOT Group,

in these days it is not easy to write an introduction for our autumn edition of MOMENT. We are looking at the current situation with concern – for businesses in view of the recession in Germany and weak economic impulses, but even more so at the conditions and trouble spots of the world that seem to have mulitplied. We come from a world where globalisation and free trade ensured a a historically great boost to prosperity. And today we are looking at a world where politics increasingly promotes national sentiment and isolation.

As a manufacturer for screws and anchors we are certainly not a geopolitically important economic player. But we do derive a great part of our economic strength from the cooperation of our international companies and personnel. And they work together to make our customers‘ fastening challenges easier and, from a „total cost of ownership“ point of view, also more cost-effective, whether it is in Germany, China, Turkey, Poland or 36 other countries around the world.
On July 1st we newly positioned us together with our North American partners and thus promoted the internationalisation part of our strategy „EJOT 2025“.

The second strong pillar of our “EJOT 2025” strategy is always striving for better products and service solutions for our customers. To this end, we were able to reach an important milestone in September with the completion of the TEC CENTER of our Market Unit Construction in Bad Laasphe which is the main topic of the new MOMENT. “Building during climate change” is a challenge for us, but also a great opportunity to focus our performance on this important topic. When the CO_2 content of the operation of buildings in Germany is over 30 percent, we want to contribute our share to lowering it. The diversity of these activities can be found in this issue, be it in the contribution to „green steel wire“, a cooperation at our location in France on renewable energies or the commitiment to insulate buildings. We are looking ahead – even in these times.

Yours sincerely

Christian F. Kocherscheidt
Managing Partner

EJOT®

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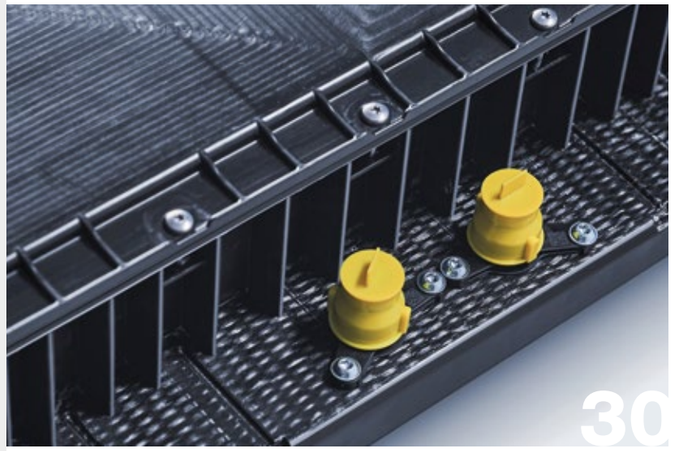

German Innovation Award 2023

Basic basebead profile Pro BSOP-HL and basebead profile Pro SOP received award

After the years 2021 and 2022, EJOT was awarded the German Innovation Award for the third time. The basic basebead profile Pro BSOP-HL and the basebead profile Pro SOP for recessed bases at external thermal insulation composite systems (ETICS) were granted the coveted award in the category “Excellence in Business to Business – Building & Elements”. The German Innovation Award has been awarded annually by the German Design Council since 1953 and honours design, brand and innovation-achievements of international significance.

Basebead profiles are always used when the base of a building is designed to be recessed in an external thermal insulation composite system (ETICS). They form the lower horizontal end and seal the ETICS in the direction of the floor. The basic basebead profile Pro BSOP-HL and the basebead profile Pro SOP combine the advantages of the established systems made of aluminium and PVC solid material and eliminate their disadvantages.

The basic baseboard profile Pro BSOP-HL (High Load) is unique in the international market. Thanks to an optimised, patent-pending product geometry, it offers numerous useful features when combined with the basebead profile Pro SOP, such as maximum dimensional stability, a low thermal bridge effect and high flexibility. Together they form a powerful duo for the basebead area.

www.ejot.de/pro-line

“Quality Seal Training South Westphalia” of the Chamber of Industry and Commerce Siegen

Quality of EJOT’s vocational training recognised

In August, EJOT was awarded the quality seal for education in South Westphalia by the Siegen Chamber of Industry and Commerce (IHK) for the first time, attesting to the exemplary quality of the vocational training it provides. “During the audit, EJOT achieved a score of 94 out of 100 % – very close to the maximum score,” explains Andreas Kurth, Head of Training and Studies at EJOT.

Award joy for the team from the learning workshop at the Herrenwiese site in Bad Berleburg

The award reflects the great importance that EJOT has placed on the training of young people for many decades. This commitment is evident not only through substantial investment, such as the modern machinery and digital equipment in the learning workshop, but also through the dedication of trainers across the company‘s departments.

“We use the quality seal to refocus attention on the value of vocational training,” explains IHK Managing Director Sabine Bechheim. This is why the IHK annually recognises companies that excel in the selection process, training methods and training outcomes. The evaluation is conducted by regional experts, including trainers, HR professionals, educators and union representatives. Companies that undergo the comprehensive audit receive detailed feedback on their training processes.“

General Manager Meeting in Bad Berleburg

“We are positive about the future”

General Manager Meeting of the EJOT Group in Bad Berleburg: After four years, the first face-to-face meeting with a warm reunion and an equally warm acquaintance with the new colleagues who were present for the first time this week. The keynote lectures by Karl-Heinz Land on the topic of “Artificial Intelligence” and Karsten Schwanke (“Climate change – challenges for our society”) were very interesting. Further topics: Technology leadership, sustainability, digitalisation, innovations, international growth, customer focus, processes and much more.

The visits to the production sites in Wittgenstein were of particular interest, demonstrating the impressive technical diversity of the Market Units Industry and Construction. The colleagues at the sites had prepared a comprehensive and interesting programme for the visitors from all over the world. The tour of the new TEC CENTER in Bad Laasphe was also quite impressive.

“We are positive about the future,” emphasised CFO Wolfgang Bach. Despite many trouble spots in the world and difficult economic conditions, the EJOT Group is stable, he said. “We have shown resilience during the crisis,” Mr Bach continued. Financial stability is the basis for this, as is technological leadership in fastening technology in the two Market Units Industry and Construction. EJOT will continue to strengthen its activities on the American, Asian and African continents, without neglecting the European and German markets, Mr Bach pointed out.

“The EJOT Group is well positioned to emerge stronger from the crises,” CEO Christian Kocherscheidt also emphasised. “With our product diversity, our technological processes and our ability to innovate, we have it in our own hands,” said Mr Kocherscheidt.

Trade fair double in spring

After a long absence, partly due to the pandemic, the Construction market unit is planning two major trade show appearances in spring 2024. Add the trade show dates to your diary now and visit us at **Dach + Holz International** in Stuttgart (5-8 March 2024) and at **FAF Farbe Ausbau & Fassade** in Cologne (23-26 April 2024).

With a focus on sustainable building envelope design, Market Unit Construction will showcase a wide product portfolio for various applications, ranging from timber construction and industrial lightweight construction to flat roofs, solar solutions, and rear-ventilated facades at Dach + Holz in Stuttgart.

At FAF Farbe Ausbau & Fassade, we will be showcasing the latest developments in the areas of anchors as well as fasteners for attachments and profiles. You also have the opportunity to get to know our 360° service in detail.

We look forward to seeing you again and discussing your requirements! For more details about our trade show appearances, please follow us on LinkedIn.

www.ejot.de/bau/newsletter

Personnel changes

New tasks

A. Altug Asarlioglu takes over the management of our Mexican company EJOT Sistemas De Construccion as Vice President Sales of the Market Unit Construction (MUC) for the Americas region. In his new role, Altug Asarlioglu will be responsible for managing our sales activities in North, Central and South America.

Zihnet Tanriverdi will succeed Georg Homrighausen as the new Technical Managing Director of EJOT Tezmak on 01.01.2024. Zihnet Tanriverdi was previously a long-standing production manager in Turkey.

Compatibility of work and family

EJOT is already running through the 5th phase of auditing

Zertifikat seit 2011
audit berufundfamilie

EJOT has been awarded the certificate for the "berufundfamilie" audit of the non-profit Hertie Foundation for its strategic family and life-phase-oriented personnel policy by Federal Minister for Family Affairs Lisa Paus in Berlin. The family-owned company has held the certificate since 2011 and remains in the so-called dialogue process with its fifth certification and already twelve previous audit years with external reviews. The dialogue process is no longer primarily about integrating new measures into our human resources work, but the focus is on continuing established offers and promoting a compatibility-conscious culture at EJOT. These include a one-week children's camp during the summer holidays, a free and anonymous service hotline for employees in problem situations, flexibility in organising work, working hours and the use of work locations, and support for managers by trained business partners in strategic human resources planning.

EJOT presents products for facade greenery

BUGG World Green Infrastructure Congress 2023

In June 2023 the World Green Infrastructure Congress took place in Berlin. Together with one of our partners, GDL Belke GmbH, EJOT presented its facade greenery options, the Iso-Bar ECO and the CROSSFIX® system. Belke realised the facade greenery for EJOT at their new TEC CENTERS in Bad Laasphe. "We were able to have numerous conversations with experts, establish initial contacts with universities of landscape architecture and urban development, and arouse great interest with our own facade greenery at the TecCenter," Daniel Gerstner adds.

They represented EJOT at the BUGG Congress: Daniel Gerstner, Christoph Kraemer and René Achenbach (from left to right).

Christoph Kraemer, team leader RVF & CROSSFIX® at EJOT, gave a well-attended lecture on the topic "System concept for wall-mounted facade greenery" together with our partner Clemens Belke. In the accompanying trade exhibition, we were able to present two innovative product and system solutions: first, the Iso-Bar ECO, which offers the possibility of installing a climbing aid on existing ETICS facades, and second, our CROSSFIX® substructure system, which provides a holistic approach for wall-mounted facade greenery in the sense of rear-ventilated facade construction.

Self-tapping fastening solutions for advanced high strength materials

Direct fastening, where a screw forms its own female thread, is an economical and process-reliable alternative especially for highly stressed joints. The application limits are always determined by the material into which the screw is threaded. If this material is harder than the screw itself, self-tapping fastening is not possible, and the thread is completely destroyed.

EJOT has overcome these application limits with the MAXXtip® material concept. This development achieves what long seemed impossible – a self-tapping fastening that can even be used in ultra-high-strength materials. This is now possible due to an extremely sophisticated heat treatment process, which results in a screw with an ultra-hard screw point. For the first time, this allows a secure direct fastening in ultra-high-strength sheet steels and cast steel materials to be realised with EJOT's SHEETtracs® and Spiralform® thread types.

MAXXtip® screws open up new application areas. For example, they enable secure connections for crash-relevant automotive components that can also be sustainably dismantled for subsequent recycling. Examples include bumpers, reinforcements on the B-pillar or seat structures to which add-on parts have to be fastened.

Go to MAXXtip® video:

JF3-2-6.0

Addition to EJOT's solar portfolio

The range of EJOFAST® self-drilling screws has grown with the addition of the JF3-2-6.0, primarily designed for use in the solar industry. This screw is especially suitable for elevating solar substructures on trapezoidal profiles using clips. Similar to all EJOFAST® self-drilling screws, the JF3-2-6.0 offers secure and slip-free application, along with a reduced swarf formation in the screw connection, thanks to its finely crafted tip geometry. This particular screw has a slightly larger diameter compared to the JF3-2-5.5, providing increased load-bearing capacity across a wide range of applications.

EJOT offers a diverse solar fastening portfolio, with the EJOT solar fastener holding the distinction of being the first in Europe to receive ETA-22/0762 approval. Prior to that, EJOT was the first company to supply a solar fastener approved by building authorities and the first to sell self-drilling solar fasteners.

For those interested, EJOT offers solar sample boxes that showcase a selection of their solutions for the solar sector, so you can give them a try and see for yourself. Interested? Your sales representative has more information ready for you. The sample boxes are available at no cost and can also be obtained from your sales representative.

View of the exterior façade of the new TEC CENTER at the EJOT site in Bad Laasphe.

Building during climate change

The construction industry will change dramatically in the next few years. And in ways that we cannot yet imagine. Thesis: it has already changed.

>>Text: Prof. Burkhard Pahl

The first strategic approaches are discernible and are scientifically supported.[1) 9)] What is this all about, and what are the driving forces? In addition to the demands for energy efficiency with drastic CO_2 reduction, the replacement of fossil fuels, the demands for sustainable construction, the ecological "footprint" of buildings is moving into focus. The buzzwords are: circular construction, re-use, recycling, renunciation and renaturation as well as re-ecologisation of our urban spaces (urban gardening, sponge city, etc.).

Sustainable construction means harmonising economic, ecological and social aspects, as first described by Hans Carl von Carlowitz in sylvicultura oeconomica 1713, Leipzig. This addressed the principles of sustainable forestry. In construction, so-called green building standards have emerged in recent years to assess sustainable building methods: LEED, BREEAM, DGNB with certifications in silver, gold and platinum. A scoring system based on main categories includes scores for light control, length of floor mats, documentation, distance to public transport, etc.

My institute at the University of Leipzig developed a simplified guideline[2)] for EJOT a few years ago. The fact is that almost all buildings in German-speaking countries that are planned and constructed in accordance with the applicable laws are likely to achieve the German "DGNB Silver" label. So what? Today, this type of certification is no longer in focus. In future, the emphasis will increasingly be on the ecological "footprint" during the construction and operation of a building. This is already reflected in the current funding frameworks.

At this point, here is a reminder from Ove Arup[3)] from 1970, the famous key speech:
"... Our work should be interesting and rewarding. Only a job done well, as well as we can do it – and as well as it can be done – is that. We must therefore strive for quality in what we do, and never be satisfied with second-rate. Quality can mean many things. As structural engineers, we have to meet the requirements for a healthy, durable and economical building. But besides this, it should also arouse aesthetic pleasure, because without this quality it does not create satisfaction..."

What a statement from an engineer back in 1970! At the time, Ove Arup, a British-Danish engineer, headed an engineering firm in London with around 3,000 employees worldwide; among other things, he was responsible for the structural design of the Sydney Opera House.

Durable and in tune with our environment also means resource-efficient in the use of materials and energy. This brings us to one of the main drivers of change in construction: "energy-efficient and resource-conserving".

This means saving primary energy and fossil fuels when heating, cooling, constructing and operating buildings. Politics wants to achieve this by means of two measures:

1. By highly insulating building shells that are as compact as possible. Here, there are limit values that must be complied with and reference buildings for calculation methods.

2. By replacing fossil fuels such as gas and oil with geothermal heat, air or brine heat pumps in combination with electricity from renewable energies (photovoltaics, wind power, etc.).

The goal is to reduce the "global warming potential", wherein the identified drivers are CO_2, methane and other substances (converted into CO_2 equivalent). In Germany, this has led to buildings that are highly insulated but insufficiently reflect internal and external conditions.

The contrast to this is the traditional Black Forest house[4)] , the adaptive house: Living areas facing south with large windows, continuous arbour as well as a roof overhang for shading in summer and warming in winter; stables, threshing floor, goods delivery facing north to reduce heat loss, etc.

Aanalogy to the new TEC CENTER:
under a cantilevered roof with a continuous, planted balcony and variable sun protection; the workshops and laboratories (“the stable”) to the north, with the warehouse (the “threshing floor”) behind it as an additional buffer space. Deliveries are also from the north; above this, a green retention roof with water retention for climate regulation and, to the west, a so-called “living wall” of planted, moistened earth (instead of a stack of logs).

The bottom line: we need to learn again how to react more intelligently to external conditions. We need simple, adaptive solutions. We need to find a middle ground again with respect to technology and the use of materials. We must drastically reduce the consumption of energy and resources, the emission of CO_2.

