

"We are the right partner for standard and customized design"

MHT was founded in 1996 and has enjoyed global success for more than 20 years. We spoke with the new CEO, Christian Wagner, about the challenges faced by a medium-sized company, about the company's past and future, and about PET packaging as a demanding, global niche market in plastics processing.

Mr Wagner, you have been with MHT since it was founded 21 years ago and since 1 December 2017, you have been solely responsible for running the company. What new personal challenges await you as the new CEO?

I've known this company since the beginning. I've come to know it better every day, as I have seen it from different perspectives and positions within the company. I started working here when I was a student. The fascination I felt as a budding machine engineer has never left me. As your tasks and responsibilities



An Interview with Christian Wagner, CEO of MHT ———

grow, so do you, so to speak, and I rose to the challenge. Today, as CEO of MHT, I see it as my principle task - and I think this is the case for many mediumsized companies - to ensure the company's future is safe. I feel that it's particularly important that MHT is an attractive employer, so that we appeal to the best employees at all levels. This allows us to meet the requirements of the market and, above all, respond to future challenges such as digitalisation and energy reduction with innovative solutions. This is a responsibility that I haven't really felt or perceived myself yet, at least not fully, at MHT.

20 21

PMC SOLUTIONS BY MHT

(i)

- PMC technology for all common PET systems
- Excellent alignment of PMC parts for perfect quality
- Very stable double tube system
- Fastest cycle times
- Spring loaded gripper pins available
- 2 to 192 cavities

MHT COOL-MAX



- Patented air flow technology
- Cooling & part picking combination
- High efficiency by optimized airflow guiding
- Water cooling option (reduced air temperature)



"THE MARKET IS IN A STATE OF UPHEAVAL ... OLD ALLIANCES ARE CRUMBIING AND NEW ONES ARE **BEING FORMED..**"

What position do you think MHT is currently in?

Firstly, I'd like to say that I'm happy to be assuming responsibility for MHT at a time in which the company is in an outstanding economic position - this wasn't always the case. An important requirement for this stability was created when we settled the protracted legal dispute with Husky in 2016.

Could you say that you've finally stepped out of Husky's shadow?

Yes, definitely. We were very worried about it, actually. The settlement allowed us to direct our focus back onto the market, our clients and technological developments. Our moulds meet the highest technical standards. They are in demand and enjoy an excellent reputation. This is not just a foundation to rest upon, but one that we can build upon strategically.

What is your role in the market today?

Today, more than ever, we see ourselves as the only trulv independent mould manufacturer, and we feel right at home in this sector. MHT has a presence on all essential PET platforms, where it satisfies the most stringent requirements. We've made a name for ourselves in the technically difficult market segment of high cavity applications in particular. I can proudly claim that with our 144- and 192- cavity moulds, we have been driving the trend towards productivity optimisation since 2001. Since that time, the maximum cavity number for all PET systems has steadily increased. Today, MHT offers the complete package, in other words, not just mould technology, but a post-mould cooling system that is often more technically advanced than OEM products.

How do you see MHT's future in a rapidly developing global market?

MHT is the only mould supplier with expertise in the entire range of existing PET systems. Of course, our standard moulds are technologically excellent available ready-made, and but we also offer solutions for challenging, individual more cases. This brings us full circle, engaging intensely because with complex special topics, in turn, contributes to the quality, performance and ease of maintenance of our standard products. I feel that the most important factors for consolidating and expanding our market position are proximity to our customers and partners.

In both cases, this involves working together to develop technical solutions - including for complex problems. This creates added value.

? This brings us to the topic of strategic aims. Which strategic aims would you like to achieve in the medium-term?



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We do more.

I'm pursuing four goals. In no particular order, these are:

- integrating the mould into a digitalised overall process
- expanding our reputation as a supplier of innovative products

Anuga FoodTec 2018 Cologne, 20 – 23 March Hall 8.1, Stand A020/B039







NOZZLE TECHNOLOGY BY MHT

MHT VULCAN II

- Reduced costs and perfect guality for preform production
- Efficient heat transfer
- Longer maintenance intervals
- Customized nozzle tip inlay for all applications



- pursuing cooperative partnerships
- ensuring that we are an attractive employer

What are the challenges you'll face on the way to achieving these aims?

