

# DTS takes laminate floors to a new high

by IRENA JOSOEB in Germany

German-based laminate producer DTS is now all ready to bring its unique electron beam curing technology to Asian flooring manufacturers. *Panels & Furniture Asia* talks to its Plant and Sales Manager, Mr Ralf Michael Gerigk, during a July 2008 visit to its headquarters and production plant in Moeckern, Germany, and gets updated on its latest developments and offerings.

**D**TS Sytemoberflaechen GmbH, from Moeckern, Germany, specialises in the manufacture of decorative surfaces cured by electron beams by using a globally patented process, for various interior and exterior applications.

We interview Mr Ralf Michael Gerigk, Plant and Sales Manager, to gain a better idea of the innovative technology it has and what plans it has for Asia, on top of getting in the thick of action in its production hall.

**Q: Shall we start with a brief history on DTS and what it does?**

**A** (by Mr Ralf Michael Gerigk, Plant and Sales Manager, DTS): DTS was founded in 1994. HDM – a German manufacturer laminate flooring, furniture and other related wood products – was then looking for a different surface for its laminate flooring, as a unique selling point and to provide better advantages to its end-customers.

Mr Wihelm Taubert, partner and owner of DTS



*Mr Wihelm Taubert,  
founder and current  
managing director of DTS*

Sytemoberflaechen had been in the electronic beam curing business for more than 35 years then and informed HDM that he could, through use of electronic beam curing and acrylic resin, create a different and better surface for laminate flooring; he would also be able to create the new machineries for this system.

He then set up small production line and together with HDM invested into a starting a factory in Oberhausen, at the western side of Germany to produce the laminate which the world now knows Elesgo. Later on, DTS was moved to this site in Moeckern, in the eastern side of Germany, to be nearer to our customer HDM.

In the last decade, DTS began to experiment more with this technology and also in types of raw materials used. We now also have other laminate products for ceilings, furniture, kitchen worktops, indoor doors, doorframes, and exterior laminates for HPL compacts, etc. We produce 12 million sqm of laminates a year, quite a big volume with only 50-70 people in the company.

We have been working very hard in the past five years to push Elesgo and DTS into international markets. We have a relatively small sales department, consisting of four people, two in-house and two on the go. We also work with agents such as KD Feddersen Uebersee Hamburg.

Today, other than HDM, our customers for laminate flooring include Classen from Germany and Mannington from the US, etc. Our growth in production capacity has reached 15-20% per annum in recent years.

**“We know we will never be the ones to talk to if manufacturers are looking for cheap alternatives, so we focus on the bigger and more innovative customers.”**

- Mr Ralf Michael Gerigk,  
Plant and Sales Manager of DTS



*DTS headquarters and facility in Moeckern, Germany*

**Q: Which countries make up**



*In progress: the new DTS office building and showroom*



*In the DTS lab; a new lab four times as large will be completed by end-2008 to replace this current lab*

**your major markets?**

**A:** Currently Germany makes up 70% of our market and reach the biggest flooring manufacturers; for our export markets, Italy makes up the bulk for our furniture market while Russia is another major market for window sills.

For Asia, we are looking at various markets, and at the moment, we are focusing on China as we see there is a high potential for high gloss materials. There are also many laminate producers in that country and we have had Chinese flooring producers come and visit DTS to see our production.

**Q: So the focus in Asia for Elesgo products would be on the flooring market?**

**A:** For Asia we are indeed targeting the flooring products. I believe there is already a change in the flooring market and a lot of companies want to jump into bandwagon to produce laminate flooring, and hence there are already small producers who produce low-cost ones and a large volume of these going into the US market.

There is however big competition between the producers of laminate flooring who compete on being cheaper, cheaper and cheaper. Some time in the future, they will not able to earn much from this and they have to somehow find a selling point to earn the money. That something, is to show that they have a higher quality product to make the brand more valuable.

DTS can help these manufacturers with the use of simple and non-expensive ma-



*A new fully automatic stock system for raw material storage in the just-completed second production hall*



*DTS staff inspects the laminate after the electron beam curing process*

chinerics, like continuous double presses, to produce first-class products. Our products come packed as a continuous roll and not sheet papers.

In Asia, we find that end-users like high gloss flooring. However these flooring must also be usable. For more than 10 years we have producing a high scratch-resistant flooring material which also has the positive effect of being non-slippery. This will help manufactures distinguish themselves from other producers.

