

Single-source craftsmanship

The future poses major challenges for the leather processing automotive industry – from a logistical as well as environmental perspective. **Ernst Thalhammer**, managing expert for cut and sew technology at DRÄXLMAIER, the market leader in the leather-lamination sector in vehicle interiors, discusses how the company has been setting the standard for many years, and how it succeeds in the balancing act between fulfilling customer desires and sustainability.

Leather is an inspiring material – in homes as well as cars. A dashboard or centre console trimmed with leather, leather-clad doors and columns, or a leather steering wheel creates a sophisticated, luxurious atmosphere in a car interior that, depending on the owner's taste, can be individually designed and defined – because every hide is unique.

As a long-time expert in leather craftsmanship and a supplier of high-quality interiors for cars in the premium segment, DRÄXLMAIER has insisted on expertise from a single source for many years. From development and purchasing to creating the initial prototypes, via series production and the sequential supply of stylish interior components to a replacement part service, DRÄXLMAIER covers the entire process chain in the leather crafts industry. As such, the company, which has branches in more than 60 locations in more than 20 countries, caters to the ever increasing expectations of its demanding customers in terms of quality of materials, high-end workmanship and design.

Excellence in leather lamination

By combining its engineering and production expertise, DRÄXLMAIER has achieved market leadership in the leather lamination sector in vehicle interiors in recent years. DRÄXLMAIER's system expertise in leather workmanship

is reflected in many sectors. The company has its own development system for leather components; for example, its own design tool to produce press laminating or injection moulding and other special tools in house that are required for leather processing.

Short decision-making paths also ensure a more efficient way of working. As a system expert, DRÄXLMAIER also shows it excels in advanced training – an essential, important aspect when it comes to quality assurance.

"Developers, project managers and, of course, the workers who handle it every day have to acquire a feeling for the material," says Ernst Thalhammer, managing expert for the cut and sew technology within the DRÄXLMAIER Group. "They have to be able to appreciate and experience this refined natural product and get to know its peculiarities."

This is the reason DRÄXLMAIER conducts ongoing training programmes to generate the greatest possible knowledge of the material throughout the group – internally as well as externally – which is how DRÄXLMAIER also actively meets its customers' requests by stipulating the technical dimensional specifications of leather. How thick should the leather be? How much scope is there in terms of leather shrinkage and what degree of loose-grained quality is still acceptable? >>

The company also provides advice on finding the right design. This is subject not only to visual criteria, but the correct positioning of stitches, and the contours and the outlay of radiuses play an essential role in the subsequent life of the elements covered in leather. DRÄXLMAIER is therefore not only familiar with conventional dispersion adhesives, but has taken on a pioneering role in the advanced development of hot-melt technology for many years.

“As agreed with the OEMs, in the genuine leather sector, we are increasingly employing hot-melt adhesive methods in order to achieve extremely robust bonding and to cope with leather shrinkage,” says Thalhammer as he also points out that under certain circumstances, leather may be exposed to extreme temperature fluctuations; depending on the location it may also be exposed to tropical climatic conditions.

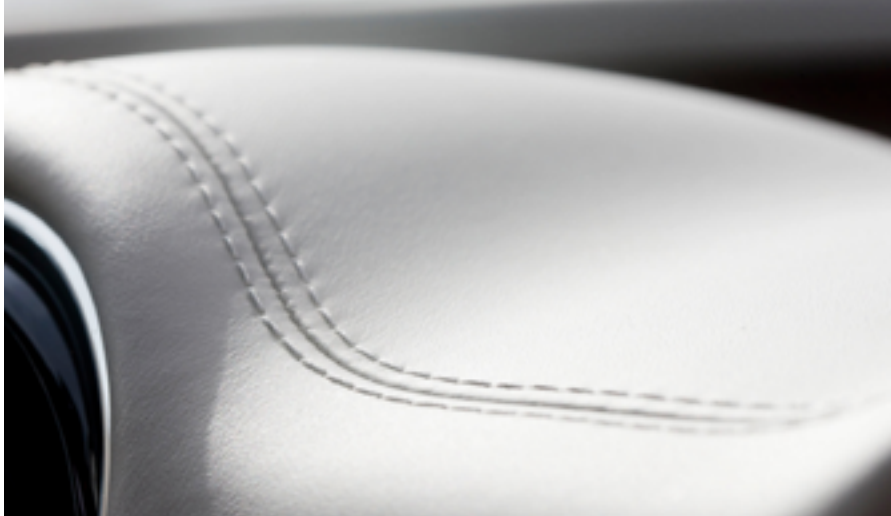
The combination of great heat and high air humidity constitutes a major stress test for the material and is very stressful on leather. In this case, there is a risk that it shrinks too much and that adhesion to the component comes undone. This is why the company is keen on passing on its technical expertise to the OEMs at the earliest possible stage. With the joint agreements in the design studio, for example, DRÄXLMAIER's experts show how the leather has to be laminated without being stretched, so no wrinkles form in the cut and sewn panel.

“The trick is to create a balance of excellent quality with functionality and good looks,” says Thalhammer.