All in all, it's about improving our competitiveness in a global market. For us, this primarily means focusing on product quality and technological innovations. I see the main challenges in technology and IT, cost reduction, process optimisation and human resources. Although at the end of



the day, we "only" supply a mould, it's actually much more than that and getting to that point is guite complex. This means that in order to hold our own in a rapidly developing global market with ever increasing competition, MHT will have to grapple with these challenges even more than before.

How will you deal with increasing cost pressure and competition, as well as growing demands?

Although there are a lot of approaches that need to be considered, these are either already being implemented or are the ongoing focus of our operational service processes. What matters is that we continue the restructuring process that is already underway and invest in new production technologies. We don't see reducing the cost pressure and competition by outsourcing to lowwage countries or by procuring low cost primary materials as a solution. Like our other notable competitors, we are active in a comparatively moderate-wage environment. In addition, with regards to ever-increasing raw material and energy costs, efficiency and the quality

of preform manufacturing processes will be even more relevant in the future. In my estimation, low cost, low quality suppliers in this segment in particular - e.g. high cavities mould lower energy and material usage, thin-wall technology etc. - will have to contend with increasing acceptance problems in the market. That's why we aren't excessively nervous - we don't see the majority of newcomers to the market as our actual competition. Competitors come and go all the time. I'm convinced that the three most important PET mould suppliers of the last few decades will maintain their market position.

As you've said, MHT is an independent mould manufacturer. Yet, you're aiming for collaborative partnerships. What's your position on partnerships with the manufacturers of PET injection moulding machines active on the market?

In the past, collaborating with strong partners to offer the client an alternative to the market leader was incredibly important to MHT. Besides our direct

sales, this system business is an important component of our operations and it has proven to be successful since our company was founded, both in cooperation with Krauss-Maffei, for vertical equipment, and Netstal, for horizontal equipment. Three years ago, a successful partnership with SACMI was added to the mix. We're also working with Sumitomo, but only thus far only in the Japanese market. Everyone benefits from these partnerships, and they facilitate the continuous technical development of their systems.

Is there a "but"?

Yes, unfortunately, there is also a "but". In recent years, some of these partnerships have turned into buyersupplier relationships. The mould manufacturer is more and more rarely seen as an important technological

partner, and therefore has fewer and fewer opportunities to contribute and implement their knowledge and ideas. The buyers alone are consulted and if a reduction of x% isn't guaranteed, there's no deal. That's not acceptable. One way to buck this trend would be to offer our own complete system, as some market players do. MHT doesn't want to go down this path, though.

What would your ideal partnership look like?

The next task we are focusing on is integrating the mould into a digitalised overall process. We want to push this task forward with a strategic partner and we already have some preliminary contacts and meetings. As the core element of the injection moulding procedure, the mould is to be embedded in a digitalised overall process. One



possibility would be to approach these tasks with strategic investors. In this instance, we'd want someone who wants to move forward into the future with us.

? What kind of influences might have current trends in your market environment?

The market is in a state of upheaval. What's guaranteed is that old alliances are crumbling and new ones are forming. Plus, many companies from other industries are making an effort to access the PET preform market. Of course, we perceive these market developments, but we are focussing less on the competition and instead primarily on our own strengths and on our customers. It seems that our competitors are currently focussing a lot on themselves. This gives MHT the opportunity to concentrate on the

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- Advanced cooling design
- Reduced cycle time
- Heat absorbation at required spots
- Combinable to most standard stack designs
- Cooling channels closest to contour
- Changeable contour-part (gate insert)



clients. The developments in machine

manufacturing, of course, also play

a decisive role and there are clear

differences here if you compare the

machinery, for example, only with

technology play for the mould?

Sensor technology offers the

opportunity, for example, for recognising

any tilting of the mould or for detecting

vibrations. We can build a lot of sensors

into the moulds these days... but who

processes the data in the "injection

moulding" system and how? The market

leader, for example, uses chips to

exchange data between the mould and

the machine. These chips record how

the mould is used or what condition the

hot runner is in. If these kinds of chips

are used to keep the competition away...

that's a different story altogether. Users

expect an open system.

regard to sensor technology.

What role does the sensor

What are MHT's latest product innovations?

