

“In manufacturing, a one-stop supplier strategy can work in everyone’s favour”



Rolf Schäfer
Dipl.-Phys, Robeko

If an industry is going to flourish, it needs a quality-controlled supply network. Renewable energy producers in particular need end products that are safe, reliable and built to last. PES asks Rolf Schäfer (Dipl.-Phys.), owner of Robeko, about the challenges and benefits of entering the solar-power supply chain



PES: Can you explain a little about your company and what you offer the renewable energy industry?

Rolf Schäfer: Robeko is a European trade and manufacturing organisation based in southwest Germany. Since its foundation in 2002, Robeko has become a respected member of the market in all its various fields of activity.

Robeko is strictly focused on the supply of thin-film deposition components and services. These components are widely used in the production of solar cells and solar absorber coatings, as well as other industries such as glass and tool coating, decorative, low friction and automotive.

Robeko follows a one-stop supplier strategy, supplying all relevant equipment and services for building thin-film coating machines. Through a network of partners, Robeko is able to combine the different

aspects of its product portfolio and consistently offer the highest technical standards, in cost-effective packages.

Robeko works with leading technology partners such as Gencoa, Sputtering Components Inc, Seren IPS, Technipower, Magpuls and Process Materials to produce and supply a wide range of products. These include:

- Highly productive and low-maintenance planar sputtering cathodes of the optimum target utilisation
- Unique, single-end high-power rotary sputtering cathodes
- Sputtering power supplies – RF, DC, DC-pulsed and Bipolar pulsed
- Planar and tubular sputtering targets
- Evaporation materials

Services include:

- Design and engineering of coating

systems and subcomponents

- Process control systems and automation for thin-film coating machines
- Project management
- Process development and implementation
- Surface analysis
- In-house bonding service for sputtering targets; a large stock of semi-finished targets allows Robeko to offer supply chains with fast reaction times to minimise cost to the customer

PES: Your organisation is often visible at worldwide conferences and exhibitions – are these events effective in raising your company profile or even increasing revenue?

RS: As a young company, Robeko needs to be present at the major industry exhibitions and conferences. At past events we have received a significant number of visitors and a generally positive response, proving that

our one-stop supplier service for thin-film components is a successful business model. The customer base has also seen steady growth and sales have gone up.

PES: R&D is obviously a vital aspect of your operation – is your investment in this arena reaping rewards?

RS: To keep ahead of the game in terms of performance and customer satisfaction our products are constantly being improved and upgraded. These developments are often made in close co-operation with our clients, including end users and system manufacturers. This ensures that our products are consistently state of the art and orientated to daily production requirements.

A current field of research and development for Robeko and its partners is a new range of high-quality sputtering targets, such as CuGa and CuInGa, tubular AZO, NiV, Mo and Ag. We aim to offer dense and pure products with high deposition rates. These materials will expand and enhance our product base for manufacturers of thin-film solar cells.

We are also developing linear evaporation sources, which can be used for the preparation of absorber layers within CIGS and organic thin-film solar cells by thermal evaporation. The resulting product will be extremely resilient to an aggressive environment and able to homogeneously evaporate both organic and inorganic materials on large substrates. This unique cutting-edge technology will open the door to new production facilities leading to more efficient and cheaper solar cells in the future.

PES: How important is product quality to your business?

RS: Product quality is very important. All our products are designed to be low maintenance for use 24/7 with extended uptimes. Sputtering targets are of the highest density and offer the very best layer quality.

Internal quality procedures assure immediate response to customer requests. Meanwhile, traceability of parts is also secured by our internal procedures and the consequent use of ERP/CRM software solution from SAP.

PES: Can you explain what challenges you face when trying to get your corporate message out to prospective clients?

RS: The biggest challenge is the boon and

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bane of today's business life. Fast and easy electronic communication is available almost everywhere. The majority of people in developed countries have an email address, a mobile phone and a personal extension number. Contact details are widely advertised and easy to get hold of, which is hugely beneficial to brand building and networking. The problem is standing out from the spam and the cold-callers trying to sell shares in a “promising” South American mining company.

PES: What single piece of information would you most like to share with our readers?

RS: Robeko is THE one-stop supplier for thin-film equipment and solutions!

PES: What measures do you take to reduce the impact of your manufacturing plant on the environment?

RS: As Robeko is based in Germany, we are obliged to adhere to some of the strictest rules and regulations in the world. Beyond the realm of obligation, we strive to buy energy-efficient equipment, use only recyclable packing materials and produce as little non-recyclable residual waste as possible.

PES: Europe is obviously a huge growth market for your business, are you actively pursuing opportunities in the region?

RS: Robeko is constantly working on expanding its activities. In 2008 we plan to install two sales offices in Southern and Eastern European regions to enable closer contact and better service for our customers in those areas.

PES: What frustrates you about your industry and conversely, what excites you?

RS: The reason for frustration and excitement are very much the same. They lie in the ongoing design and development of new and better thin films for solar cells.

It is frustrating because the highest-spec technology is still not good enough in terms of energy efficiency. But it is exciting at the same time because the development hasn't stopped yet and the limits of technology are boundless.

PES: How will global warming affect your business?

RS: Global warming is currently driving the thin-film industry. The need to address environmental issues, as well as a limited supply of high-purity crystalline silicon, is driving demand for the development and production of thin-film solar cells. As more and more people wake up to the real threat of global warming, we expect the industry to see continued growth.

PES: What's the latest development in your industry? And how does it benefit the end user?

RS: One of the latest developments in our industry is leading-edge deposition sources, namely high-yield planar sputter sources and new, easy-maintenance rotary sputter sources. Both enable maximum utilisation of deposition materials, which in turn reduces downtimes and the direct cost of material procurement. Robeko is in the fortunate situation that it is able to offer both types of sources. ■

Rolf Schäfer (Dipl.-Phys.) is the owner of Robeko, a specialist in design, manufacturing and sales of components for vacuum and thin-film deposition technology. For more information please email info@Robeko.de or visit www.Robeko.de.