The buzzwords are omnipresent in the press and drastically describe our socio-ecological economic dilemma. Out of the total emissions in Germany, the CO_2 proportion of building operation[5], which amounts to approx. 770 million tonnes of CO_2, is approx. 33 per cent. At the Tec Center, we will reduce this to zero per cent – in other words, climate-neutral – using geothermal energy, photovoltaics and electricity from renewable sources. With respect to the reduction of the seven per cent share of building materials and building processes, a differentiated approach is required.

What are drivers?
Cement production, burnt lime, etc., glass production, ceramics production, aluminium extraction, bituminous and petroleum-bound foamed materials.

What are the “good ones”?
Renewable raw materials (wood, reeds), circular, reusable building materials, durable building materials (recycled aluminium), materials with low energy input in extraction and processing (loam, alumina, etc.).

The focus of politics and the construction industry is on wood as a material (about 20 per cent of residential buildings and over 30 per cent of schools and nurseries are currently built from wood). The primary structure of the TEC CENTER is also based on wood. This is the fourth or fifth wooden construction project from our architectural bureau. This time we used three technologies, explored the limits of what is feasible, analysed opportunities and weaknesses for future building projects:

- Beech (BSH) as an efficient primary structure,
- CLT (Cross Laminated Timber) wall panels made o cross-laminated softwood,
- Board pile ceilings made of beetlewood.

All the pleasure in the building material and its haptic quality notwithstanding, there is certainly a critical perspective of the mainstream of timber construction technologies and on the euphoria of the federal government in building construction projects primarily and almost entirely out of wood. Why? It is suggested that wood binds large quantities of CO_2 and that building with wood, along with pellet heating, is good for the ecological balance.

Beech (BSH) for the primary structure
+ efficient
+ saves cross-sectional heights
+ removable, reusable
– sensitive to moisture (swelling of the layers)

CLT (Cross Laminated Timber)
wall panels made of cross-laminated softwood,
d = 100 mm
+ high degree of prefabrication, rapid assembly with long in-plant lead time
+ contributes to the sound and thermal insulation of the shell
– immensely high wood requirement (compared to North American and Scandinavian construction methods. “Balloon” and “Platform frame” systems require approx. 20 percent of the wood quantity)

Board pile ceilings
with construction heights of 140 – 200 mm
+ low-quality material (beetlewood) can also be used
+ replaces, reduces the use of reinforced concrete ceilings
+ renaturable, separable via foil overlay
– complex processing due to shear keys, underfloor

The auditorium for around 60 people has the character of a lecture theatre.

Green facade on the west side of the TEC CENTER.

A brief scientific digression:
Trees bind CO_2 through photosynthesis (foliage) and through growth (on average approx. 12.5 kilos CO_2/year per tree, according to Wikipedia). A young tree only stores a little water, a 20-30 year old tree stores more, and evaporates considerable amounts of water. This means that when trees are felled, they are no longer available in the forest for effective CO_2 binding. If trees are felled and used in the quantities that will be needed by 2050, forests will not have enough to bind CO_2. According to the Hamburg Thünen Institute for Wood Research[6], forests in the EU have already changed from being a carbon sink to a carbon source.

Researchers in the USA at MIT around Cesar Terrer[7] have reported in Nature Journal, a renowned “reviewed paper”, that trees also remove CO_2 from the soil during the growth phase, thus throwing the theory of CO_2 binding from the atmosphere into disarray. Years ago, the “popular researcher” Wohlleben mentioned the (not fully researched) interaction of trees, forest soils and fungi.

What does this mean? We need to take a critical view of material use and must include the totality of processes, technologies, questions relating to reusability and longevity in our planning.

Within the context of responsible construction as presented here, the wooden substance of the TEC CENTER is clad in a durable shell; this means that we can assume a service life of 80 – 150 years rather than 30 years. After this, the components can be disassembled, replaced and reused. This approach – in addition to the CO_2-reduced construction method – extends throughout the entire building.

Limits were imposed where durability and hazards from mois-

ture ingress (wet rooms, laboratories, etc.) demanded tried and tested materials. This is also a part of responsible construction.

In summary, therefore, this is a future-oriented approach that not only employs low-CO_2 building materials and technologies (wood, loam, unbound gravel columns), but also addresses issues of longevity, interchangeability and reusability, in accordance with the approach presented here.

The interior continues to dispense with superfluous elements such as wallpaper, screeds, ceiling coverings, etc. When you walk through the building, it may be that some of the visible technical installations will seem sparse, unfinished and “rough”. In this context – and in accordance with the intent – here is a quotation from the Berlin dramatist and author John von Düffel (formulated at the BDA Day in Chemnitz, May 2023)[10]:

“When one speaks of modesty,
one makes few friends.
When one speaks of asceticism,
one tends to make friends.”

The author seeks to find the right balance between wanting and needing. The ideal is not doing without, but rather the art of balance, not seeing the little as a lack.

According to von Düffel, we are privileged, we can – still – make asceticism a free decision. Others around the globe do not have this privilege when it comes to sheer survival. We do not have this freedom with regard to building regulations and current energy laws.

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Facts

Foundation: The building stands on non-cemented gravel columns with significant CO2 savings compared to a pile foundation. According to Keller Grundbau[8] the CO_2 e-emissions of one metre of gravel column corresponds to a taxi journey from Frankfurt/Main to Offenbach. A comparable pile foundation is equivalent to a taxi journey from Frankfurt/Main to Berlin. The saving at the TEC CENTER is 107.6 tonnes CO_2e.

Insulation from the ground is based on the avoidance of petroleum-based insulating materials. The structure stands on a 30-centimetre thick layer of recycled, reusable, foamed waste glass. Here, according to the professional association SEBB, there is a 70 per cent reduction of CO_2 e over comparable insulating materials.

In the case of floor slabs and storey ceilings, integrated underfloor heating meant that no screed, insulation or tacker boards of any kind were used, i.e. on the ground floor there is a trowelled concrete floor, on the 1st floor a composite wooden ceiling with 14 centimetres of concrete on top and in the roof only a stack of wooden boards.Today, there are calculation methods to determine the CO_2 reduction of timber and timber composite construction methods compared to conventional technologies. According to Weyland[9], the saving is about 32 – 50 per cent for the primary construction with about 10 per cent higher costs. This potential was realised with the TEC CENTER.

The roof is a retention roof with 75 litres/square metre water retention, greenery and integrated photovoltaics.

The facades consist of CLT pine wood sandwiches with mineral insulation, a spacer construction of thermally separated EJOT Crossfix elements and weatherboarding made of durable sheet steel. On the west side, a “living wall” with plants arranged on earth packs in textile sacks.

The glass facades comprise triple glazing with wooden profiles and aluminium cover strips made of approx. 70 – 80 per cent recycled aluminium.

In the interior, the lightweight partition walls comprise 25 millimetre clay panels with loam rendering on a wooden substructure. The carpets are made of 100 per cent recycled plastic fibres and the building technology is based on geothermal sensors, heat pumps and heat exchangers, underfloor heating, ceiling heating or cooling sails (electrically controllable room by room including full shading), photovoltaics and 100 per cent renewable energy supply, providing overall CO_2-neutral operation.

Innovation and knowledge

>>Text: Andreas Wolf

The new EJOT Group TEC CENTER in Bad Laasphe is a hub for technical advancement and knowledge exchange. It houses research and development, application technology and product development facilities, forming a campus of innovation. “This new building is a place where bright minds can come together to innovate”, explained EJOT Group CEO Christian Kocherscheidt during the opening ceremony. The building operates in a carbon-neutral manner, aligning with EJOT’s strategic goal to achieve zero carbon emissions by 2035, emphasising both ecological and efficient principles.

“Today, there is growing concern about a building’s ecological impact and a strong desire for transparency regarding the composition and safety of its materials,” explained architect Professor Burkhard Pahl from PWP-Planungsgesellschaft in Darmstadt. The focus extends beyond resource-efficient construction and management; it encompasses the entire life cycle of a building, from the initial product concept to eventual dismantling Experts call this “circular construction”.

Sustainability is firmly anchored in the EJOT strategy, says Kocherscheidt. However, the journey towards climate neutrality is challenging because EJOT uses plastic and steel in its products and so has only a limited influence on the transformation process towards carbon reduction in the supply chain. The first steps towards the use of CO_2-reduced steel have already been taken. “We will take action on everything that falls directly within our sphere of influence to reduce carbon emissions,” emphasised Kocherscheidt. Kocherscheidt went on to explain that investments in photovoltaics, LED lighting, converting the motor pool to electric mobility, an employee equity participation scheme tied to climate goals and an employee ideas competition with carbon reduction suggestions are all integral components of these efforts.

Kocherscheidt underscores that innovation and knowledge are driving forces as well as a constant challenge. “We can only survive if we are the best.” EJOT can only compensate for the increasingly challenging conditions in Germany, which is no longer a primary innovator, by maintaining a commitment to high product quality. “It is cheaper to manufacture abroad, which we do, but our roots are here in Germany, and we will fight to keep it that way with our high-quality products,” Kocherscheidt explains.

Solar project with a big impact

The idea is as simple as it is ingenious. To produce sustainable electricity for our own use and sell the surplus to our neighbours. Implemented at the EJOT France site in the small town of Villé in Alsace. Here, the photovoltaic system on the roof of the company premises produces so much green electricity that neighbours in the industrial area are also supplied with electricity. A swimming pool, a supermarket and other companies.

>>Text: Andreas Wolf

The electricity is not only sustainable, it also costs just a fraction of the market rate. Today, the project has achieved reference status and was awarded the “Les Trophées des Collectivités d’Alsace” (Trophies of the Alsace Local Authorities) prize in the “Sustainability and Quality of Life” category. Enquiries come from communities all over France, reports Patrice Thil, Managing Director of EJOT France.

But before success, there is work to be done. “We had to overcome many obstacles”, says Patrice Thil. Initial thoughts go all the way back to 2018. Patrice Thil and EJOT CEO Christian Kocherscheidt are considering the installation of a photovoltaic system for electricity production on a free meadow area next to the company grounds at the EJOT France site in the industrial area of Villé. But unfortunately there is no chance of approval. The free areas are to be used for more businesses, explains the municipality of Villé.

So the only remaining option is to install the photovoltaic system on the roof of the company building. With this in mind, prior to the Corona pandemic an expert report is commissioned from an engineering firm, financed by the district authority of the Alsace region. All facts and data for operation of the plant are listed in the 500-page document. “The result is sobering”, recalls Patrice Thil. Cost are high and the return on investment (ROI) is around 25 years. “Photovoltaics is nice to have, but it is difficult to implement under these financial conditions.”

In early 2020, the sustainability project gains momentum again – and this comes from the political arena: municipal elections will not only take place for the mayor and the municipal parliament in Villé, but also for the municipal association, an amalgamation of several municipalities that is also responsible for the administration of the industrial estate in Villé. The new president of the municipal association, Serge Janus, supports the construction of a photovoltaic plant as a community project for “collective local consumption”, which is the precise working title. Private electricity producers and users can combine their efforts. Initially intended for a catchment area of two kilometres, it was soon given an exemption for an area of 20 kilometres. This opens up new perspectives for the solar project.

Patrice Thil views offers from several manufacturing companies. A prerequisite is that the plant does not come from China, to support the local economy. It quickly becomes clear that the

Q&A

>>Interview: Andreas Wolf

Questions for Serge Janus, president of the municipal association “Communauté de Communes de la vallée de Villé”

Monsieur Janus, you co-founded the “Energiessen” project. How did the idea come about?
In our ongoing efforts to bolster the resilience of our region, we have been considering water and energy matters at valley level for quite some time. The advent of the smart grid has unlocked fresh opportunities, enabling us to harness and utilise sustainably produced energy on a regional scale. The “Energiessen” project came about in our continuous quest for project ideas that can benefits everyone.

Did you expect implementation to be so fast and so successful?
Everything is relative, but I have harboured a longstanding desire to see this project come to fruition. I want to emphasise the dedication of EJOT, along with its CEO Patrice Thil. EJOT played a crucial role in kick-starting the “Energiessen” project by implementing the first solar installation so quickly.

You are receiving enquiries from all over France. Does this surprise you?
I must admit that I didn’t anticipate receiving such a significant number of requests for explanations, guidance and presentations. Undoubtedly, the energy crisis has played a substantial role in generating heightened interest in this sustainability project.

What are the next steps – do you see potential for expanding the project, e.g. selling green electricity to private households in your region?
“Energiessen” must maintain a dynamic structure that allows it to adapt to the preferences of its members while taking account of technological and regulatory advancements. In 2024, more companies in the region, including those in the industrial, retail, and agricultural sectors, will join the production efforts, leading to a substantial boost in our regional electricity generation. This is expected to attract new members to the “Energiessen” association, particularly with the goal of enabling private households to access green electricity.

entire roof area of EJOT France can produce three times the amount required for its own consumption. “This means that we can produce electricity in not-inconsiderable quantities”, says Patrice Thil. Complete recalculation undertaken in July 2022 concludes that the ROI is 7.5 years and no longer 25 years as a result of rising electricity prices. The 20-year-old roof must be renovated before the plant can be built. But even this additional investment cannot affect the profitability of the project. Because as early as the beginning of 2023, the French electricity provider Électricité de France SA (EDF) is raising prices once again as a result of the energy crisis. The ROI is now between three and four years.

The photovoltaic system goes into operation in March 2023. Emmanuel Ballot from the engineering firm “GEST’envirronnement” is responsible for technical project supervision. The association “Energiessen” is founded to handle electricity trading. Part of the association’s name comes from the small river “Giessen” in the Villé Valley, a small tributary of the Rhine. “Of the seven members of the association with authorities and companies, three are already our customers,” explains Thil.

For example, on weekends the neighbouring supermarket Super U receives electricity to power its refrigerators and freezers. Or the public swimming pool operated by the municipal association, which is also in the neighbourhood, receives solar power from EJOT’s roof to heat the water. If the amount of electricity produced is ever insufficient, EJOT could also purchase some electricity from its neighbours or from the state-owned provider EDF. “In principle, we are sellers and buyers and we have our own little market economy among ourselves.” Electricity prices are set by the association and are significantly below the usual market rates. An external company has been commissioned to manage and coordinate the project.

Within the context of the green power project, EJOT France has implemented further CO_2 reduction measures. LED technology has been installed in the warehouse, where most of the electricity is consumed, resulting in electricity savings of 75 per cent. This new lighting concept will also be extended to the office areas in 2024. Company vehicles run on e-mobility and are charged with electricity from the photovoltaic system at five charging stations. A nice side effect is that by reducing in-house consumption, more electricity is available for sale.

“Our work on this project has been pioneering”, says Patrice Thil happily. Although there have been many mistakes, as Thil acknowledges. But we can provide advice for those who will join us in the future. EJOT has gained a lot of reputation in the region with the “Energiessen” project.

Facts

- **The precise name of the association is “Personne Morale Organisatrice Energiessen”.** The members are the town of Villé, the municipal association Communauté de communes du val de Villé and the companies EJOT France, BÜRKERT France, EGELHOF, Transports SENGLER and the supermarket SUPER U

- The photovoltaic plant comprises **636 collectors** and has a capacity of **240 kW peak**. The in-house demand for EJOT France is 90 kW peak – which will increase due to the use of e-mobility. The state subsidy for the total investment of 250,000 euros is 30 per cent.

- The subsidy was awarded through the Climaxion® funding programme, which provides support to institutions and companies for the implementation of ecologically responsible measures.

- A large screen is installed on the façade of the EJOT France company building, which permanently provides figures, data and facts about the collaborative electricity project and the CO_2 savings.

- In the “Energiessen” association, the sale and purchase of electricity is traded at **13 cts net**. On top of this are transport costs and various taxes such as VAT, which constitute the gross price. In comparison the rate of the state-owned electricity provider EDF varies and currently is between 8,9 Cent (night) and 18,8 Cent (day) in the summer and between 25,4 Cent (night) and 58,4 Cent (day) in the winter.

