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PHOTOVOLTAIC MARKETS & TECHNOLOGY


Photo: Meyer Burger

Reimagining a technology leader

New Meyer Burger CEO Hans Brändle sets out his vision for the PV powerhouse. *Pages 58-61*

Photos: Meyer Burger

Having worked in the coating industry for more than 20 years, Hans Brändle took over as CEO at Meyer Burger on January 1, 2017.

Making Meyer Burger profitable again

PV equipment markets: Meyer Burger has enjoyed a strong start to 2017, coming off the back of a major restructuring. However, the significant challenges in returning to profitability are not lost on CEO Hans Brändle. He spoke with **pv magazine** at Meyer Burger's Technology & Product Center in Germany, in his first solar industry interview since stepping into the role at the beginning of 2017.

Since January 1, what is your feeling of Meyer Burger as a company, and of the solar market today?

Solar is a very interesting market that is experiencing long-term double-digit growth – at least 3 or 4 times the rate of global GDP growth – which is impressive. Of course, solar is a sustainable technology, and if the global community is serious about renewable energy, it will have a prominent impact.

Before I joined, I knew that Meyer Burger was a strong technology company. Once I had further insight, I was deeply impressed at how strong Meyer Burger really is, especially how strong the relationship is with our customers.

I also hadn't realized to what extent Meyer Burger had transformed into a coating company. I was also impressed by the product pipeline, and the way that Meyer Burger thinks ahead of the market. I already knew some of the key people within the company and I had a feeling for the company culture but when I joined Meyer Burger, I realized how open and willing the company and the employees are to change. I was not sure whether everybody truly understood how critical it was that Meyer Burger makes a rapid return to profitability, but it turned out that even shopfloor people approached me and told me, "well it's really good that we are now making this company profitable again."

What strategic shifts do you intend to make to get back on that path?

The first and foremost topic is to return to profitability. I joined the company just after a successful recapitalization, and this is the final opportunity we'll be getting from our investors.

We have been in a loss-making situation since 2012 – last year we had to report another CHF 97 million ($124 million) loss. To be able to maintain our current market position we need to invest in R&D, and for that we need to make sufficient profit. In addition to returning to profitability, I can confirm that we will continue to drive the technology road map for the PV industry. Meyer Burger is ideally positioned with core technologies along the entire value chain, from wafer to cell to module manufacturing technologies and solutions. We are dedicated to continuing this approach; however, we will focus on those products where we have a clear USP. In the past, our product portfolio was too broad and there were some products which didn't have clear USPs.

> *"We have to understand what is coming beyond PERC"*

Regarding our product pipeline and technology road map, we have to understand what is coming beyond PERC, and in my opinion that will be heterojunction technology (HJT). The name of the game for us is to set the next industrial standard with HJT, and we expect that HJT will become a mainstream technology for PV manufacturers in the foreseeable future.

These are the most important points regarding technology, but having said that, our must-win battle is our return to profitability.

It's an absolute must for Meyer Burger.

At its Technology & Product Center in Hohenstein-Ernstthal, Germany, Meyer Burger is operating a demo line of its heterojunction technology with a capacity in the low double-digit megawatt range. It reports that running pilot lines is crucial when convincing manufacturers of the stability of new processes.

You mentioned that Meyer Burger's position as a coating company has become very important through the PERC installation cycle in the last year, and this year looks like more of the same. What challenges lie in supplying that cycle at the moment, in terms of meeting demand and preparing for what may come afterwards?

We are in an extremely strong position when it comes to supplying the market with PERC equipment, and yes, the demand is still high. By end of last year we had cumulated shipments of more than 120 systems, or 15 GW. From that you can more or less assess how strong our market position is: above 80%. We also see there is still a long way to go until all of the installed systems are upgraded resulting in strong and growing demand that we believe will continue into 2018 and beyond. PERC is currently establishing itself as the new standard in PV cell technology, replacing Al-BSF [aluminum back surface field].

