

# Vital vacuum

As CEO of Oerlikon Leybold Vacuum, Dr. Andreas Widl is one of the PV industry's innovators. Here, he talks to PES about the evolution of the company and the technological advances that have made it a major global player.

**PES:** Welcome to PES magazine, for the benefit of our readers who might not be acquainted with your company, can you outline how you serve the PV industry?

**Andreas Widl:** For the past 160 years the business focus of Leybold Vacuum has been vacuum technology, a prerequisite for most modern manufacturing process. This is also the case for the PV industry. Only 5-10 per cent of total investment is spent on vacuum technology, even though vacuum is the enabling factor in the production chain. Vacuum plays a role in growing silicon ingots, wafer processing, all relevant coating processes and lamination. Application know-how, and the experience of selecting the right vacuum solution and systems for the different applications are crucial for a stable and reliable production as well as essential for secure and profitable processes.

**PES:** You operate in a number of production sectors, can you tell us about the importance of PV to your overall operation and whether this sector is growing?

**AW:** From delivering vacuum for the first electric light bulb to delivering vacuum for research institutes, Leybold has always been a forerunner in new technological fields. The PV industry is no exception. With our well-proven know-how of semiconductor and coating applications, we were well positioned to serve our customers when the PV sector started growing and will certainly continue to optimise our product-offering in order to grow with market opportunities. Moreover, the PV industry offers socially and environmentally-acceptable energy solutions, and we are excited to participate in this kind of sustainability.

**PES:** A German company with a global reach, which other markets are you actively targeting at present?

**AW:** Oerlikon Leybold Vacuum also serves markets covering coating technology, industrial process industries, analytical and life science instrumentation, R&D institutes and universities. This wide range of technological fields ensures our team is well versed in all existing demands and able to detect future trends. Due to our global footprint, we understand regional differences and can adjust our offering accordingly.

**PES:** Maintenance and downtime is an issue for any manufacturer. How do your products ensure minimal disruption to the production cycle?

**AW:** I agree, these two topics are absolutely essential, but would like to put it under the umbrella of 'Cost of

Ownership' and also add the security aspect. Our products are reliable, robust and specially designed to endure the high demands of these processes and are optimised as to overall maintenance. This is a prerequisite we have in mind while developing and designing new products. The methods used in our own R&D processes also include monitoring and controlling of the pumps, so that the customer obtains utmost operation transparency.

Depending on application and process requirements, we offer customised vacuum solutions with exactly these topics in mind. We not only deliver vacuum; we consult, so that our customers can concentrate on their real target – production. Presently, we are launching a new range of dry vacuum screw pumps DRYVAC – they will drive these issues to the next level of customer-friendliness, flexibility, footprint and, of course, cost of ownership.

**PES:** The lamination process presents temperature-related problems for some equipment. How do your systems cope with this?

**AW:** Before offering a solution, our experts talk to customer to analyse the actual demands. The manufacturing processes therefore determine the kind of pump system used. Especially in lamination processes, our well-proven pumps of the SCREWLINE series have reached excellent results due to their excellent temperature management, limiting the compilation of deposits. Also, maintenance is easy and can be done in-situ at the customer site, thus improving the uptime.

**PES:** We note that Oerlikon Leybold Vacuum has just obtained an Authorised Economic Operator (AEO) certificate. Can you explain what this is and how it benefits your business?

**AW:** This certificate is very valuable for Oerlikon Leybold Vacuum. As a global player and supplier of high-tech vacuum systems, solutions and components, our products are used in sophisticated processes. Our excellent procedures within the supply chain and in-trade control represent real added value to our business partners.

'Authorised Economic Operator' companies are considered as particularly reliable and trustworthy. They have proven solvency, shown previous compliance with the pertinent laws and the fulfilment of certain high-security standards.



The customer obtains utmost operation transparency



Maintenance is extremely easy and can be done on site

For our customers, there are obvious benefits in customs regulations – we follow simplified customs processes and are faster, as we need to issue only reduced data. Shipments are inspected less frequently and even if an in-depth inspection may be required, this is performed with priority and the holder of the authorisation is informed in advance.

**PES:** After-sales care is an area where many companies fall down, can you explain a little about how you service your customers?

**AW:** Oerlikon Leybold Vacuum has the largest sales and service network in the vacuum technology branch. We believe in service as an essential part of our product offer. Customers need various degrees of service performances. We offer everything from 24/7 response

time, to customer-care packages and back-up pools for fast on-site response. It is our goal to ensure our customers' profitability. Prerequisite is selling the optimum solutions and offering the best service there is.

**PES:** We've seen you at the Hamburg show and at several other European events – to what extent does attending these shows benefit your operation?

**AW:** Shows and exhibitions always serve three purposes – boosting image, driving sales and networking. You could also say see and be seen. Being in the middle of companies, driving technologies, markets, and developments presents the best chance of collecting information about the trends in industry. Of course, showing what you eventually do with this knowledge is just as important.



**PES:** In an area such as PV production, precision matters greatly. How do you ensure the operators of your equipment are as reliable as the units themselves?

**AW:** Our pump systems are equipped with proven technology, also for monitoring and control of the operations. And implementing of the hardware also means implementing the software and enabling the customer to deal with the system.

We realised early that the knowledge on vacuum technology may be limited at the customers' side – so we founded the Leybold Academy. We offer training and seminars externally and internally on almost all aspects of vacuum technology and, of course, in the handling of our products.

**PES:** The solar sector generally tries to lead in 'green' issues; what's your policy in relation to the environmental impact of your production facilities?