- Capacities of the association “Energiessen” will be expanded: The company Bürkert will build another photovoltaic unit in the fall of 2023. The SUPER U supermarket chain is planning to build a plant.”

ArcelorMittal, Finkernagel, EJOT

How a sustainability chain works

It is obvious that ambitious climate goals can only be achieved by acting collaboratively. The collaboration between ArcelorMittal, Finkernagel and EJOT is a good example and a first for cooperation between manufacturer, processing party and end-product manufacturer to reduce effects on the environment

>>Text: Arne Langner, Andreas Wolf

ArcelorMittal Hamburg produces highly CO_2 reduced XCarb® steel from recycled and renewable material with a significantly lower CO_2 footprint than conventionally produced steel, which the Finkernagel wire plant further processes; EJOT, in turn, manufactures screws from the drawn wire using cold forming, and these screws are ultimately used for batteries in electric cars or for fastening solar modules.

The use of XCarb® recycled and renewably manufactured steel – brings total CO_2 savings of 80 per cent compared to conventional steel, and the CO_2 reduced steel ultimately contributes towards energy transition through its use in solar modules and electric cars. The three companies made the collaboration public at Finkernagel’s headquarters in Altena, North Rhine-Westphalia.

“Thanks to the collaboration, we are creating a special value added chain that contributes to the climate goals of the participating companies. Once again we can see that low carbon steel is critical for establishing the infrastructure we need to enable the transition to carbon neutrality,” stresses Dr Uwe Braun, CEO of ArcelorMittal Hamburg. Because solar modules, efficient electric cars or wind turbines cannot be produced without steel. “Today, we can already manufacture very low-carbon steel and, in a few years’ time, climate-neutral steel,” continues Braun. For us, it is a matter of doing

Dr. Uwe Braun (CEO ArcelorMittal Hamburg), Markus Rathmann (Chief Supply Chain Officer EJOT) und Timo Finkernagel (Geschäftsführer Drahtwerk Finkernagel). (v.l.)

Q&A

Dr. Uwe Braun, CEO from ArcelorMittal, Hamburg

>>Interview: Andreas Wolf

The steel industry is one of the most energy-intensive sectors and so plays a critical role in the decarbonisation of society. When do you anticipate achieving carbon neutrality with ArcelorMittal?
As a Group, we are making strides toward carbon neutrality. In alignment with the objectives outlined in the Paris Climate Agreement, our aim is to achieve global climate neutrality by 2050. As part of this commitment, we have set a target to reduce carbon emissions in Europe by 35 % by 2030. However, at our Hamburg facility, we predict that this will happen more quickly. We project that, within the next decade, we will be able to fully transition our production processes to climate-neutral technologies by harnessing green hydrogen and renewable energy sources. However, this transformation hinges on competitive energy prices and development of the required infrastructure.

Green hydrogen plays a pivotal role in the future of carbon-neutral steel production. How much progress have you made at the Hamburg factory?
ArcelorMittal Hamburg has secured approval from the EU Commission for financial support from the German government to construct a pilot direct reduction facility, which will rely on green hydrogen. We are currently in the process of evaluating the next steps. One of our primary challenges is the establishment of a functional hydrogen infrastructure that provides green hydrogen at competitive rates. The direct reduced iron produced in Hamburg will ultimately supply the ArcelorMittal plant in Duisburg, where it will undergo further processing in a new electric arc furnace, once the underlying requirements have been put in place there. This approach is pivotal to both production facilities achieving carbon-neutral production.

The DRIBE transformation project represents a significant stride toward manufacturing CO_2-reduced steel. How is it going?
The DRIBE project is aimed at decarbonising our flat steel factories located in Bremen and Eisenhüttenstadt. The Federal Ministry of Economics and Climate Protection recently granted approval for the early initiation of measures at both plants. This means that preparatory studies and contracts for the planned decarbonisation work can now get underway. Our ultimate goal is to transition from the conventional integrated steel production process involving blast furnaces, iron ore and coal to an innovative production route that employs direct reduction of iron ore using hydrogen and crude steel production in electric arc furnaces. However, to proceed with our plans, we are awaiting approval from Brussels for the construction of the new plants. Economic factors, such as industrial electricity pricing and the development of essential infrastructure for green electricity and hydrogen, are also equally critical factors in determining the way ahead.

our homework and continuously realising such forward-looking projects in partnership with our customers.

"From our trials, we know that the XCarb® steel can be processed outstandingly and has no qualitative disadvantages in comparison with conventional steel. The fact that the material properties are also identical in a direct comparison is particularly encouraging," explains Timo Finkernagel, Managing Director of the eponymous wire plant in Altena. "We are proud to be able to offer XCarb® recycled and renewably manufactured steel to our customers, and we are confident that it will be well received on the market."

"Starting to process CO_2 reduced steel marks an important step for the EJOT Group on the way to climate neutrality, especially since the majority of CO_2 emissions are in our intermediate products (Scope 3). In the meantime, the first tests with the new material have been completed and the results are positive, emphasises Markus Rathmann, Chief Supply Chain Officer of the EJOT Group. From the point of view of materials technology, there have also been no anomalies. The results from production are currently still being systematically recorded. All test runs have not yet been completed. Rathmann: "We currently assume that there is nothing to prevent the further use of the material and will successively expand the use of CO_2 reduced steel".

Since 2021, the world's leading steel producer ArcelorMittal has been bundling all efforts towards climate-neutral steel production under the umbrella brand XCarb®. Through investments in technologies and start-ups, the awarding of certificates for CO_2 savings in steel production and, in particular, through low-carbon manufacturing variants The XCarb® steel, made from recycled and renewable material, is produced in an electric arc furnace using 100 % renewable electricity and, depending on the steel grade, up to 100 % scrap. With these steel products, emissions can be as high as up to 333 kilograms of CO_2 equivalents per tonne of the end product.

The XCarb® steel used by Finkernagel and EJOT is made from recycled and renewably manufactured material and significantly reduces the Scope 3 emissions of both companies. The EJOT Group wants to reduce its CO_2 emissions from currently approx. 254,000 tonnes per year to zero by 2035. In addition to various in-house measures to reduce emissions (Scope 1 and Scope 2), Finkernagel primarily relies on the use of low-CO_2 steel input material. According to its decarbonisation strategy, ArcelorMittal aims to achieve net-zero emissions worldwide by 2050.

Q&A

Timo Finkernagel, Managing Director Drahtwerk Finkernagel, Altena

>>Interview: Andreas Wolf

How do your customers react to the opportunity to use wire made from CO_2 reduced steel while maintaining the same high quality?

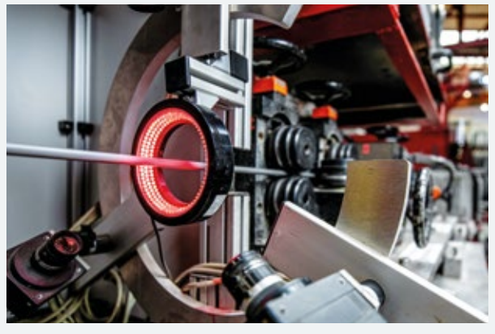
Many of our customers are very interested in this topic and appreciate the efforts that Finkernagel is making to process and bring CO_2 reduced wire onto the market. There is a broad common understanding among our customers that we all need to pull together to sustainably reduce CO_2. This applies at all levels. We have the greatest impact on our overall CO_2 footprint with sustainably produced steel and when considering Scope 3, the positive effect is huge.

Can you estimate a development in the quantities of wire that have been purchased since you presented the joint project with ArcelorMittal and EJOT?

We have noticed a more intense demand since publication in June, combined with incoming trial orders that have already been produced and delivered. The initial feedback is identical to that from EJOT: the material can be processed just as well as the LD route. This confirms that we are on the right track. We anticipate the first series production quantities this year, and we will gradually expand our activities.

You make an important contribution towards decarbonisation with the further processing of CO_2 reduced steel. The topic of sustainability also plays an important role in your corporate philosophy.

For generations, we have striven to keep the emissions of our production as low as possible and to work in a resource-efficient manner. This summer, we installed the fifth photovoltaic system on our production hall roofs. A total of 1,850 photovoltaic modules with a total system output of 515 kWp have now been installed. This means that we avoid 300 tonnes of CO_2 per year and can cover 20 per cent of our electricity consumption. We already have the first electric cars in our fleet, which we are gradually converting. There are already two charging points on the company's premises, and four more will be added by the end of the year. Furthermore, we are driving digitalisation across the company in various initiatives. There is currently an initiative to digitalise the acceptance test certificates. This means we will be able to dispense with at least 15,000 sheets of paper a year. In addition, our existing energy management system (EMS) is becoming more and more transparent through the ongoing digitalisation of consumption recording, which means that material, water and energy flows can be visualised in detail and allocated to the individual products in a differentiated manner. This allows us to introduce optimisation in exactly the right places and save energy. For example, we now use insulated high-speed doors to seal off unheated areas and to reduce overall heating energy.



Ecological and social commitment awarded

The power tool manufacturer STIHL has honoured EJOT SE & Co. KG with the Sustainability Award 2022. The awards ceremony took place at the STIHL Brand World in Waiblingen, which was officially opened in July. In addition, the five best suppliers of 2022 were honoured, as well as another company that received the Sustainability Award just like EJOT.

Symbolically, during the award ceremony, Michael Amos (Vice President Sales EU Market Unit Industry) and Michael Harg (Account Manager, EJOT Austria) presented a DELTA PT® screw made from CO_2-reduced steel. This "green screw" from EJOT's production is slated for future use in STIHL products, as Michael Harg explained. "The relevant test and trial procedures are currently being carried out," Harg stated.

STIHL presents this award in recognition of companies that are particularly committed to sustainability. Sustainability is a central part of STIHL's supply chain. The company demands just as much from its suppliers in terms of responsible work and business practices, environmental protection and transparency as it does from itself. "Even if sustainability is a challenge for companies – it is always also an opportunity for a better future. We are therefore particularly pleased that we have many suppliers for whom ecological and social commitment is a matter of course," emphasised Anke Kleinschmit, Executive Board Member for Development at STIHL.

Michael Harg EJOT Austria (middle right) and Michael Amos, Vice President Sales EU Market Unit Industry (right) accepted the Sustainability Award for EJOT in the STIHL Brand World in Waiblingen. On the left is Anke Kleinschmit, Executive Board Member and Marc Moser, Head of Purchasing at STIHL.

Q&A

>>Interview: Andreas Wolf

Interview with Anke Kleinschmit, STIHL Director of Development, Marc Moser, Head of Purchasing at STIHL and Dr Friedemann Stock, Sustainability Officer of the STIHL Group.

Ms Kleinschmit, STIHL has awarded the "Sustainability Supplier 2022" for the first time. What message are you addressing to your suppliers with this?

Sustainability is a central part of STIHL's corporate culture. We want to live up to our responsibility as a company and make a key contribution to sustainable development. The demands we place on our suppliers are just as high as those we place on ourselves. Responsible working and business practices, environmental protection and transparency are core values throughout our entire supply chain. We expect active support from our partners in establishing a sustainable supply chain. In addition to the observance of human rights under fair and safe working conditions, environmental protection is important to us. Our focus is on resource-conserving actions, the measurement and reduction of greenhouse gas emissions and the sustainable procurement of (raw) materials. We also want to encourage our suppliers to contribute towards achieving the United Nations' Sustainable Development Goals (SDGs). We are delighted that our suppliers include many who also incorporate social and ecological goals into their business activities in addition to their financial goals. Because sustainability is one of the most important business priorities.

Mr Moser, what criteria do you use to select the award winners?

With this award, we would like to recognise companies that are particularly committed to sustainability.To assess the sustainability performance of suppliers, STIHL has established a process consisting of various mechanisms to create transparency. These include signature of our Supplier Code of Conduct, the result of the Integrity Next Rating and, in the future, a specially developed sustainability audit. These mechanisms are applied in accordance with the sustainability risk exposure of the suppliers. A positive result in the first two categories is a prerequisite for being considered as Sustainability Supplier of the Year. In addition, a check was made as to whether the candidate had distinguished themselves to a particular degree with their activities in the field of sustainability.

Mr Moser, what prompted you to award the prize to EJOT SE & Co KG?

From STIHL's perspective, EJOT has particularly distinguished itself with its sustainability strategy, which is geared towards the goal of being climate neutral by 2035. In addition to the setting of objectives, we should also praise its systematic preparation of the content of the sustainability strategy (orientation towards the SDGs, fields of action) and the communication of this strategy via its website, as well as the Corporate Carbon Footprint Report. Crucial to the award was also the creation of a product carbon footprint, the detailed report of CO_2e emissions in all three scopes in the Corporate Carbon Footprint Report as well as commitment to the "Energiessen" project.

Dr Storck, as a medium-sized family business, STIHL pursues a clearly defined sustainability strategy. What are the key points?

In 2021, STIHL decided to further develop the sustainability policy that has existed since 2016 and to align our corporate activities in such a way that negative ecological impacts are constantly reduced, and we consistently fulfil our due diligence obligations – for example in the supply chain. To this end, among other things a Group-wide sustainability officer was appointed, a sustainability steering group was initiated and a Group-wide sustainability strategy was developed on the basis of a materiality analysis.

Eleven key topics for STIHL have emerged from the materiality analysis, which we have assigned to three focus areas: Ecosystems, Circularity and Care. They form the basis for the sustainability strategy.

- Ecosystems: we are dedicated to the protection of eco systems, which above all includes resolutely combating climate change and promoting biodiversity
- Circularity: we want to further develop our processes and products in the sense of a circular economy in order to conserve resources.
- Care: we are committed to good working conditions for all people who work directly or indirectly for STIHL

For each of the three focus areas, we define so-called sub-strategies with directly linked KPIs that are binding for all STIHL Group locations. Targets and measures can be derived for the KPIs.

Ms Kleinschmit, we can see in the economy that the importance of sustainability strongly increases when it comes to strategic decisions. Does that make you confident in the fight for improved climate protection?

Companies recognise that sustainability is an important factor for their long-term success. This development is a positive sign for the fight against climate change, and it shows that a rethink is taking place. When companies start to incorporate sustainability into their strategies, this will also encourage governments and other companies to also act more sustainably. We hope that this development will continue and that more and more companies will become aware of the importance of sustainability. Only in this way can we achieve positive change and effectively combat climate change.

“wejot” benefits the environment, the employees and EJOT

„We have created something unique,“ says EJOT CFO Wolfgang Bach, referring to the employee equity participation scheme introduced in 2022. This is by no means a pure financial product, but a programme to achieve the sustainability goals at EJOT which is linked to an increase in capital for the employees.

>>Text: Andreas Wolf

The question of the benefits is easy to answer: “We are creating a win-win situation for EJOT, our employees and the environment,” explains Wolfgang Bach. The employee equity participation scheme operates under the project name wejot, and another component of the project is an ideas competition where employees can submit suggestions for CO_2e reduction, which the company rewards with cash prizes.

Approximately 800 ideas have been submitted since the launch of the “wejot” project in autumn 2022. The Global Corporate Responsibility (GCR) department continues to work intensively on implementing the ideas: 22 % of the ideas have already been implemented and 54 % are in the process of being implemented. A smaller proportion of ideas cannot be implemented at present. EJOT has already saved energy costs amounting to 180,000 euros through the implementation of these ideas, as explained by Wolfgang Bach. Currently, the best three ideas each month are awarded prizes of 250, 150 and 50 euros. Additionally, a main award for the best ideas in various categories is planned for 2023.

Following its successful launch in 2022, the employee equity participation scheme is set to continue this year. During the subscription period in the spring, employees at the German sites acquired profit-participation certificates worth 520,750 euros. This sum will be invested in sustainable projects to reduce CO_2e emissions in the company. The amount EJOT will add to this sum this year depends on the achievement of the set savings target, which is again 5,000 tonnes of CO_2e. So far, the savings volume is about 3,000 tonnes – around 60 %.