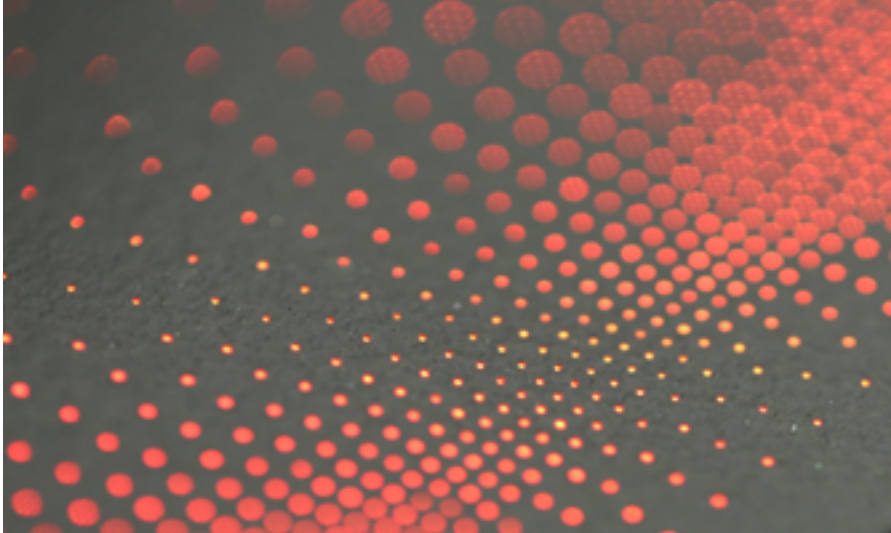
Quality is the be all and end all of any product. For this reason, innovations in the leather-processing sector at DRÄXLMAIER are also protected by key patents. One of those patented ideas at DRÄXLMAIER is the invisible airbag solution for genuine leather by means of what is known as a tear line. Here, the leather around the airbag cover is reduced to a minimum thickness so the airbag door can just about shoot through it. The trick here is that the contour jump at the thinned point is invisible to the customer's eye.

In keeping with its general two-in-one approach in its leather processing work, DRÄXLMAIER also pursues a strategy of using a special technique to execute two

Luftausströmer: a DRÄXLMAIER patent.



Microperforation from DRÄXLMAIER.



different production processes with the same tool. An example of this is the patented seam-priming technique that allows the seam end to be designed in such a way that it can be laminated on a moulded surface even without a seam ditch. This way, the same component is also suitable for a low-cost film thermoforming variant.

“The variety of colours in leather has increased significantly in recent years,” says Thalhammer. “With some OEMs, the customer can choose from eight different colours in two different grain patterns respectively. In total, that means 16 different leathers – a great thing for the customer and a major logistical effort for us.”

“ DRÄXLMAIER's aim is to cater to the individual needs of OEMs flexibly and allow for variety in design. ”

Close links with partners and suppliers

DRÄXLMAIER's aim is to cater to the individual needs of OEMs flexibly and allow for variety in design, but this also poses various logistical challenges for the company.

Not only that, but the number of leather suppliers has also multiplied. While OEMs used to often work with only one leather supplier in the past, recently they have been dealing more with increasing numbers of suppliers. The result of this is

that the tanneries have to specialise increasingly in certain colours.

“For example, it’s possible that supplier A supplies black leather and supplier B the red leather – for the same car,” says Thalhammer. “So, good logistics and time management are required.”

DRÄXLMAIER attaches importance to working very closely with the OEMs and individual suppliers in order to achieve a common understanding of the range specifications, for example. It means precise agreements have to be struck on how the natural features can be spread across the hide to guarantee problem-free production.

Design of the future

A vehicle interior lined exclusively with leather arouses longings among customers, without a doubt. But DRÄXLMAIER is also always coming up with new ideas of how to trump the leather experience. It is not only that interior experts have perfected various laminating processes; the preliminary development experts also like to experiment with new techniques and creative elements along with DRÄXLMAIER’s designers. This is how, for example, the idea originated of lasering decorative marks or symbols into the leather, such as the vehicle manufacturer’s logo and backlighting them, similar to switchless lighting symbols. A foil is attached behind the leather, which produces a kind of lens effect and focuses the light coming from behind. The magic only begins at nightfall, however. In the evening, the indirect illumination produces fantastic effects in the vehicle interior. It’s very classy and exclusive. Another highlight is brilliant piping stitches that provide a varied lighting scenario by means of RGB technology.

Rethinking future-oriented solutions

The continuously growing demands of customers for design solutions also pose increasing problems for the leather industry, when it comes to the key issue of sustainability. But DRÄXLMAIER is and always has been at the forefront of the research and development of alternative, future-oriented solutions. For example, the company recently fitted a vehicle with an olive-leaf-tanned leather door trim.

Ernst Thalhammer is the managing expert with worldwide responsibility for cut and sew technology within the DRÄXLMAIER Group.



“There’s currently a trend towards using more vegetable tanning agents,” says Thalhammer.

With the appropriate positive development compared with the current standard of FOC leather, as used for most components to be laminated in the automotive industry, this could be a real alternative. If the subject under discussion is current design trends in vehicle components to be laminated with leather, two contrasting developments within the industry are soon encountered, which are associated with the properties of leather as a natural product. Many OEMs pursue a two-surface strategy, meaning the various components are always available as a faux-leather variant – in competition with genuine leather, of course. Faux leather has been developed to look increasingly like leather in recent years. Nonetheless, OEM expectations are rising with regard to pure leather surfaces. For example, in the instrument panel sector, they frequently demand laminations with as few stitches as possible, the result of which is that the

required panels always have to be larger. And, for this, only the very best-quality hides are suitable, which are in short supply today. It is virtually impossible to obtain supplies of leather in this quality on the market currently.

Against this background, Thalhammer advocates a rethink in the industry.

“The end customer often lacks an understanding of ‘real leather’ as a product and its characteristic natural features,” he says. “The customer is not given enough information and therefore doesn’t have the opportunity to recognise the beauty and individuality of this leather-laminated dashboard and to appreciate its uniqueness, as for the most part OEMs do not want natural features such as mast pleats or variation in structure. However, these are in fact signs of the leather’s actual authenticity. Is it possible – and this would be very desirable especially with regard to the idea of sustainability – that we can look forward to something of a rethink among OEMs in years to come?” ■