**AW:** 'Green' is just one aspect of social responsibility. Optimising productions methods is paramount for modern industry and that entails the careful use and deployment of all required resources. For us, this means constantly striving for better machining, better energy management, less waste in the production chain and, as this cannot always be avoided, the best recycling options. We see ourselves as technological enabler for modern, innovative and sustainable technology – we care about what we

do and maintain our manufacturing standards also in our French and Chinese production facilities.

**PES:** There is a feeling that, following the economic downturn, it's now very much 'business as usual' in the PV/manufacturing sector. Would you agree with this outlook?

**AW:** At present it seems that the first triggers for market improvements are coming from Asia. The potential and the impact on global PV manufacturing is high and will certainly recuperate. Yet, we still see that the issue of financing is not yet solved globally and there is doubtlessly a careful hesitation noticeable.

**PES:** Finally, we're discussing grid parity in this issue. Do you find there is a growing call to achieve this goal within the industry?

**AW:** I would not say that the call is growing – it is the purpose behind establishing a technology which has the economics to replace less 'green' energy-producing technologies. In Germany, the state subsidies for PV technologies were decisive for the fast market development and the chance to go further in researching better ways of using solar power. But without subsidies, the technology must pay for itself – and without attaining grid parity, the longevity would be questionable. That is also one issue for us: contributing with vacuum technology to drive down production costs in order to reach this goal sooner. ■

## About the expert

Dr. Andreas Widl joined the Swiss Oerlikon Corporation (former Unaxis) in 2004 to globally restructure the cash-burning Flat Panel Display division, turning it into a profitable and strongly growing Thin Film Solar business.

In December 2005, he was appointed Asia President and Managing Director of Oerlikon Shanghai, driving the group's competitiveness in Japan, Korea, China, Taiwan, SEA and India.

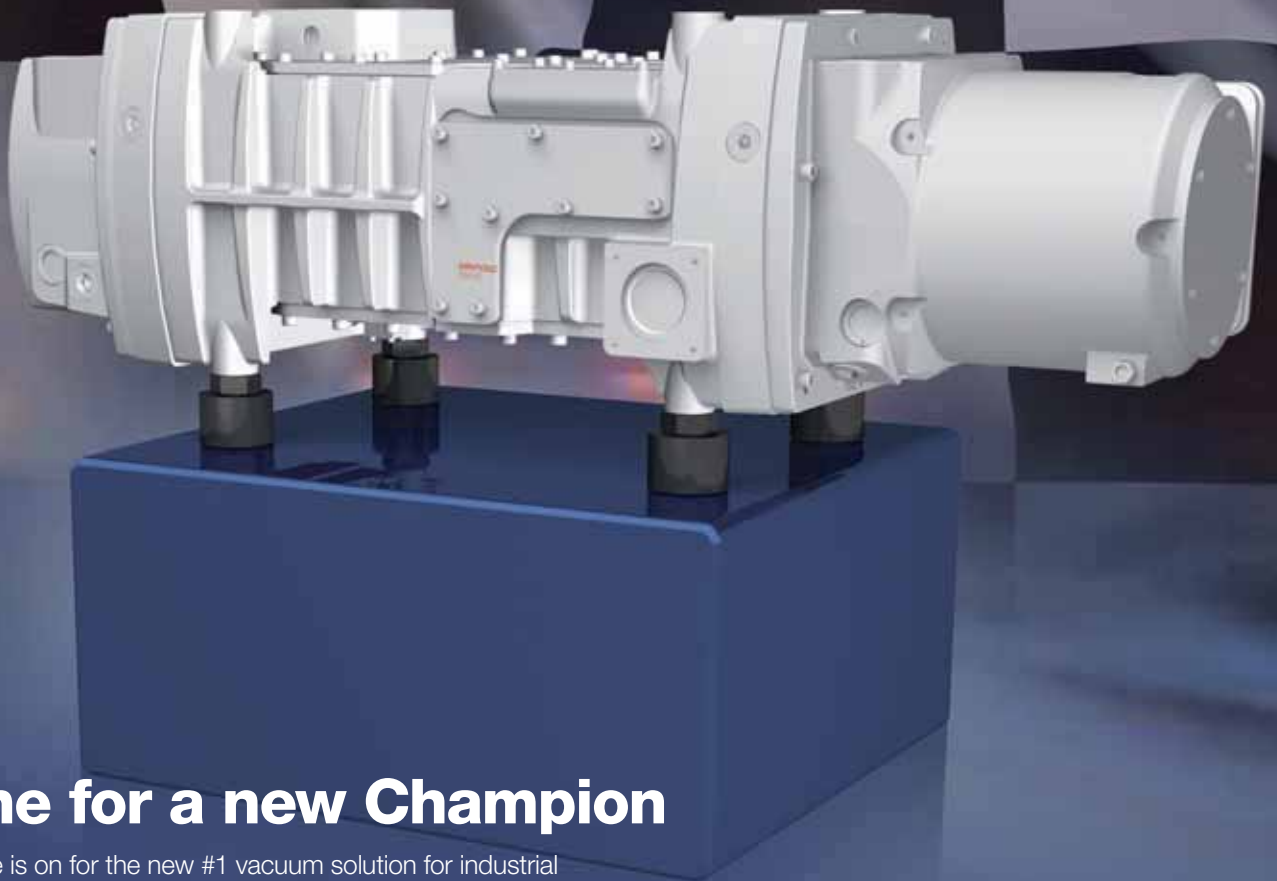
Since August 2007, Andreas has been acting CTO in addition to his Asia responsibilities, coordinating Oerlikon's global R&D activities. In October 2008, he was appointed CEO of Oerlikon Leybold Vacuum. ■



For more information, please visit:  
[www.oerlikon.com/leyboldvacuum](http://www.oerlikon.com/leyboldvacuum)

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