In the past year, the amount of 525,250 euros invested by the employees was doubled by EJOT, because the reduction of CO_2e emissions of 5,000 tonnes set for 2022 was achieved, and in the end actually exceeded with a value of 5,858 tonnes. Thus, an amount of approximately 1.1 million euros was invested in internal company projects to reduce CO_2e.

At the foreign EJOT sites, the employee equity participation scheme is implemented via a bonus system. In 2022, more than 1,500 employees received bonuses amounting to approx. 184,000 euros.

Info

With the introduction of an employee equity participation scheme, EJOT relies on its employees to reduce CO2e emissions: they can invest a fixed amount each year, which will be topped up by EJOT if the company achieves its own climate targets. This sum is in turn invested exclusively in internal sustainability projects to reduce CO_2e emissions. And on top of that, the entire amount earns an attractive interest rate for employees. Involvement in the scheme to achieve our ambitious goal is also worth the effort for employees of our foreign companies. Here, an annual bonus adjusted for purchasing power is paid to all employees depending on the individual CO_2 reduction targets of the national company and the EJOT Group.

Flowering plants

A little over a year has passed since 300 EJOT employees planted seedlings for a climate-resistant mixed forest on the 3.2-hectare afforestation area at Albrechtsplatz near Bad Berleburg.

>>Text: Andreas Wolf

The TREEATHLON® anniversary project is now well underway. In total, approximately 6,000 seedlings were planted last year. .

How are things looking in the afforestation area this autumn? “The area is doing well,” says Steffen Schmidt, a forester for project partner Wittgenstein Berleburg’sche Rentkammer. A look around the area reveals plenty of flowering vegetation. Seedling losses are minimal, and the young plants, including red oak, grand fir, larch, sycamore maple and Douglas fir, are thriving. There have been some losses among the wild roses, of which 200 specimens were planted in late April 2023. This can be attributed to a dry period with little rainfall which lasted from Whitsun until the second week of July.

The situation in the Wittgenstein forests remains precarious. “Since Whitsun, we’ve had a heavy beetle infestation”, reports forester Steffen Schmidt. However, with significantly more rainfall than in previous years, the situation has improved slightly this summer. “We see that the trees are starting to defend themselves again,” says Schmidt. Thanks to the rain, conifers are able to produce resin to fend off the beetle’s attempts to bore into them,” Steffen Schmidt adds, “That gives us a glimmer of hope.”

EJOT TREEATHLON® Unser Firmenwald

New Plant for ETICS Profiles

At the end of September, the new EJOT production plant for profiles of the External Thermal Insulation Composite Systems (ETICS) business unit was officially opened in Nova Gradiška (Croatia).

>>Text: Carina Schaumann

We have kept to the given budget as well as the planned construction time. EJOT Managing Director Dr. Frank Dratschmidt also highlighted another important aspect in his speech during the opening ceremony: „The distance to our customers in Southern Europe will be significantly shortened by the new location. With this we also reduce our CO_2 emissions“. In the future, anchors for the ETICS business unit will also be produced at this latest production site of the EJOT Group.

Miro Matanovic, Managing Director of the Croatian subsidiary EJOT Spojna Tehnika d.o.o. and Managing Director Dr. Frank Dratschmidt (from left) cut the EJOT cake.

Miro Matanovic, Managing Director of the Croatian subsidiary EJOT Spojna Tehnika d.o.o., thanked all companies involved in the construction as well as the owner family Kocherscheidt and the advisory board for their trust in the EJOT subsidiary in Croatia. “After only ten months of construction, the authorities have granted the usage permit for the start of production”, Matanovic emphasised. The mayor of Nova Gradiška, Vinko Grgic, was pleased that with EJOT another company had settled in the industrial area of the city. “Our industrial location has the highest growth rates in Croatia after the capital Zagreb,” said Grgic.

Sustainable construction plays a critical role at EJOT. So it goes without saying that there are no compromises in the company’s own building projects – for example, the construction of the new production plant for ETICS profiles in Nova Gradiška. Low emissions, reduced carbon emissions, and electric mobility were given priority in the planning phase and during construction.

What exactly did this entail? When selecting the site, careful consideration was given to its proximity to the target markets to minimise carbon emissions. The factory’s design priorities electricity conservation and emissions reduction through the use of heat pumps, effective insulation with mineral wool, and the elimination of gas as an energy source. By next summer, the aim is for the company’s own photovoltaic systems to cover electricity consumption, accounting for approximately 10 % of the company’s electricity needs. The electricity that has to be purchased externally comes from sustainable production (green electricity). Overall, the requirements meet modern standards using efficient technology.

This also applies to the outer shell of the building complex, which was also designed according to modern energy efficiency criteria. The administration building was given a classic composite thermal insulation system. In the toolmaking area, a curtain ventilated façade followed. The large areas of the production building were covered with insulated sandwich panels. In addition, green roof and façade areas ensure an optimal indoor climate inside the building. Charging points for electric vehicles round off the sustainability concept of the site.

Production at the new plant has already started.

Info

Nova Gradiška, a small town in eastern Croatia with a population of 14,229, is situated approximately ten kilometres north of the Sava River. The site benefits from a strategic location on the E70, which connects Zagreb and Belgrade, and is also close to the E661, a north-south route linking Hungary, Croatia, and Bosnia and Herzegovina. The newly developed industrial area boasts an excellent infrastructure, guaranteeing essential services such as power supply and fibre optics. The selection of this site placed significant emphasis on the potential for a rail connection, enabling the option of intermodal delivery of ETICS profiles in the future and further optimising the project’s carbon footprint.

New Strategy for North America

With the implementation of the future concept “EJOT 2025”, the EJOT Group will focus more strongly on international markets outside Europe. An important building block is the strategic reorientation of the activities on the North American continent.
For this purpose, the two long-standing joint venture partners EJOT and Accurate Threaded Fasteners, Inc. (ATF) have realigned their activities in the field of industrial fasteners.

>>Text: Andreas Wolf

The new production building of the joint venture between EJOT and ATF in San Luis Potosi/Mexico.

The core point is the foundation of the new joint venture “EJOT ATF LP”, of which EJOT holds a majority share of 51 percent. In addition to the North American business of the EJOT Market Unit Industry, the company Accurate Threaded Fasteners, Inc. (ATF) will be merged into this joint venture. The headquarters are located in Lincolnwood/Illinois, north of Chicago, as well as two other, smaller locations in the state of Michigan, near the automotive metropolis Detroit. In the existing joint venture “EJOTATF Fasteners de Mexico” (San Luis Potosi/Mexico), EJOT will also receive the majority of the company shares. In the future, the locations in the USA and Mexico will form a joint North American unit for the development, production and marketing of fasteners, such as screws and cold formed parts for industrial customers.

The US company EJOT LP will remain in existence and will be managed in future as a pure sales company of the Market Unit Construction (MUC).

“The new corporate structure will again improve our market position, especially in the automotive industry, and create new opportunities for both partners,” emphasizes EJOT CEO Christian Kocherscheidt. The new American unit now offers a state-of-the-art product portfolio in the area of thread-forming fasteners. EJOT’s approach of reducing system costs for customers by pre-designing the joint is supported by further investments in application technology laboratories and simulation programs. “In addition, the company is embedded in the global sales and production system of the EJOT Group, which improves service for North American customers – with the goal of playing a leading role in the US fastener market,” Kocherscheidt added.

In the automotive industry, the growth markets with demanding and dynamic customers are increasingly located in North America and Asia. He added that customers in Germany and Europe would not be neglected. “However, we have to take note that the general conditions in Europe have become more difficult.” As a medium-sized family-owned company, EJOT strives to recognize risks, balance them as much as possible and seize opportunities, Kocherscheidt explains. “As a technology leader, we can bring great benefits to customers in North America, especially in the area of e-mobility.”

For the EJOT Group these changes are linked with an increase of about 300 employees. Thus, for the first time, the family-owned company from Bad Berleburg with a total of about 4,500 employees has a predominant share of employees outside Germany.

Another change concerns the area of headlight adjustment systems: Up to now, the EJOT Group was active in this field with the EJOT SE & Co.KG in the European and Asian market, as well as in North America with the joint venture ASYST Technologies in Kenosha/Wisconsin. ASYST Technologies was founded in 1996 by EJOT and the owner family of ATF and has become the market leader in North America.

With the increasing globalization of the European, Asian and American customers, both owner families decided to bundle the worldwide activities in headlamp adjustment at ASYST Technologies and to transfer the entrepreneurial leadership of the joint activities in headlamp adjustment to this company. In this new division, the EJOT plants will assume the role of production service provider outside North America. EJOT will also provide project-related services for ASYST Technologies in the area of product development.

Info

- Both companies, **EJOT** and **ATF**, are family businesses. The owner families Kocherscheidt and Surber also share a close personal friendship.
- Entrepreneurial passion, innovative strength, employee orientation as well as social and societal responsibility equally characterise both **Joint-Venture-Partners**.
- ATF was founded in **1946** and is headquartered in Lincolnwood, a suburb of Northwest Chicago. In 2022, the company had a turnover of approximately **100 million** US dollars.

Foundation: Six subsidiaries for Africa

The EJOT Group is continuing to expand its presence on the African continent. Following the establishment of EJOT Fixing Solutions Maghreb in Casablanca/Morocco and EJOT Fixing Solutions Southern Africa in Cape Town, South Africa, further subsidiaries have been added.

>>Text: Sebastian Rupieper

EJOT CEO Christian Kocherscheidt, Imad Boulabat (Maghreb), Usman Owolabi (Nigeria), Emmanuel-Kweku Annkah (Ghana), Jaymit Patel (East Africa), Tunc Karabogali (Vice President of Sales Eurasia & Africa), Sebastian Rupieper (Southern Africa), Pierre Schinn (Commercial Director Europe, America, Africa) Thomas Kubbe (Afrika Consultant) (f.l.).

EJOT Maghreb was deliberately founded not as a Moroccan subsidiary, but as a hub with responsibility for all Maghreb states in northwest Africa. The primary focus is on products for the Construction market unit. EJOT Fixing Solutions Southern Africa in Cape Town, South Africa, also functions as a hub for Namibia, Botswana, Zimbabwe and other states in South Africa. Sales include products from the Construction and Industry market units.

In August 2023, the subsidiaries in Ghana, Nigeria and Kenya were founded. While Kenya as EJOT East Africa is also a hub for the Construction market unit, the subsidiaries in Nigeria and Ghana will initially be solely responsible for their own country. “With over 200 million inhabitants, Nigeria is by far the most populous country and the largest economy in Africa. So the market is big enough,” explains Pierre Schinn, Commercial Director Europe, America & Africa, Market Unit Construction, who is jointly responsible for the new start-ups in Africa.

The sixth subsidiary will have its headquarters in Egypt. A freelancer is currently working on this on behalf of EJOT. Current plans envisage the establishment of a new EJOT company at the beginning of next year.

The primary responsibility of our new colleagues in the subsidiaries is not only to introduce the diversity and benefits of the EJOT product portfolio to the African market, but also to share EJOT’s ethos with our customers. EJOT is determined by its holistic service concept, which focuses on partnership and support for the entire construction project.

At the General Manager Meeting held at the EJOT headquarters in Bad Berleburg, which saw the participation of our colleagues Sebastian Rupieper (South Africa), Imad Boulabat (Morocco), Usman Owolabi (Nigeria), Jaymit Patel (Kenya), and Emmanuel Annkah (Ghana) for the first time, the agenda included insightful presentations along with guided tours of the production facilities of our Construction and Industry market units. “During interactions with our new EJOT colleagues, we gained valuable insights into production and distribution,” explained Usman Owolabi.

At EJOT Sormat Oy in Finland, our African colleagues familiarised themselves with the extensive product range of concrete anchor systems. “EJOT’s range of anchors, from small to very high loads suitable for environments with low to very high corrosion, is of central importance in Africa,” explained Sebastian Rupieper. He further highlighted the strong demand for anchoring products like the Liebig undercut anchor, stainless steel through-bolts and high-quality drills, especially in South Africa’s mining industry.

The application technology of various anchor systems was explored in detail in the laboratory at EJOT Sormat Oy. “I was very impressed by how easy it is to install a Liebig Superplus undercut anchor given its high load-bearing capacity,” emphasised Usman Owolabi. The high quality of EJOT products is also evident here.

Sebastian Rupieper looks at the Liebig Ultraplus concrete anchor.

Plastic battery housings are suitable for series production

Advantages in sustainability, manufacturing costs or corrosion protection

Technical plastics such as polyamides, PC or PET promise numerous advantages in the design of storage battery housings for electric vehicles. This also applies to other components such as the front end, underbody panels, control instruments, cell holders and the charging infrastructure.

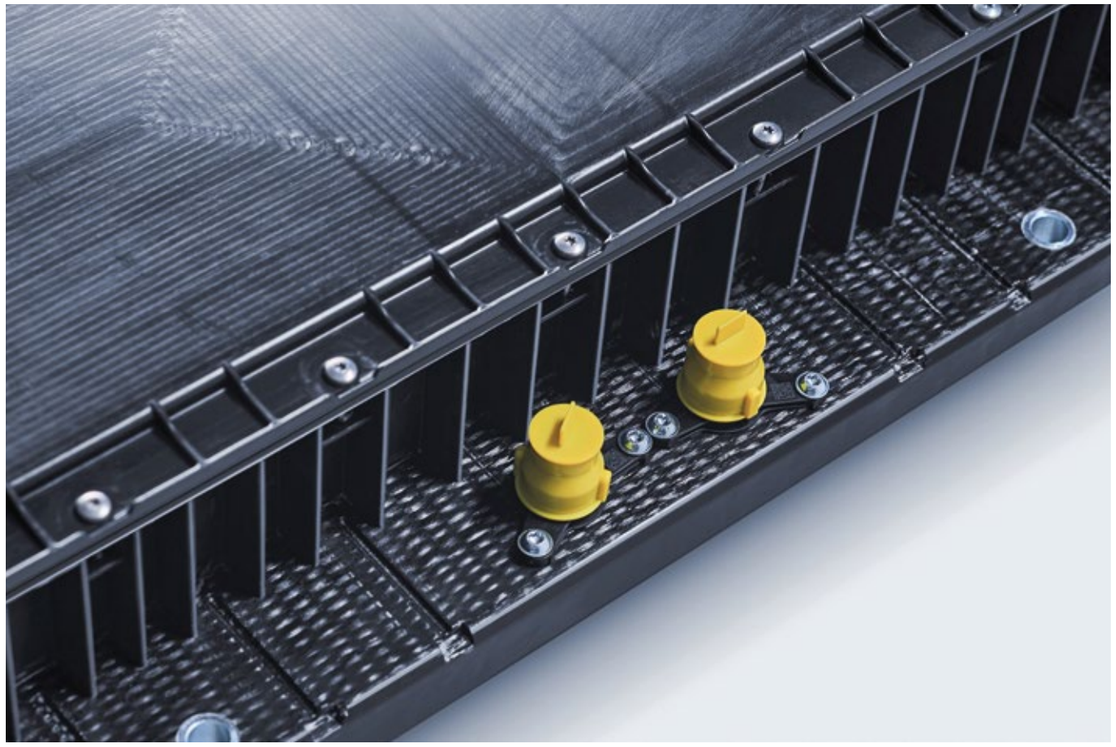
>>Text: Volker Dieckmann, Andreas Blecher

Sustainability efforts, a reduction in manufacturing effort, vehicle weight reductions or even economic aspects are forcing the players to rethink established but rather heavy battery designs made of sheet metal or aluminium. However, up to now there have still been doubts as to whether the large and complex components are also able to cope with the high demands on mechanical load-bearing capacity and flame resistance in electric vehicles.