**Q: Please give us an update of recent developments within DTS.**

**A:** We are now in the process of doubling our office space with a new building located just next to our current one; it will incorporate our new showroom, meeting rooms and also purchasing, sales and accounting departments.

We are in the midst of investing also into the fourth electron beam curing line, which is then also our third production line excluding another one for lab testing.

Our first electron beam curing line is now 10 years old while our second is five. In total they have a maximum capacity 22-23 million sqm though they now produce about 12 million sqm. However we are planning this new line to meet expected increased demand for capacity in four years' time. Construction is expected to be completed in 2-3 years.

We have also completed a new production hall in April this year, thus freeing up space in the current hall for our upcoming third line. This new hall will be used as a storage space for our resins and other raw materials ready for production, and also for packing and commissioning. Together, both halls give us a

production area of about 12,000 sqm or three times as much floor space as before.

In the new hall, we are already putting in place a fully automatic stock system that can contain about 6,000 pallet units. By September 2008, all raw materials will be recorded and controlled via this new system.

We also have installed a new computer system that coordinates the different departments together, to better plan production timelines and anticipate where potential bottlenecks might be.

Currently we have also invested into a new coating machine; to be used before the laminating process, this step increases our line capacity by 25%. This was installed in May 2008 with test-runs done in July.

Finally, we will set up a new testing laboratory by end-2008, which will be four times as big as the current one.

**“Machinery technology is one thing but 40% of our success comes from the knowledge of our people who on the machineries: to adjust the chemicals, paper and temperature. No computer programme can do it fully automatic.”**

*- Mr Gerigk*

**Q: How do you see DTS developing the next five years?**

**A:** It is the plan of DTS to be a global player and we are targeting to double the business in five years. We see a lot of interest in our laminates and technology, and have had big players who expressed interest in buying into our technology and company, but

we have always said, “Sorry but no.”

While it's beneficial to get fresh capital for further investments, our philosophy is to keep the control of responsibility and technology in our hands. And we have made progress still: we have invested in our production departments and also into a new computer system as mentioned earlier. Our next step is to ‘invest’ in more colleagues and more good sales people to



*Mr Christoph Graf v.d. Schulenburg, from DTS' Sales division*

travel around the world.

We are also on the lookout for more specialists. For example, we are looking to expand our R&D department and labs. Last year alone, we grew from 50 employees to 70; the plan is to grow it to 90-strong staff within the next few years. We also want to bring the logo of Elesgo to around the world so that they know this brand as real quality product.

In the near future, we also want to specialise in niche markets, with the focus being on always the highest quality. Our laminates may be more expensive, but there are big advantages. We know we will never be the ones to talk to if manufacturers are looking for cheap alternatives, so we focus on the bigger and more innovative customers; we want to grow with our customers as partners.

**Q: What makes Elesgo traditionally strong in the area of laminate flooring production?**

**A:** Currently, traditional laminate flooring has two big disadvantages: one is that it feels cold to the touch and doesn't feel natural. Two, it is noisy to walk on.

The use of Elesgo for laminate flooring will result in a warmer touch as the heat transfer resistance of the acrylic resins used is different from that of traditional melamine surfaces. Also the noise factor of the final product is better.

To address that second issue, producers can however use a hollow plastic core instead. Together with the use of Elesgo, which is water-stable and also a water-stable glue, manufacturers will have in their hands a water-stable flooring product.



*Mr Ralf Michael Gerigk, Plant and Sales Manager of DTS*

**“Many suppliers can manufacture high gloss laminates for flooring but only DTS and a couple of other companies can produce one that will last for many years.”**

Also, our use of acrylic resin increases the impression of the décor, an optical effect that is not possible with melamine surfaces.

High gloss effect is not just about the gloss level of the product but also the clarity and 3D effect of paper to the human eye. So Elesgo may have lower gloss level than some products, but people will think it is glossier. Elesgo's high gloss level is about 90°.

**Q: What is your opinion on the current market conditions?**

**A:** With respect to market conditions in the EU and US, I expect a lot of producers of traditional materials such as melamine surfaces, to meet some problems. With demand going down, manufacturers would now buy the cheapest available or make some investments as they understand it adds value to buy better quality.

We focus on the quality market, so this situation is not re-

ally that bad for us, as we provide our customers advantages against their competitors. It's now the right time to speak to customers to use higher quality materials for their production as they are more open now due to the more competitive environments.