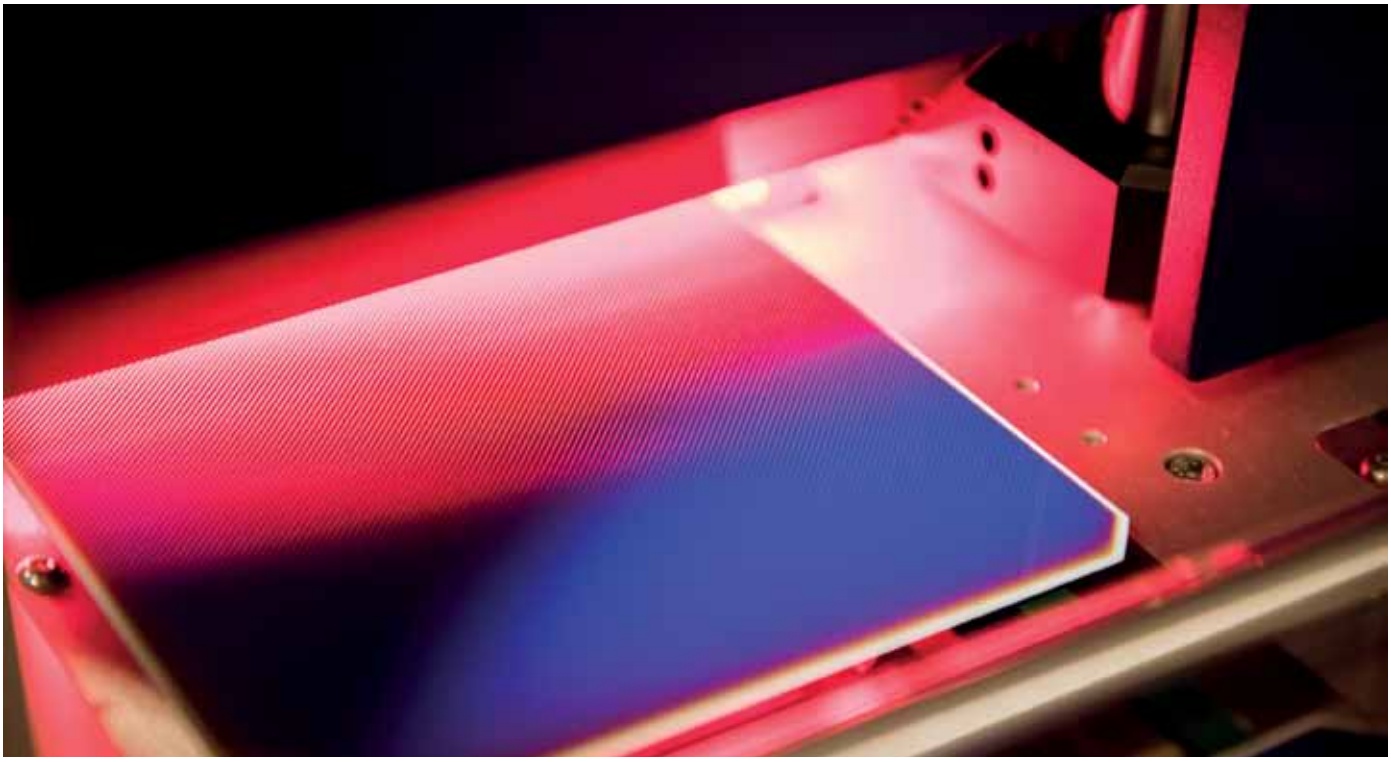
With our strong position, we now face the positive challenge of meeting demand for our MAiA technology platform while closely managing our fixed cost base. Of course, the market and our customers do not want to wait for their equipment, so for us delivery times of, for example, more than six months are a no-go. We have increased our production shifts up to three in order to increase manufacturing volume. We could theoretically ship four or even five systems per week in order to meet customer demand. Four to five systems per week translate into a 20 – 30 GW yearly capacity. The demand from PERC so far has been predominantly upgrade business, with only about 20% being new build installations. We see that ratio shifting more towards new build installations versus upgrading business. Looking at both multi and mono, roughly speaking, it's currently about 50/50 in PERC installed base.

And what about competition in the PERC space?

What became clear after some years of development is that aluminum oxide is the passivation layer of choice for PERC, because it can withstand the high temperatures during the manufacturing processes which follow aluminum oxide deposition. I was surprised to find out how superior Meyer Burger's aluminum oxide passivation is compared to other alternatives. What you have to understand is that our technology uses microwave as a plasma source which is unique. The concept of the MAiA is also quite unique, as an in-line system with linear sources, which makes it a very flexible, versatile concept that gives customers a lot of room to adjust parameters according to their own specific needs. The market has already made a decision with our MAiA platform being the system of choice.

So you don't see a threat coming from atomic layer deposition (ALD) processes?

ALD is a very interesting technology and we take it very seriously. We have ALD technologies in-house. As a technology leader we are constantly reviewing technologies – understanding their advantages and disadvantages. But for now, we don't see a reason why we need to change our technology. Down the road, we might see some ALD solutions in the market but I believe that PECVD [plasma-enhanced chemical vapor deposition], and with that our MAiA platform, will remain the mainstream solution for PERC.



Meyer Burger regards seeing what is coming beyond PERC as key to its strategy, and believes that heterojunction will become a mainstream technology for manufacturers in the foreseeable future.