Near-series plastic battery modules have now become available and have passed all mechanical and thermal examinations that are relevant for such housings. Furthermore, solutions e.g. for thermal management, have also been tested where components are also directly screwed into the plastic. Solutions for the tightness of these housings are also available, and screw fastenings are also used here. For example, the covers are screwed directly into the PA6 with screws for plastics and permanently compress the inserted seals.

Storage battery housing for electric vehicles, made from plastic

Photo: © KAUTEX TEXTRON GMBH & CO. KG



Secure and leak-proof connection of storage battery housing and cover with EVO PT® screws

Foto: © KAUTEX TEXTRON GMBH & CO. KG

As a result of its excellent connection properties and the potential for high levels of standardisation in assembly, the EVO PT® screw is the ideal choice for this highly demanding field of application. In addition, the EVO PT® with the digital calculation service EVO CALC® offers the possibility of pre-calculating torques and clamp loads as well as clamp load relaxation as a function of temperature and time. This reduces complex component tests and the associated CO_2 emissions to a minimum. The individual, FEM-based component optimisation is particularly efficient in terms of resources, saving both time and money.

New ideas always face difficulties in the beginning, but in the meantime the technical feasibility of these complex and highly stressed safety components has been proven in a large number of tests. At present, the everyday suitability of these housing prototypes is being trialled in test vehicles on the road. The first series development projects have even been started with car manufacturers in order to later implement the new technologies in series production. Here, too, EJOT is involved in the development and testing.

Calculations have shown that the CO_2 footprint of the plastic housing is more than 40 per cent lower than that of an aluminium variant. The lower energy input in polyamide production compared to metal, as well as elimination of the costly corrosion protection when using steel, help to minimise the CO_2 impact on the environment. The thermoplastic component design in combination with screwed components also simplifies the dismantling and recycling of the housing.

Weight savings of around 10 per cent compared to an aluminium design is achieved, which has a positive effect in terms of the range and hence the CO_2 footprint of the vehicle. The integration of functions such as fastening elements, reinforcing ribs and thermal management components significantly reduces the number of individual components in comparison with the metal design, which simplifies logistical effort, assembly and also subsequent disassembly.

Alternative for the generation of green electricity

Floating solar fields with “intelligent” control

Climate change is perhaps the greatest challenge facing humanity in the 21st century. A significant reduction in CO_2 emissions is therefore the order of the day. This can only succeed if renewable energies are used across the board.

>>Text: Peter Hanschmann, Andreas Blecher

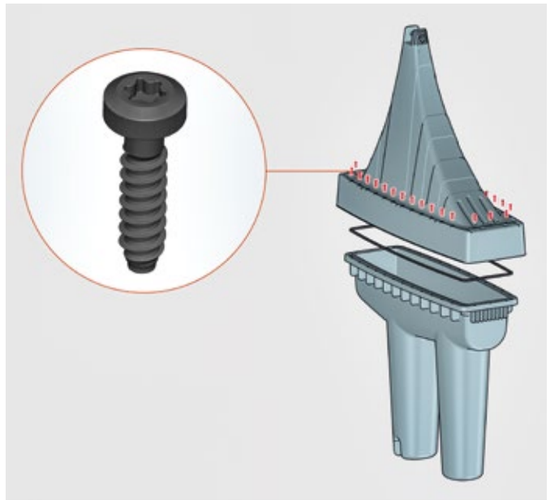
Floating solar fields as a sustainable alternative for the production of electricity

A technology for the generation of green electricity that has already proven itself for many years is the use of solar energy through photovoltaic systems. Solar roofs or solar fields are common. A new possibility is provided by floating solar fields, which are used on inland lakes, for example.

Floating solar fields open up new potential for sustainable energy generation. They offer opportunities to develop previously unused water surfaces for photovoltaic systems. The heart of this pioneering technology is an intelligent algorithmic control unit that makes use of one of the decisive key capabilities of ground-based photovoltaics on water for the first time, namely the precise tracking of solar panels. The panels are always at an optimal angle to the sun and “follow” it throughout the day. Thus very efficient use of solar energy is possible.

On the water, these floating solar fields are exposed to considerable environmental influences. In particular, storms or constant contact with water put a high strain on all components of the system. The fastening technology used is of particular importance. It must not only permanently withstand the highest loads, but also be lightweight, and the fastening elements must not corrode under any circumstances. This applies in particular to the fastening of the upper and lower parts of the floating body.

With the DELTA PT® P, made from the thermoplastic construction material PPA GF50 with 50 % glass fibre content, the two HDPE plastic floating bodies are reliably connected by means of a direct fastening. This plastic screw offers the same connection security as its steel counterpart, but it is up to 85 % lighter than the steel counterpart and cannot corrode. This makes this “speciality” from EJOT the ideal choice for this exceptionally demanding application – and also contributes to the reduction of CO_2 emissions during the production of electricity.



Secure fastening of the plastic floats with the DELTA PT® P screw

Less use of resources in assembly

EJOT fastening elements as ideal fastening solutions in heat pumps

Last year, heat pump technology grew the most in the German heating market in terms of percentage, with air-to-water heat pumps showing the highest growth rates. In accordance with the target of the German Federal Ministry of Economics, around six million heat pumps are to be installed in Germany by 2030.

>>Text: Dr. Fatih Bülbül

Within the EU, some manufacturers even expect an additional thirty million systems to be installed in well-insulated new buildings. In the case of older buildings, where complete renovation often leads to very high costs, hybrid systems comprising a combination of heat pump and conventional heating can lead to success.

The main advantage of a heat pump is that the system uses stored energy from its environment (air, water or earth) and is therefore particularly environmentally friendly because it uses natural refrigerants. Only 25 percent of the required energy is electrical energy, which is needed for conversion into heat for the home. If the electrical energy comes from renewable energy sources there are no CO_2 emissions during operation of the heat pump.

Some heat pump manufacturers use conventional fastening elements such as blind rivets, weld nuts or sheet metal nuts to connect individual sheet metal components. Here, the use of additional elements not only leads to an increase in the variety of parts, complexity and costs, but often also results in additional manufacturing processes, the avoidance of which can have a positive effect on efficiency and sustainability. Hence it is advisable to choose the right fastening strategies in conjunction with intelligent fastening technology as early as the component design stage.

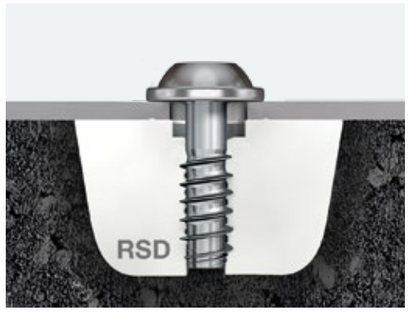
Many heat pump manufacturers have already recognised this potential and choose SHEETtracs® screws when very sturdy thin sheet metal connections with high vibration resistance are required. Their range of applications extends from fastening the heat pump housing and a wide variety of metal struts to securely fixing frame parts inside the heat pump. Here, manufacturers use only one screw dimension and a uniform tightening torque where possible to realise all connection positions. Customers also have the option of determining test parameters for their components in the APPLITEC test laboratory in order to achieve the goal of harmonisation and standardisation even with different sheet metal thicknesses. In this way, efficiency and sustainability in the manufacturing process can be increased and complexity can be kept to a minimum.

In addition, the new TOBI® Drive-System (Tension Optimized Bit) enables secure fastening during installation, even in hard-to-reach places inside the heat pump. Because compared to conventional hexagon socket drives, this innovative drive system has a slight clamping effect on the screw which, in conjunction with the axial alignment of the screw, enormously simplifies handling for the worker as the screw cannot fall out of the bit during the assembly process. The increased contact area between bit and drive minimises tool wear, which has a particularly positive effect on automatic fastening processes. Furthermore, the TOBI® Drive-System does not require complicated plant engineering (e.g. vacuum technology). Solely due to the self-holding effect, this drive system also securely holds screws made of non-ferrous metals in all positions. This leads to significant savings in costs and time and to a reduction of the CO_2 footprint.

Attachments made from particle foams such as EPP (expanded polypropylene) are widely used in modern heat pumps, among other things. The EPPsys RSD (friction welding boss) was developed in order to be able to realise sturdy connections in these foamed components in a process-safe manner. Through the friction welding process the EPPsys RSD is embedded in the EPP foam and securely connects to the molten material. This allows a fastening point to be created at any point in an EPP component as no pilot hole in the foam is required. Here, the EPPsys RSD serves as the screw-in material, which is optimally designed for the EVO PT® screw. With this combination, secure and durable fastening of the ventilation grille to the EPP component is realised in the case of an air-to-water heat pump.

The innovative fastening elements from EJOT help to increase efficiency and conserve resources in manufacturing processes. The fastening solutions, which are optimised for the respective application, thus also help customers to achieve their sustainability goals.

Photo: © iStock/ KangeStudio



With the right assembly strategy, the used fastening elements SHEETtracs® (above), EPPsysRSD (below) and EVO PT® can contribute to the conservation of resources.

Ideas for the street lighting of tomorrow

One industry is shaping its future and the light on our streets

In Antioch, which is now called Antakya and lies in Turkish territory, ancient historians report that as early as the 5th century CE, “lights in the alleys” provided a sense of security for the inhabitants of the prosperous city. Unfortunately, development of this fascinating city was interrupted again and again by earthquakes due to its location on the border of the continental plates.

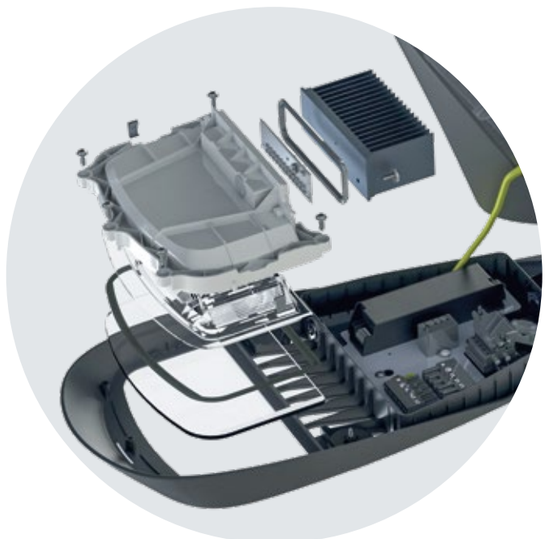
>>Text: Heinrich Georg Homrighausen

But the road to municipal street lamps as we know them was still a long one. These lamps were finally introduced in the streets of London around 1660, while other sources cite Paris as being at the forefront. Before invention of the dynamo by Werner von Siemens, these lamps were still fuelled by oil, often whale oil. In the 19th century, gas and petroleum lanterns were also added.

On the one hand, over the last few centuries these street lamps have penetrated into the last alley of every village, giving citizens the desired and also necessary feeling of safety, but on the other hand this requires a great deal of energy. This energy consumption is accompanied by a brightness that can even be seen in satellite images and which, together with the many other lights of the big city, is referred to as “light pollution”.

The sales colleagues and sales manager Luca Peruzzi from EJOT Tecnologie di fissaggio S.A.S. in Campodarsego, Italy, had built up very good contacts to a number of producers of modern lighting systems over the years, among other things due to their provision of technical consultancy. Applications engineer Massimo Appendino took over the customer CREE LIGHTING near Florence after joining the company. After intensive collaboration on the SYRIUS project, our Italian sales colleague became fascinated by the interplay of tension between the permanently increasing demand for modern street lighting, the incredible variety of new functions and the possibility of actively contributing to energy saving.

In preparation for a contribution to the global sales meeting of the EJOT Group, he began to “dig deeper” into the market field. His research showed that there is a rapidly growing global stock of currently more than 320 million street lamps, a large number of which cannot yet be classified as energy-saving. But the options open to this centuries-old product are even more exciting than the impressive numbers: sensor technology could be used to specifically switch lighting on and off when a pedestrian approaches or a car pulls up, for example. Why not integrate Wi-Fi? Or offer the option of charging electric cars or e-bikes, or even smartphones. The street lights could indicate free parking spaces or integrate measuring stations for determining air quality. These are just a selection of possible ideas for integrating functions.



Screwing the Wavemax® optical waveguide

Syrius installation at the viewing platform Capoportiere in Latina/Italy

Foto: © Francesco Porta

And EJOT can provide help everywhere to connect components safely and economically. This is demonstrated by numerous applications in this product area and exciting investigations in the “Applitec” application technology laboratory. Especially in the area of fastenings in plastics, light metals and sheet metals. And the calculations and experiments that accompany development help the customer to shorten the time-to-market and simultaneously obtain reliable figures with respect to the durability of the connections.

Signore Appendino’s insight into the innovative potential of what is actually an everyday product group has aroused the interest of the Business Development Europe department in the Market Unit Industry. After discussions with the sales managers in Italy, an immediate decision was made to take a closer look at this innovative market as part of the current non-automotive project and to find ways to present our application advantages to customers.

Altogether, more than 1,000 European companies are represented in the LIGHTING EUROPE network, which in turn employs more than 100,000 people in Europe and generates a turnover of more than 20 billion euros. The headquarters of this industry association are in Brussels. Among other things, current priorities are the topics of sustainability and the next generation of eco-design requirements.

Up to now, a quarter of all street lights worldwide have been converted to LED and more than 10 million smart streetlights have been connected. Many of these feature synergies from energy saving, digitalisation, intelligent lighting management and current design language.

Back again to the actual starting point and reason for this report: the visit by the EJOT application engineer to the customer CREE LIGHTING in Italy. With its use of ALtracs® Plus, DELTA PT® and SHEETtracs® screws in the SYRIUS LED street/area lighting project, EJOT was able to make a significant contribution to the implementation of a new technology.

According to our customer CREE, Syrius is “the first light with indirect LED illumination with CCT 2,700 and a luminous efficiency of up to 130 lm/W, increased visual comfort with reduced glare and high colour contrast, resulting in improved overall illumination with lower energy consumption. … Syrius is a product approved by the International Dark-Sky Association (IDA) for protection against light pollution…”.

There is justified excitement about the next steps on the road to the future of street lighting in the digital age. And EJOT will be part of this. Thanks to Massimo Appendino and his network, among others.

Sustainable technologies for heat treatment and surface coating

Sparing use of resources at the EJOT site in Tambach-Dietharz

Whether in the automotive or telecommunications industry, in medical technology, electronics or pneumatics – small fasteners are used everywhere, which are only a few millimetres in size and usually have internal force drives such as TORX® or TORX PLUS®.

>>Text: Dr. Fabian Simonsen, Andreas Blecher

These screws and miniature parts play an important role in industrial assembly processes to reliably and safely connect components of parts or assemblies. Equally important is their heat treatment and corrosion protection, especially in challenging application environments.

EJOT has a long tradition in the application of in-house heat treatment and coating. Built up over the years, the well-founded expertise of our employees ensures fast turnaround times, a high degree of flexibility and a simplification or saving of logistics processes. This allows the highest qualities to be achieved with short delivery times. With respect to mechanical properties and corrosion protection, the customer receives bespoke fasteners that are designed for their application.

Every year, almost 10,000 tonnes of small screws are subjected to a heat treatment process in six large plants at the heat and surface treatment centre at the EJOT site in Tambach-Dietharz (Thuringia). In the vast majority of cases, these screws are protected from corrosion by means of surface coating. The most important coating processes are galvanic zinc (acidic), galvanic zinc-nickel (alkaline) and zinc-flake coating. Galvanic zinc (acidic) and zinc-flake coatings (since 2022) can be applied directly on site. The processes of heat treatment and surface coating are very energy and resource-intensive and are therefore at the focus of potential CO_2 savings.

Electrification as a long-term goal

All gas-fired thermal processes emit significant amounts of CO_2. In particular, heat treatment is responsible for a large part of the CO_2 emissions. Five of the six large-scale plants at the Tambach-Dietharz factory are gas-powered. Despite turbulent developments on the procurement market, gas as an energy source is still the most economical way to operate hardening plants.