Of course sometimes it's not easy as some are not keen to risk changing anything in their production methods and to change their product. There is also the issue of fluctuating exchange rates and rising transport costs for the laminate, which however are negligible looking at the costs of the finished product.

Furthermore we find that the market in China – Shanghai in particular – is more prepared to pay for better quality. They understand that we are not merely an alternative for surface use but that we in fact increase their product quality level.

## The Elesgo production process

The innovative technology developed by DTS permits an exact dosage of electron beams used, thus allowing a wide variety of substrates and resins be hardened without the use of pressure or heat. The acrylic resins are absolutely free of solvents or formaldehyde, giving DTS its own high standards in environmental friendliness and energy-saving production methods.



*Elesgo in production...*

By using low energy electron beams, radicals are formed within the monomeric acrylate resins. During the curing process which lasts only milliseconds, these combine with other acrylate resin molecules to form a fully cross-linked, macro-molecular acrylate resin polymer, ie, one that has been hardened.

Explains Mr Gerigk: "First is the impregnation of decor paper, thereafter we go to a coating station and apply a base coat mixed with aluminum oxide for good abrasion resistance. On the third coating station, we bring on a top-

coat for good scratch resistance.

"Then we place a plastic release film on top of the surface. At this point in time, both top and base coat are still in liquid form but do not mix because of their different viscosities. However after going through the electronic beam curing process, all liquids are hardened and 100% cured within milliseconds."

As a result of using this special technology and various release foils, DTS is able to provide the whole spectrum of degrees of brilliance, with 12-13 gloss levels ranging from dull matt of gloss level 4 to super gloss of up to level 90, and different structures such as wood grain and also Fantasy ones thanks to the innovative use of its foil also as a flexible pressing plate.

The company not only produces various wood, stone and imaginative patterns, but also pigmented single-coloured laminates – for which it mixes its own colours based on requirements – including those with soft-touch finishes.

Shares Mr Gerigk, "Many suppliers can manufacture high gloss laminates for flooring but there are many different grades and qualities of high gloss materials, whereas there is only one Elesgo with its outstanding features."



*The complete electron beam curing line which costs more than EUR10 million each*



*... laminating of impregnated décor paper and release foil together*



*The new coating line in DTS*



*Electronic beam curing unit*

We are hopeful to secure our first contracts in China within the short term and are sure that our clients then will realise the great advantages our laminate brings to them. By upgrading their products and distinguishing themselves from standard flooring products, they will see that they can earn more money with a high quality product rather than with commonly known and available low priced ones.

**Q: How are you going to show your presence in Asia, given that this is your first attempt venturing in Asia?**

**A:** Going to fairs like the one coming up, ZOW Shanghai in September. We hope to meet many people at one place for 3-4 days. I also enjoy working with our agent KD Feddersen Uebersee Hamburg as they know the markets and address their message to producers directly. They go to factories, and speak to the people who matter, and see what machineries are being used. This is also our philosophy: that we address the people who could be interested in using Elesgo and ensure that they have right machineries to work with.

By end of this year, we are visiting companies at their production sites and assisting their operators in using our sample rolls with their existing machineries.

Technology is a benefit that we bring to the people. Going to the fairs and merely giving out some sample rolls without sharing personal

experiences and customised technical information will not work.

We had many visitors from the Asian markets come visit our booth during our fairs in Italy, Germany and Russia and there were a lot of visitors who are impressed by our surfaces. We listened, and realised there was a demand. However realistically, we did not have the capacity then to serve them as we did not know their markets, mentalities and attitudes, and we don't speak their languages.

Hence we have been in discussion in entering Asia since year 2006. We had



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- 1) Colour-changing uni-colour Elesgo laminate as produced by DTS  
 2) Elesgo surface on HDM floor products

since then our first success in South Korea with a large producer of HPL especially for outdoor compacts and lab use.

**Q: What are other unique selling points of Elesgo?**

**A:** DTS is custom-made, which means we do not sell products from stock, but generate for every customer unique surface that is specially designed for his needs. We don't ask potential customers to pick something from an available and limited range.

What we do is first determine where this surface will be used, the flexibility and gloss level they require, what glue systems they are using, which machineries are in place, etc. We find the optimum balance between quality and price.

However, we do have existing products in sample rolls as "door-openers". If these don't work, we can adjust nearly everything and make it work in production.

**PFA**

- 3) Metallic possibilities with Elesgo on top  
 4) Elesgo made a big pink splash with its eye-catching floors at the ZOW Bad Salzuflen 2008