You mentioned heterojunction, and clearly Meyer Burger thinks that will be the next technology of choice, particularly for new entrants. Why haven't we seen more traction for HJT in the market at this stage?

HJT is already an established product in the market – it's not a new technology. However, so far it has been used by very few players. Over the past years, we have invested heavily into industrializing HJT. It is in Meyer Burger's DNA to industrialize great technologies and make them available to the whole market. As far as I can see, we are the only company offering a really industrialized solution for HJT. In order to bulletproof our solution, we even operate our own demo line with a capacity in the mid-teens megawatt range. I am not aware of any other competitors who have such a capability. I think that creates trust with potential customers who want to invest into the technology which we believe is coming beyond PERC and PERT.

> *"Meyer Burger is pushing and supporting HJT"*

However, in the past, we wanted to sell only complete HJT solutions, including our SmartWire Connection technology (SWCT). For some customers, this was too much of a technology risk. Following my arrival, we decided to adopt a more balanced approach and give the customer choices. If they are interested in our core heterojunction technology only, we are open to it. Since we adopted this approach we have experienced increased interest and are in very promising discussions with major players in the PV field. This leads me to conclude that there is strong interest in the market. And one important prerequisite is already given: Meyer Burger, with its extraordinary track record as a reliable technology partner in the PV industry, is pushing and supporting HJT.

On the cost side of Meyer Burger's business, what other actions are you looking to take to bring the company back to profitability?

We want to really reduce our fixed cost base, with the target to break even on EBITDA at a sales level of CHF 300 million. We are on track to achieve this target. The other topic we are addressing is increasing our overall margin. Within our product mix we had a number of products which were not profitable. Here I am very strict: I want to know the USP and the profit margin of each of our products and solutions. An example is our diamond wire business, which was based in the United States. Our product was competitive, but on the cost side we couldn't compete with Asian companies, so the decision was made to discontinue operations.

Diamond wire itself is quite a healthy market in terms of tooling, it appears that it's heading in a positive direction, does it not?

Wafering is still the biggest cost contributor when it comes to cost/Wp and diamond wire is the solution to reduce costs. Therefore, diamond wire technology is key for the market. Is it a healthy business for us as an equipment and technology provider? We invested heavily into developing diamond wire technology, but I read an interesting comment from an analyst who said that Meyer Burger's R&D team did everything to destroy its own market. Over the last couple of years, productivity went up by a factor of 10, while prices per machine went down by a factor of three, so the accessible market went down by a factor of 30. So you can see that there was a grain of truth in that analysis. Because of the shrinking market, we are seeing a consolidation

in the equipment market for diamond wire saws. Some companies have already exited the business, and now there is basically Meyer Burger and some Chinese competitors left. What we also see are copies in the market, and there we will be rigorous when it comes to enforcement of our own IP rights.

Chinese competition is the main theme running through the equipment supply business, looking at the big picture, how do you expect that to evolve over the next few years. Will the competition remain as fierce, and how do you meet that challenge as a European provider?

I am sure that will continue. Now the biggest market for PV end installations is China, but also in terms of wafer, cell, and module production, China is leading by far. It's easy to understand that the equipment business is also growing locally.

So what is the reason for Meyer Burger to remain in the market? Simply innovation. Driving the technology road map must be the core of our business. The good thing about PV is that technology is the key enabler to driving costs down. Here, we jump into the game and can offer cutting-edge solutions. When it comes to efficiency, it is cell technology that plays the predominant role and superior coating technology is more and more the name of the game. It started with anti-reflection coating of the front side, continued with passivation layers for PERC, and continues with various front and back side coatings for HJT.

In coating technology, we have a very strong research scene in Europe with a good track record; we have leading research universities and highly trained experts in that field. Coating technology is an area in which we can continue to compete with Asian competitors. Having been active in the thin film coating field for more than 25 years now, I know that coating technologies are among the most difficult technologies to copy.

That is a core competency that you believe Meyer Burger should focus on?

Yes. Thin film coating based on industrial plasma technology is a core competency of Meyer Burger. Another core competency is our customer relationships. If we look back and see what we have achieved, we have the trust of the market and of our customers. We are able to partner with the most important players in the field. From the discussions I have had with our customers so far, I really feel that they trust in our technology and our ability to support them in their road map to drive down costs and stay in the market.

> ***"What is the reason for Meyer Burger to remain in the market? Simply innovation"***

So the message with new leadership at Meyer Burger is that it's a more focused company, and not a change of direction?

Yes, more focused, especially focusing on profitability. Let's see what 2017 brings. ◆

Interview by Jonathan Gifford