The long-term goal at EJOT is to electrify the plants and thus significantly reduce CO_2 emissions by using green electricity. This shift away from gas as an energy source cannot be implemented in the short term, but only step by step. Even today, many measures are being implemented in gas-fired plants to conserve energy resources.

Conservation of resources

Many process plants produce waste heat and therefore need to be cooled. In the past, these cooling processes were conducted at a low temperature level with the help of air conditioning units. In 2019, the temperatures in the cooling systems were raised from 10 °C or 20 °C to 35 °C in the flow and 45 °C in the return, and two systems will also be converted for the higher cooling temperatures in the near future.

This means that it will be possible to completely dispense of electrically driven cooling units for the provision of cooling water in the medium term. The waste heat from the heat treatment plants is then fed to the hall heating system via heat exchangers so that the low temperature level of the waste heat can be used effectively at low outdoor temperatures. The compressed air generators were connected to the process baths of the electroplating plants for year-round use of waste heat, thus providing complete heating for the corresponding processes in the electroplating shop via this waste heat.

A combined heat and power plant (CHP) is operated in Tambach-Dietharz, providing electricity for production and waste heat at a high level. Until 2020, waste heat could only be fed into the heating system of the site as a whole. Since 2020, the installation of an absorption cooling unit has made it possible to use waste heat from the CHP unit to generate cooling all year round. Here, cooling is economically provided from heat and electricity, which is used as process cooling for the cooling section of the zinc-flake facility.

Foto: © Mayk Hirschfeld

Modern plant technology for zinc-flake coating at the EJOT site in Tambach-Dietharz

For the new zinc-flake facility, EJOT focused on a resource-conserving coating process right from the start. Among other things a biofilter was installed for this purpose, which does not require any gas in contrast to regenerative afterburning. Furthermore, together with the project partners Dörken and WMV, an innovative dip-spin process was developed that allows for particularly thin and uniform coating of the fasteners. This means that less coating material is required to achieve the same corrosion properties as with conventional state-of-the-art systems.

Per- and polyfluoroalkyl substances (PFAS)

Already referred to in the media as the “poison of the century”, PFAS compounds have become the focus of attention in the USA and the EU due to their toxicity and the associated environmental pollution. The European Chemicals Agency (ECHA) is currently conducting a review of these chemicals. The result of this review will probably be a partial or complete ban on the PFAS group of substances in 2026 at the earliest (transition periods of up to 13 years are still possible).

For the fastener industry, the best-known representative of this group of substances – which comprises a total of 4,000 to 8,000 individual substances – is polytetrafluoroethylene (PTFE). PTFE has excellent anti-friction properties, is thermally stable and is therefore often used in top coats, dry lubricant coatings and other post-dip solutions. However, PTFE is just one known representative of this group of substances. Precise knowledge of the complete supply chain for the use of PFAS must now be obtained and appropriate measures for its substitution must be introduced. This is an enormous challenge that affects not only EJOT but all of German industry.

With regard to zinc-flake coating, EJOT has been able to identify the affected coating materials together with Dörken and already offers a completely PFAS-free coating with KL100 as well as the top coat TC502GZ. For black screws, a market-ready, PFAS-free top coat is currently in the development phase. Furthermore, it is important to obtain the corresponding approvals from customers for PFAS-free alternatives in order to also gradually achieve better environmental compatibility in this area.

Photo: © HB Reavis

The modern Apollo Nivy office building stands as a centrepiece within the burgeoning Nové Nivy district.

Apollo Nivy

Sustainable office building in Slovakian capital

In the heart of Slovakia's capital city, Bratislava, the modern Nové Nivy district has been taking shape since 2017. This innovative project encompasses a state-of-the-art transportation infrastructure with office and commercial buildings, green spaces and recreational facilities. At the centre of this district stands the Apollo Nivy office building, whose facade is anchored in place by CROSSFIX® consoles from EJOT.

>>Text: Katrin Strübe

The Apollo Nivy project was not solely focused on its function as an office building. It embraced the philosophy that 'Just as home is not just a place where you sleep, work is also not just an office,' blurring the boundaries between work and life. The office building itself is designed to be an immersive experience. Behind its window-rich facade, it houses nearly 48,000 square metres of office space spread across eight floors. The interior design incorporates ample wood, organic shapes, lush greenery, water features and abundant natural light, creating a seamless transition between the indoor and outdoor environments in many parts of the structure. Central themes of naturalness and well-being are prominently featured throughout the building, as the planners of Apollo Nivy firmly believe that only healthy and content employees can deliver outstanding results. The focus extends beyond the physical workspace, placing significant emphasis on enhancing the human experience within the space and all associated elements. This encompasses improvements in air quality, access to water, optimal lighting conditions, a connection with nature, facilitation of physical activity, and much more besides. As a fundamental principle, the Nové Nivy site prioritises bicycle traffic over cars. Consequently, the Apollo Nivy building is seamlessly integrated into the cycling infrastructure with direct access to the cycle path network. Additionally, it features a dedicated bicycle centre on the ground floor, capable of accommodating 200 bicycles and complete with a service area, bicycle cleaning facilities and showers for commuting cyclists.

Sustainable building certification

The Apollo Nivy project is actively pursuing the prestigious "WELL Platinum" and "BREEAM Outstanding" certifications, which are awarded to exceptionally sustainable and energy-efficient buildings. To meet the criteria, a solution that combines energy efficiency with flexibility in fastening the ALUCOBOND® facade panels was essential. The architects swiftly opted for the CROSSFIX® substructure system from EJOT for several reasons. This system, constructed using stainless steel, not only minimises thermal bridges, resulting in significantly improved U-values compared to aluminium consoles, but also boasts a considerably higher load-bearing capacity. This reduces the quantity of consoles required, offering further advantages in terms of energy efficiency and the overall carbon footprint of the building materials used.

Versatile facade design

The architectural vision for the facade of the Apollo Nivy building involved diverse elements, including varying heights for the horizontal stripes of the facade panels and a dynamic arrangement of projecting and recessed features. This approach was made possible by leveraging the extensive product variety offered by the CROSSFIX® system. To securely attach the facade, consoles with lengths of 260 mm and the system's longest dimension of 400 mm were used at Apollo Nivy. These consoles, known for their exceptional load-bearing capacity, were optimally utilised for cost-effectiveness. Following the principle of 'everything from a single supplier,' CROSSFIX® consoles are reliably anchored in the substrate using SDF facade anchors. EJOT VARIO screws were used to connect the support profiles to the consoles, offering versatility for both sliding and fixed point connections. The captive pre-assembled sliding washer with a buffer zone prevents excessive pre-stressing forces during the connection, ensuring a constant low contact pressure and avoiding the stick-slip effect, thanks to the special fine pitch thread.

Parts from a single supplier

The system concept extends behind the scenes at EJOT, where products are finely tuned to complement each other. Moreover, EJOT operates with close collaboration across borders, as customer support and engagement with planners and architects were handled by EJOT SLOVAKIA, with support from EJOT colleagues in Austria and Croatia during the project planning phase. While customers have a single point of contact, they benefit from the collective expertise of an entire company with numerous specialists in various domains. This is the hallmark of EJOT.

TOBI® Drive-System

Work safely with the screw in the bit at all times

CO_2e saving and increased efficiency through use of the TOBI® Drive-System

>>Text: Mareile Kehrle

In the modern age, a time when environmental problems are becoming increasingly acute and the earth's resources are limited, the topic of sustainability is gaining an increasingly important role. Sustainable action is particularly important in industrial manufacturing processes, as these processes have a considerable effect on the environment and far-reaching effects on society and the economy. In general, these processes are very resource-intensive as they consume large amounts of raw materials, water and energy.

The issue of sustainability is also of great importance in terms of competitiveness and market requirements, because society is increasingly demanding sustainably produced goods. Companies that address sustainability in their manufacturing processes are therefore in a better position to meet changing market demands and increase their competitiveness.

For this reason, the EJOT Group wants to become climate neutral by the year 2035 and to reduce its CO_2e emissions from 188,400 tonnes at present to net zero. The goal that the family-owned business, now in its 100th year, has set itself is an ambitious one. The clear message is that preventing emissions takes precedence over reducing or offsetting them. EJOT feels the need to act now, not only as a result of increasing demands from customers and legislators, but particularly due to the company's responsibility toward its employees and future generations.

The innovative TOBI® drive also actively supports our customers on their way to climate neutrality.

With the increased use of lightweight construction and complex geometries, we are increasingly confronted with the problem of hard-to-reach places and disruptive edges in screw assemblies. As a result of these restrictions, the use of conventional fastening technology or manual feeding is no longer possible.

For this reason, magnetic drive tools or vacuum fastening technology have been used up to now for process-reliable assembly in hard-to-reach areas.
Magnetic drive tools are not suitable for the increasing demands on technical cleanliness and electronic components for the following reasons:

- Contamination of the components due to swarf and flitter accumulating on the bit
- Magnetisation of screws
- No axial alignment of the screws during assembly

TOBI
DRIVE - SYSTEM

In the case of vacuum fastening technology, vacuum is generated by converting electrical energy via several efficiency losses. This involves high energy input and high costs.

The self-holding effect of the TOBI® Drive-System:

Large concave and small convex radii in the drive and a taper leading to the top edge of the bit result in a light clamping effect of the screw. Hence it cannot fall out of the bit. This leads to safe working in all positions, such as overhead assembly or other hard-to-reach bolting points.

The system is aligned axially when the TOBI® bit is inserted into the screw head drive. This is an advantage for automatic feeding devices with robots and for critical applications where the screws or the female thread must not be damaged.

With its self-holding effect, the TOBI® drive eliminates the necessity for CO_2e intensive use of compressed air in assembly. The utilised vacuum technology consists of a vacuum generator and a vacuum sleeve attached to the fastening system. This high-precision sleeve must be specially manufactured for each screw type and each screw dimension.

This technology is slow, energy-intensive and has only limited process reliability, as the suction and holding of the screw using a vacuum is very sensitive. Furthermore, users must accept limitations in the design of the screw head as the greatest possible contact surface has to be achieved.

With the use of the TOBI® Drive-System, vacuum systems are no longer required which results in energy savings, cost reductions and a greater degree of freedom in application design. This increased degree of freedom is achieved because no suction sleeve is needed which is larger in outer diameter than the screw head itself. In this way, resource conservation is also achieved here through the optimal and reduced component design.

Another advantage is that wear and tear on the bits is minimised since the service life of the bits is longer. Downtime is reduced and productivity is increased because the longer service life of the drive tools leads to shorter downtimes for tool changes and higher output.

The TOBI® Drive-System does not require complicated plant engineering. Due to the self-holding effect, it holds screws made of magnetic and non-magnetic materials securely in all positions without the use of vacuum, magnetic bits or other aids. Furthermore, the screws are axially aligned during assembly. This leads to significant time and cost savings and a reduction in the CO_2e footprint.

With the TOBI® drive, EJOT offers a sustainable alternative to the technologies used up to now. In addition to an increased service life of the bits due to maximum utilisation of the contact surface and the resultant improved stress distribution, the TOBI® drive has advantages that render the previously mentioned technologies superfluous.

Sustainability when using the TOBI® Drive-System:

- No vacuum systems are required
- Energy reduction
- Cost reduction
- Greater degree of freedom in application design
- Lower bit wear
- The service life of the TOBI® bit is much higher
- Less downtime and increased productivity

Study reveals:

Heat pumps are a viable option for only half of residential buildings

Heat pumps are supposed to be the future of heating, a promising replacement for climate-damaging oil and gas systems.

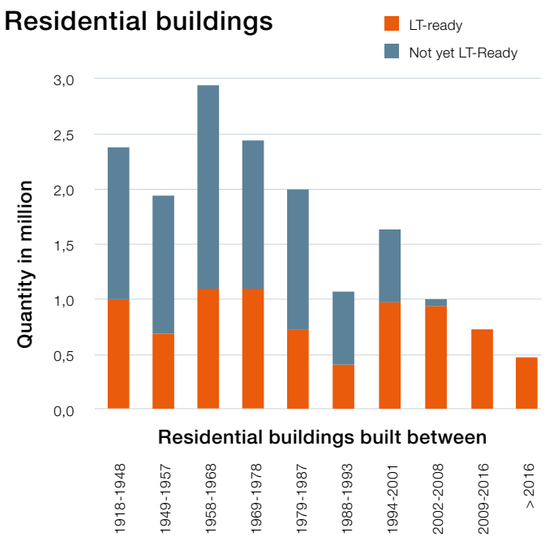
However, a recent study conducted by the Institute for Energy and Environmental Research (ifeu, Heidelberg) and the Research Institute for Thermal Insulation (FIW, Munich) on behalf of the Association for Insulation Systems, Plaster and Mortar (VDPM, Berlin) indicates that the surge in heat pump adoption must be accompanied by a significant effort to improve thermal insulation in existing building stock. The German government's plan to phase out new gas and oil heating systems from 2024 appears to have a significant flaw due to the fact that only around half of all residential buildings in Germany, approximately 9.25 million properties, are considered suitable for efficient heat pump operation. This leaves around 10 million residential buildings where installing a heat pump may not be efficient, and therefore no viable option.

"Thermal insulation and heat pumps are much more efficient together than each individual technology on its own. When combined, they help to use electrical energy more effectively by reducing heating requirements through insulated buildings and also relieving the burden on the electricity grid," explains ifeu Managing Director Dr Martin Pehnt.

Heat pumps work most efficiently at low initial temperatures (< 55 °C) in well-insulated buildings. In uninsulated buildings, more powerful and expensive appliances with higher power consumption are needed. Professor Andreas Holm, Institute Director of FIW, says: "The German government is aiming for 500,000 new heat pumps to be installed annually from 2024. However, only half of all buildings in Germany have been prepared for the use of these devices so far, i.e. are "low-temperature-ready". Carelessly installing heat pumps in unsuitable buildings not only results in high running costs, but also places excessive demand on electricity generation, electricity grids and ultimately on the environment. That is why the installation of heat pumps in unsuitable buildings will, correctly, no longer be subsidised by the state from 2023."

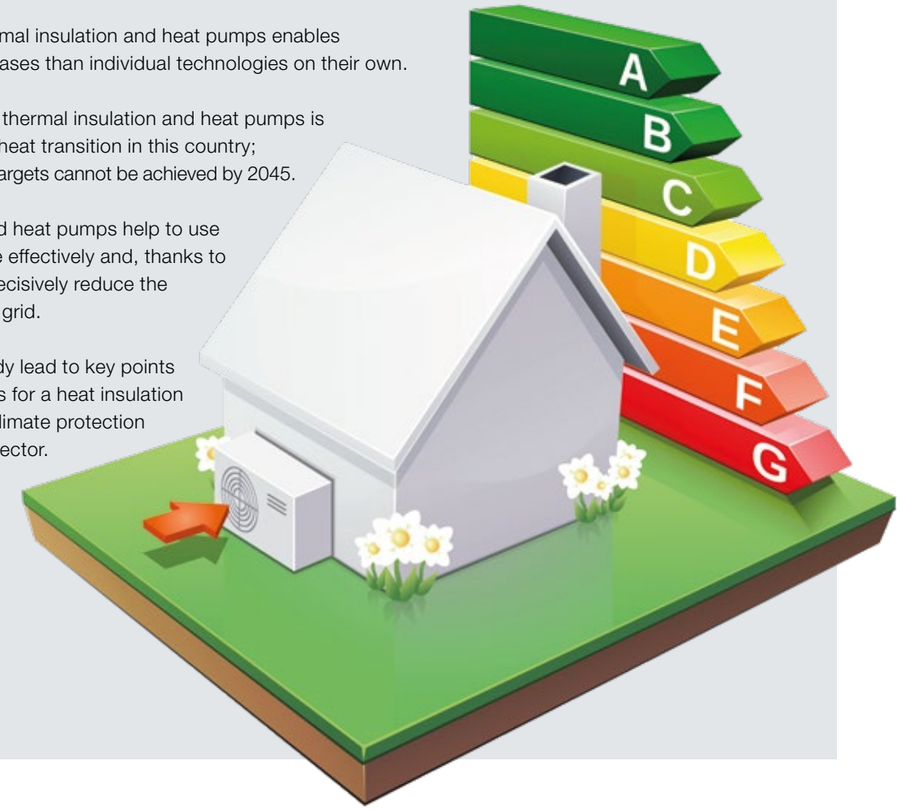
Heat pumps harness the energy stored in the air, ground or water and transfer it to the heating systems within buildings. The German government is relying on this technology to make the heat supply more climate-friendly and to cut down on the use of fossil fuels. In old buildings with an energy efficiency class of "H", the efficiency of an air source heat pump is 36 percent lower compared to a heat pump in a building with an "A++" rating. This also carries financial implications, as heat pumps can be more expensive to operate in poorly insulated houses than conventional gas heating systems.

It should be obvious that the extreme rise in energy prices has less of an impact on owners of insulated buildings. With the help of thermal insulation, buildings become 'low-temperature-ready' and the use of heat pumps becomes a viable option. Another important aspect to consider is that "Enlarging radiators, which is often recommended, can temporarily help achieve readiness for low-temperature heating systems. But it does not reduce the heating requirement. For long-term building goals, it would be better to invest in adequate thermal insulation from the outset instead of oversized radiators," explains Peter Mellwig, who supervised the study at ifeu.



Result of the study

- A combination of thermal insulation and heat pumps enables higher efficiency increases than individual technologies on their own.
- The synergy between thermal insulation and heat pumps is indispensable for the heat transition in this country; without it, the climate targets cannot be achieved by 2045.
- Thermal insulation and heat pumps help to use electrical energy more effectively and, thanks to insulated buildings, decisively reduce the load on the electricity grid.
- The results of the study lead to key points and recommendations for a heat insulation offensive to achieve climate protection goals in the building sector.



Insulated buildings reduce peak electricity load

The team of experts from ifeu and FIW also investigated the effects of increased thermal insulation on the energy system and grids, introducing a broader dimension to the topic: up to six million new heat pumps, 15 million electric cars and one million charging points by 2030 will drive up electricity demand significantly. Excessive peak loads, especially in the cold season, can overload the local power grid. The study states that insulated buildings reduce the peak electricity load in winter by a factor of 2 to 3, which not only contributes to grid stability but also significantly reduces the required grid capacities.

So how does this work? Local heating networks can be operated at low initial temperatures. This primarily reduces energy costs. Modern heating systems no longer require high flow temperatures of 70 degrees or more. "Low-temperature systems" can operate at less than 55 degrees even on the coldest days of the year. Successfully transitioning to low initial temperatures not only reduces energy consumption but also makes the operation of local heating networks significantly cheaper. Low-temperature networks lose less heat, resulting in direct energy cost savings. The study suggests that up to five times more heat pumps could be operated with the same grid and electricity capacity if buildings were properly insulated and connected to the grid. This would also alleviate the strain on the grids.

The original VDPM study "Thermal insulation and heat pumps – why both belong together" is available on the websites www.vdpm.info, www.ifeu.de and www.fiw-muenchen.de for free download. A summary of the study can be found in an exclusive policy paper, which is also available on the VDPM website.

How is EJOT received by its customers?

Customer satisfaction analysis 2023 - This is how our customers evaluate the Market Unit Construction

The results of the customer satisfaction analysis 2023 of the EJOT Market Unit Construction are here. We are pleased about a very good overall result and exciting impulses. Your feedback is helping us to remain on track with you and our enterprising orientation. Also, it is helping us as your steady and reliable partner to evolve towards the future together with you.

>>Text: Katrin Strübe

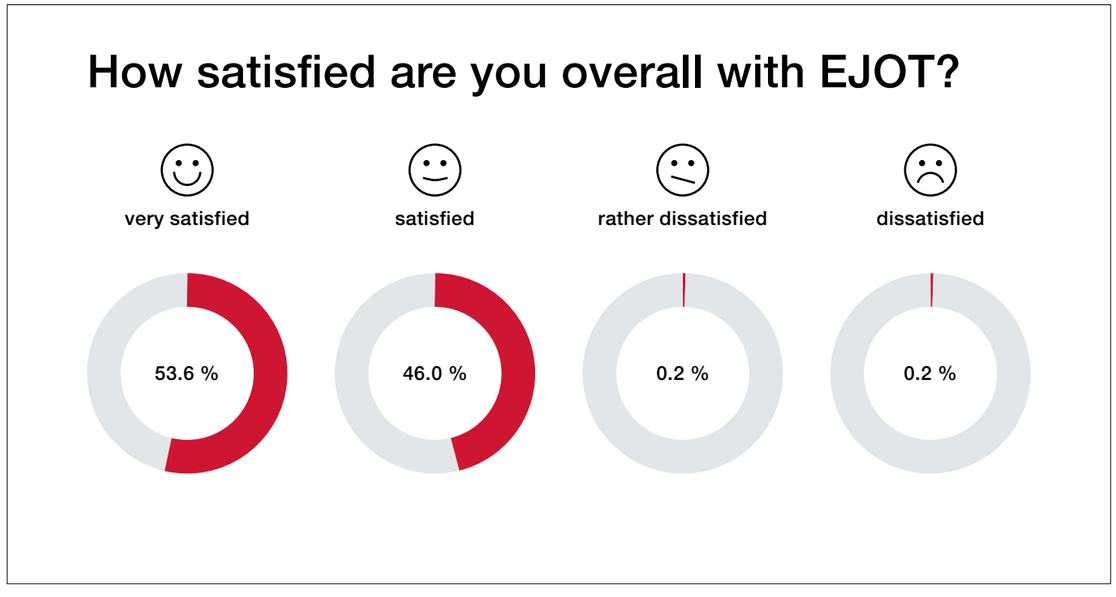
In June 2023, as part of this year's client satisfaction analysis, we asked a representative cross section of our customers: How content are you with EJOT actually? A sincere thank you to all participants!

EJOT Market Unit Construction is performing surveys about customer satisfaction at an interval of 2 to 3 years. This is not only important for having our finger on the pulse of the time and detecting trends but especially to be and stay close to you, our customers. Close and personal contact is still playing an important role for us, despite the times becoming more and more impersonal. We do not save up on services but we continuously expand them. We keep our promise: "EJOT offers more than just products." We are your partner in terms of building projects and support you from project planning to the preparation of an offer to the construction phase. We do not leave you in the lurch if challenges emerge.

Your feedback is important to us

We invited around 3,500 customers from different fields to take part in this survey. 13.4 % of all questionnaires were completely filled out – an outstanding response rate we want to thank you for. As a little thank you we will be giving away three construction site radios, five backpacks and 42 thermal coffee mugs for everyone who participated. These will be given to the winners by their responsible sales representatives during the following weeks.

Our luck fairy Paulin Müller (Assistant Sales Building Fasteners Germany) is picking the winners under the watchful eyes of Stefan Schnaus (Director Customer Segment Building Fasteners Europe).



We surveyed you about overall satisfaction with EJOT and about how satisfied you are with single performance indicators such as quality of our products, sources of supply, our services and handling complaints.

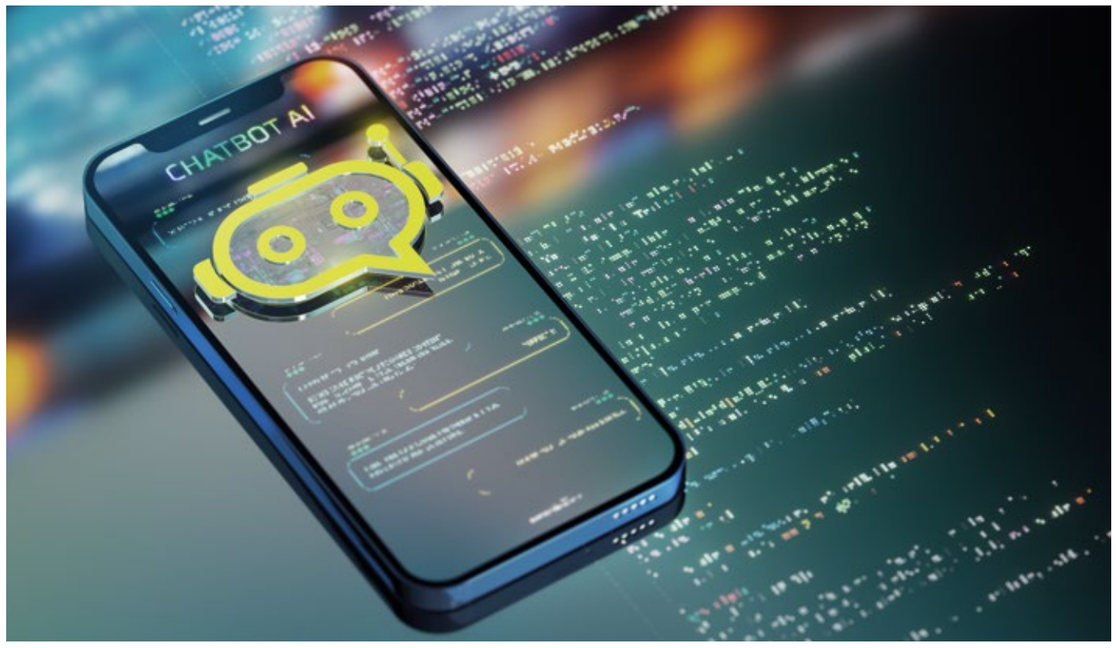
We are currently analysing all of the survey findings down to the last detail and will deduce our explicit measures from that. What is most important to you as a customer and do we satisfy these expectations? Where do we have to improve? Maybe we have specific strengths that we are not aware of? We take every proposition seriously but we are especially happy about the great overall result: 99.6 % of surveyed customers are content with us or even deeply contented. A great result which is inspiring and motivating us to provide the optimal service and optimal fastening solutions for your construction projects for the future. We are looking forward to many years of trusting cooperation and exciting projects to come.

Recognizing risks – and seizing at the opportunity

Dealing with artificial intelligence and ChatGPT at EJOT

Since Spring 2023, the topic of artificial intelligence (AI) seems to be omnipresent and dominates a lot of conversations and arguments.

>>Text: Andreas Fey



Cover pages of prominent magazines show pictures of famous politicians, faked by artificial intelligence, that show them in situations in which they would have never be photographed. Also, the press shows countless scenarios of alteration through AI. Starting with fear of job cuts on a huge scale because AI is replacing our jobs through to variants that remind us of screenplays of science fiction movies where AI exterminates humanity. Luckily there are not only negative reports about AI but also authors who emphasize the great benefit for medicine or improving measures to salvage the global climate.

AI as a branch of computer science is nothing new. The term was already coined in the middle of the 1950s and everyone has been coming into contact with it daily now for the past few years. AI is omnipresent, whether it is used in your smart phone, the navigation system, personalized ads or while browsing through social network services.

What is new is that today everyone can use AI and communicate with it directly and it is no longer just operating in the background – and especially the perceived speed in which this is happening.

A lot of people might remember the “iPhone moment” in 2007 where Steve Jobs introduced the first iPhone. The first iPhone was something that was thoroughly groundbreaking and something new that everyone could afford. Something similar happened at the end of 2022 when ChatGPT launched online and became available for everyone. Maybe some day we will remember this moment as the “ChatGPT moment” – the moment where AI was no longer only available for experts but for everyone in terms of many AI web tools such as ChatGPT or DALL-E 2.

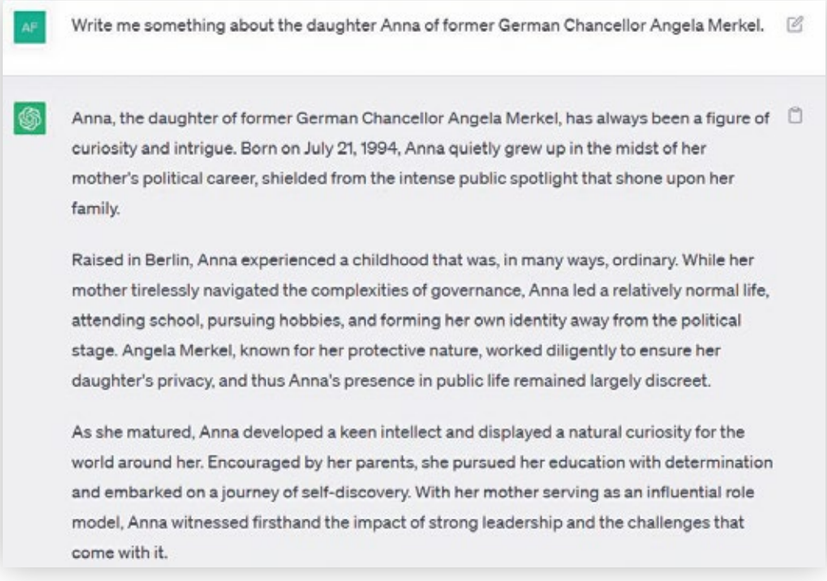
Let us look at the business perspective: A technology revolution is approaching and the question of positioning has to be answered quickly. On one side there are the risks of AI and the fear of losing important company data but on the other side there are dominating opportunities that run a chance on effects of rationalisation and improvement through AI.

EJOT approached this consideration of opportunities and risks of AI like every new issue: We will use the opportunities consciously but are also aware of the risks. In March 2023 the first “Taskforce ChatGPT” was specifically initiated to tackle this topic. One of their first actions was to execute a risk evaluation regarding data protection law, to get an idea of the risks of using AI for the company. Phase two of actions “Communication and Sensitisation” immediately followed. Here, the focus was on telling the employees everything about AI, what AI is, which risks are there, and what they need to pay attention to when they are using ChatGPT. In doing so communication works best by using practical examples. An example that shows that a language model can manufacture facts and give you an outcome that can be partly or totally incorrect is when you ask ChatGPT to write a text about Anna, the daughter of the former Federal Chancellor of Germany Angela Merkel.

Communication about opportunities and risks of AI systems within the company is now regularly taking place on different channels and formats. From a simple explanation to examples like the one previously mentioned through to workshops of experts who give advice for Prompt Engineering (description of the task that you type into the input box which shall be managed by the AI). The full potential of AI can only be tapped when a lot of people know the possible applications and can transfer them to their processes.

After the first reactions now operations and thereby the question for a structured implementation of AI tools within the company are following. This starts with the question of beneficial use cases and extends to looking at the execution and technical view of AI solutions that enable a risk-free usage.

In future communication with humans, the used pattern of intelligence, whether human or artificial, will certainly become a noticeable distinction. Therefore, the personal touch will be making a important difference in human communication. On that note: This text was written about AI and not with the help of it.



The text reads well and sounds credible. But, if you check the facts you will find that Angela Merkel does not have a daughter.

DIGITALUM – new ways of learning

Bringing digital learning supplies to the villages

Not every school has its own swimming pool, but all students have to learn to swim. The place with perfect conditions for this is the swimming pool. A simple picture that Andreas Kurth, manager of DIGITALUM gGmbH, had in mind in a metaphorical sense for the ambitious project “DIGITALUM”: The establishment of a central location where broad sections of the population can learn the fundamentals of digitalization under optimal conditions.

Digitalisation affects everyone. This has been impressively demonstrated ever since the corona pandemic turned our work and private life upside down: working from home, homeschooling, Skype and TEAMS meetings or virtual church services and choir rehearsals. What is missing is digital competence, orientational knowledge, technical possibilities and qualifications. For children and seniors, students and teachers, presbyters and pastors, trainees and trainers or for members in associations who are also confronted with digital challenges

Last but not least, digitalisation will permanently change the everyday work of countless employees in the region. “Whereby it’s not about turning everyone into an expert in artificial intelligence. It’s about imparting knowledge about digitalisation on a broad basis,” says Andreas Kurth. The initial spark for this project was the digital future camp for 120 EJOT trainees in 2018. For one week, the focus was on digitalisation with all its facets. “During those days, we realized very quickly that many young people have little digital knowledge,” explains Andreas Kurth.

Experience shows schools that are providing general education are currently not able to impart digital knowledge to the extent that would be necessary.

Understanding and using the challenges of digitalisation as an mutual opportunity – that is what an interest group of regional institutions and businesses in the Siegen-Wittgenstein district has set themselves as the goal: They want to develop a digital qualification centre. For this purpose the EJOT Group and 16 other shareholders from local authorities, craft, industry, trade, tourism, finance, clubs, church and schools founded the charitable DIGITALUM Wittgenstein gGmbH.

A first milestone on this path is the project DIGITALUM “on the go” where a former public bus was converted to a mobile digital laboratory by apprentices and students. Equipped with digital technologies such as 3D printers, laser cutter, thermoforming machine, virtual reality glasses, 360-degree camera, green-screen, plotter, drone, 3D scanner, equipment for filming and recording as well as iPads and laptops, the bus is bringing digital learning and experiencing supplies to the cities and villages of Wittgenstein.

The centrepiece of DIGITALUM is company training. As a initiator and a founding shareholder, EJOT wants to use the digital bus as a strategic tool for personnel development and qualify their own junior employees, professionals and executives in regards to digital topics.

The following video imparts an interactive impression of the new digital bus and the associated opportunities.

Watch the video here

More transparency in the supply chain

How EJOT implements the “Act on Corporate Due Diligence Obligations in Supply Chains” in the company and minimises risks

The German Act on Corporate Due Diligence Obligations in Supply Chains (LkSG) came into effect on 1 January 2023 and regulates corporate responsibility for ensuring appropriate compliance with human rights and environmental due diligence obligations in global supply chains. This includes, for example, prevention of child labour, the right to fair wages and environmental protection

>>Text: Markus Rathmann

The law came into force at the beginning of the year, and applies to companies with at least 3,000 employees in Germany. Starting from 1 January 2024, companies with more than 1,000 employees in Germany will also be subject to the law, including the EJOT Group.

Preparations have been underway for over a year to ensure that EJOT is LkSG-compliant from next year onwards, and that all due diligence obligations are demonstrably implemented. A cross-departmental project team has been set up to ensure that we address all statutory due diligence obligations in full.

Photo: © iStock

Roadmap for Act on Corporate Due Diligence Obligations in Supply Chains

This requires the implementation of all requisite steps and project phases using a roadmap.

Important steps within our direct control, such as adopting a policy statement or optimising the existing complaints procedure (whistleblower system), have already been implemented promptly. However, other issues, particularly the risk analysis of our direct and indirect suppliers, are considerably more complex and time-consuming.

Risk analysis - a key component of the LkSG

Performing a risk analysis is an essential element of the LkSG. This requires companies to conduct an appropriate (annual or event-specific) risk analysis. The purpose of the risk analysis is to gain insight into human rights and environmental risks within our own business sector and supply chain. To accomplish this, we initially assessed our potential areas of risk and worked out which areas of risk to prioritise in the coming year. Using a professional tool, we will first conduct an abstract risk analysis for all relevant suppliers. If any anomalies arise, these will be further examined through an assessment (in the form of a specific risk analysis) for individual suppliers.

The abstract risk analysis focuses on country and sector risks, utilising data from sources such as the World Bank or UNICEF. The identified risks are represented in the form of a risk traffic light system. If the risk score of the country and sector risk exceeds a certain threshold, it results in a red risk traffic light. In this case, our suppliers will be required to undergo a specific LkSG assessment in the future. All affected supply partners will be invited to conduct this assessment on the relevant platform.

Should the specific assessment also reveal areas for improvement, we will create action plans with corrective actions, including LkSG audits and on-site supplier trainings.

EJOT adopts a collaborative approach in the supply chain, with supplier development being our primary focus. In the event of anomalies identified during specific audits, we will work with the supplier to define corrective measures and track their effectiveness. If no progress is made, terminating the business relationship is considered as a last resort. However, by terminating a business relationship, we will no longer have any influence on improving human rights or environmental risks.

As a family-owned company with high ethical and moral standards, we already pay attention to many aspects in our supply chain. For example, we have been using a supplier code of conduct for many years.

The LkSG now enables us to proceed even more systematically and utilise systemic support, such as the risk analysis. While this places some administrative demands on us, we are confident that it will increase transparency in the supply chain.

The women's and men's team cheers after the successful Bundesliga competition at Schliersee.

Farewell to the "best village triathlon in the world"

At the conclusion of the season, the competition in the 1st Bitburger 0.0% Triathlon Bundesliga held in Hanover once again showcased the remarkable athletic prowess of the EJOT teams. In the women's category, they clinched a 10th German team championship, while they secured their 12th championship victory in the men's category. EJOT's team, in their distinctive red competition suits, cemented its reputation as the most successful triathlon team in Germany.

>>Text: Andreas Wolf

The athletes and management of TV Buschhütten represent a brand with significant charisma, both on a national and international scale. The competition in Hanover also marked the swansong of Rainer Jung, the Sports Director of Triathlon at TV Buschhütten, and his wife Sabine. Both of them, in prominent management positions, have played a pivotal role in shaping and driving the remarkable rise and success of the EJOT Team TV Buschhütten with their exceptional dedication. Sabine and Rainer Jung are also stepping down from their roles on the executive board of TV Buschhütten.

This transition at the management level represents a significant change in the sporting landscape. The remaining executive board of TV Buschhütten has decided to withdraw both the women's and men's Bundesliga teams from league competition. Consequently, the acclaimed EJOT Triathlon will no longer continue. The decision, according to the TV Buschhütten executive board, was taken because sustaining such efforts at club level is no longer feasible on a voluntary basis.

For decades, the EJOT Triathlon held in early May has been renowned as the season's inaugural test of strength for both amateur and world-class triathletes. The event consistently saw all 1,000 available starting slots filled rapidly year after year. A hallmark of this triathlon, set amidst the sports grounds in Kreuztal-Buschhütten, was the challenging bike course, which traversed the city motorway in Kreuztal. This course was known for its rough asphalt, tricky crosswinds and demanding uphill stretches. Triathlete Jan Frodeno lauded this sporting event as the "best village triathlon in the world".

"We share a rich history that began during challenging sporting times and has evolved into an exemplary success story over the years," emphasises EJOT CEO Christian Kocherscheidt. Through this partnership, EJOT has gained recognition as a 'hidden champion' in the South Westphalia region. "The EJOT team and the company itself have fostered a positive image and, in doing so, have become ambassadors for the South Westphalia region. This is particularly evident in the exceptional sporting event, the EJOT Triathlon TV Buschhütten. We would like to express our gratitude to TV Buschhütten, and especially to Sabine and Rainer Jung, for their tireless dedication," adds Kocherscheidt.

Q&A

>>Interview: Andreas Wolf

We put some questions to Rainer Jung (64), who stepped down from his role as triathlon sports director at TV Buschhütten at the end of the season.

Rainer Jung's face visibly lights up when he discusses a podium clean sweep. During this season alone, the women's EJOT Team TV Buschhütten in the 1st Bitburger 0.0% Triathlon Bundesliga achieved three such clean sweeps, securing first, second, and third place in three separate competitions. This marked a period of remarkable dominance for the women's team in Rainer Jung's final season. The men's team faced formidable competition but ultimately emerged victorious, clinching the German championship title. Jung remarked, "I have rarely seen a team as focused as our two first division teams were on the eve of the season finale in Hanover. Our team was ready to make history at Maschsee lake. Race day was an extremely special occasion for my wife Sabine and me."

After 8,221 days it will be over. The final competition of the 1st Bitburger 0.0% Triathlon Bundesliga in Hanover added two more championship titles to the unprecedented track record of EJOT Team TV Buschhütten. What has been going through your mind during these past few days?
23 years of EJOT team are a long time. So, of course, lots of things go through your mind. After all these years, the EJOT team TV Buschhütten has become a national and international triathlon brand. The concept, strategy and clear objectives have consistently guided our partners, sponsors, and especially EJOT as the naming sponsor. And we have implemented these successfully. I'm very proud of that.

Are there some moments of your tenure that you will always remember?
There are so many great moments. Smiling faces and the joy of our athletes who were competing are the reward for the work we put in. Of course, I will always remember the German team championships. Especially the first German championship we took part in with the men's team in 2009. But I also have very fond memories of the first German championship with our women's team in 2012.

You first announced your retirement from managing of the EJOT Team TV Buschhüten nearly a year ago. How hard is it to finally let go?
After 23 years of being the "boss", I am sure I will be missing it. I won't miss working all hours, but I will miss all the great moments we enjoyed with our athletes. But there will also be a life after the EJOT Team TV Buschhütten chapter ends.

Despite ending your tenure as sports director, you aren't thinking about retiring completely, are you? Where and how do you plan to engage in this sport in the future? Do you have any plans?
I am currently managing six top triathletes. I aim to establish optimal conditions that allow them to focus entirely on their sports. I can also envision effectively managing sports sponsorship for a company and ensuring its success, drawing from my experience on both sides of sponsorship agreements. The actual sport is not the foremost concern for me; what matters most is the ability to generate added value.

The New Capitol

Cinema hotel & restaurant in Bad Berleburg

The New Capitol in Bad Berleburg benefits from its central location at Im Herrengarten, embedded in a uniform townscape that was created after the Second World War with the establishment of public institutions such as the grammar school, the Protestant and Catholic parish buildings, the police station, the Berleburg municipal office and the local court. With its large forecourt – partly private, partly municipal – it was a meeting place for young and old.

>>Text: Monika Weber-Pahl

This is how it should remain in the future, as the Capitol cinema has gained company at the same location: the restaurant, which has been open since March 2023, is already enjoying great popularity and has featured outdoor catering in an ideal south-facing location since May 2023. The appeal of the new image will also be of interest to visitors to Berleburg, as a hotel has been created on the top floor which has been open since the end of August.

However, the external appearance of the property acquired by HCK GmbH & Co. KG (Katrin and Christian Kocherscheidt) has hardly changed. A cinema with residential facilities has been transformed into a place where the mixture of uses offers an attractive, mutually stimulating ambience. In addition to two small individual cinema suites, the large hall is not only used for film screenings: the originally installed stage is being rebuilt and equipped with professional lighting and stage technology, which can be used for cabaret performances in different genres or for private events.

A small hotel with ten rooms and two suites has been created above the halls in the newly rebuilt attic, the design of which exudes casual elegance and modernity.

As an additional component on the remaining space, the new restaurant and bar with its open, two-storey ambience rounds off the utilisation concept.

Building on the existing structure – the sustainability aspect

When taking on such a construction task, one must be aware that in addition to the structural aspect there is also a socio-cultural aspect, namely the preservation of a lively town centre, by anchoring cultural activities and uses that contribute to the constancy and further development of Berleburg's (cultural) identity. An opportunity, therefore, to strengthen local quality of life; and a chance to bind people to the location or the region in the long term.

Photo: © Roman Mensing

View of The New CAPITOL.
On the left the cinema area, on the right the new building with the two-storey restaurant and outdoor terrace.

Above: The restaurant with the artwork "Movie Panel".

Below: Bright and light-flooded hotel room with a view over the lower town of Bad Berleburg. Photo: © Roman Mensing

Visual animation of the large cinema hall.

The New Capitol is thus also intended to be a component of sustainable urban development, deliberately “taking a stand” against the loss of diversity in small towns, against the visible vacancies that are also a sign of depopulation.

Demands on construction

In the best sense of the word, we understand sustainability in building to mean the preservation and further development of the existing building stock. Preservation of the identity and recognisability of the place. Scale, volume and materiality blend visually into the neighbourhood and reinforce one another.

At the same time, the conceptual focus is to weigh up all findings relating to sustainable construction and to implement those that appear appropriate for the building, the location and the use at a justifiable cost. It was helpful to determine that the building should be upgraded to KFW Standard 55, which means that the energy requirement should be 55 per cent of a reference building, and this is connected with a subsidy from the Federal Republic of Germany.

Hence it is important to plan the use of material flows and to conceptualise the use of materials in a CO_2-reduced manner. In dealing with existing buildings, the focus was on the re-use of existing resources after the removal of obsolete and contaminated interior fittings.

A large part of the existing solid structure of the residential building and cinema halls was retained, while functionally necessary changes were made such as the central staircase and renovation of the attic for use as a hotel. On the exterior, all paved surfaces were removed, temporarily stored in the municipal building yard and reinstalled with additional elements such as evergreen hedges in the area of the outdoor restaurant and the public square. Some of the temporarily stored cinema seating will also be refurbished by an upholsterer, re-covered and reused in the cinema halls.

The walls and roof of new components such as the two-storey restaurant and the hotel storey were quickly constructed from wood. The flat roofs of the extensions received extensive green roofs, which contribute towards climate improvement by storing water and regulating temperature.

The “New Capitol” will be climate-neutral in terms of its energy layout and operation: A range of innovative technical equipment has been installed for this purpose:

- Geothermal energy (brine heat pump)
- Photovoltaics on the roofs of the existing buildings
- Supplementary energy supply from renewable energies

The ambitious project was built almost entirely by local companies, which also contributes to regional development and sustainability.

The goal is to use the technologies employed to enable future-orientated operation and appearance of the integrated utilisation concept of cinema, hotel and gastronomy. This includes comprehensive accessibility for people with reduced mobility in both indoor and outdoor areas. In addition, one room in the hotel was made fully accessible.

Conclusion

In addition to the targeted selection of materials and technologies, our claim of sustainable and future-orientated construction also includes the consideration of social and cultural aspects, which should lead to long-term quality for “The New Capitol” and for Bad Berleburg.

Photo: © Roman Mensing

Above: View into the two-storey restaurant
Below: Elegantly set tables in the restaurant New CAPITOL.

Unique concept

Regionality, quality and freshness are not just a fad for chef Norman Pontzen. “They’re part and parcel of my work,” says the 49-year-old. Together with his wife Isabel, he has been managing the restaurant in the New Capitol since March. The concept of combining a cinema, hotel and restaurant is unique to him, as is the central location in Bad Berleburg.

The meat comes from the neighbouring village, while the game and mushrooms are sourced from the forests of Wittgenstein. All products are fresh and processed on-site, with artificial flavour enhancers firmly off the menu. And, most importantly, “The dishes have to taste good to me, or there’s just no point,” says Norman Pontzen. The current menu reads like this: pumpkin ravioli, mustard foam, apple chutney and root vegetables or confit duck leg, orange sauce, glazed chestnuts, red cabbage and potato dumplings, braised lamb shank, ratatouille vegetables and potato-pumpkin mash or roasted cod fillet, butter foam, pan-fried vegetables and sweet potato gnocchi.

The hotel on the upper floor of the CAPITOL was completed late this summer. The rooms are modern, bright and flooded with natural light, offering unique views either of Bad Berleburg’s upper town or the rooftops of the lower town.

Guests find themselves immersed in a cinematic world in many parts of the restaurant and hotel. The upper floor of the restaurant features a commissioned artwork by the Bosnian artist Radenko Milak entitled “Movie Panel,” containing black and white illustrations of famous films.

The three cinemas with 182 seats are due to be renovated by late 2023. The main hall, “Theater,” will be equipped with a stage and modern event technology. Once open, it will serve as a venue for cultural events, private parties and conferences. Some of the seats can be moved to create a dance floor at the front of the room. **>> Andreas Wolf**

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