When talking about our latest innovations, I always like to mention our hot runner technology and our developments in the post-mould cooling line In recent years, we've been primarily focussed on the performance of hot runners, the two most noteworthy examples being the second generation of our Vulcan Valve Gate components and our new generation of hot runners, MHTheatCONTROL. The latter will be launched soon. All our efforts are focussed on considerably extending maintenance intervals, noticeably enlarging the process window and saving energy. There's still a lot to do here - the melt which is retrieved from the machine is hot. Here we should find a better way to avoid additional heating in the mould. As the cooling in the cold half relies on extreme cold cooling water, the machine should be equipped with a dehumifier to avoid



condensation - that's another area where we need to find an appropriate solution. Our new hot runner technology gives us technological leadership in this area - the hot runners are the mould manufacturer's calling cards.

What role does the post-mould cooling play?

Extremely short cycle times bring the topic of cooling much more into focus. You could be tempted to say that there is a tendency towards using another mould outside of the mould - in other words, forming and cooling kept separate. This means that harmony between the moulds and the post-mould cooling technology is of significant importance. We have guite strong expertise here. We've expanded our product range in the post-mould cooling area considerably - we offer excellent post-mould cooling technology for all PET systems on the market.

COOLING UNIT SHOULD COME FROM $\overline{27}$ THE SAME MANUFACTURER"

Which technological developments and challenges do you see for the PET preform injection moulding?

The core principles are raising energy efficiency, increasing long-life cycle and digitalising the processes, whereby the development projects often exhibit overlaps. This way, an optimal, energyefficient process that conserves materials isn't really conceivable without constant monitoring and data processing. Electronics will have a stronger presence in the mould. Modern mould manufacturers have to surrender to these new tasks. However, PET injection moulding technology hasn't yet been fully exploited. I think that lightweighting has more potential. We're working with promising technologies so we can develop preform wall thickness within the mould, making it as thin as possible and as thick as necessary in all areas.. MHT will be publishing news about this soon.

In your opinion, what are the future key technologies for manufacturing PET preforms and PET bottles?

As I said, I see the future of the mould as an important element within an overall digitalised process. This won't be limited to the interplay between the mould, the injection moulding machine, the post-mould cooling unit, the dryers and the chiller. We will see more and more cases where production processes that have, until now, been kept completely separate, i.e.: preform injection moulding and stretch blow moulding, are being united under one roof. The logical consequence will be closer integration of these processes. I feel it's

only a matter of time before the large manufacturers adopt this approach, if they haven't done so already ...

What role does MHT play, then, as a mould manufacturer?

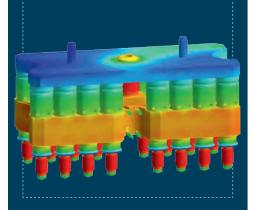
To be prepared for the future, MHT is expanding its hard-hitting development department. We want to be part of shaping the process! More than 40 active patent families are, I think, a clear



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MHTheatCONTROL

- Thermal verified design
- Naturally balanced melt channels
- Efficient heat utilization
- Reduced heat loss to the enviroment
- Reduced costs for maintenance
- Reduced energy costs



sign of our innovativeness. Continuous cooperation, with state-supported research projects, universities and research institutions, too, are more than helpful here.

Which role falls to your employees when facing the existing challenges and technological breakthroughs?

By far, they have the most important one! Above all, it's about flexibility and modern thinking. Necessary requirements for being able to face these constantly changing challenges. These changes are happening, no matter what people say. The technological development and quality of our products are carried by the creativity and knowledge of our staff. Thanks to employees who are curious in the face of change, that are prepared to think outside the box and that are in their element in the face of new challenges. MHT remains an innovation-driven company.

As a medium-sized company, how can you ensure you find the right people, win them over and keep them on staff long term?

Our company is full of interesting projects in an international field of business. There's no shortage of attractive job offers. This is something we, as an employer, need to exploit more.

We are located in the Rhine-Main area well known for high gualified staff. However, as employer we have to attract upcoming employees presenting ourselves as a modern employer. Alongside recruiting well-qualified new staff, we're also ensuring that we keep our people at the highest level, both personally and professionally. For example, we do this through programs that demonstrate the prospects for further development within MHT. Our motto was and still is: "Creating

a business environment in which our employees can feel comfortable, valued and safe". This means that you have good chances for total commitment and high performance. Employee feedback indicates that we're on the right track with our corporate culture as an SME. our understanding of management and also thanks to economic stability. I'm certainly proud of the fact that more than 75% of our employees have been with us for over ten years now.

Let's talk about the market. What are MHT's key regions in the near future?

MHT currently delivers to over 80 countries. One focus of our sales activities is in the Middle East and Africa. where we have already installed a large number of moulds. We're reinforcing our activities in these regions. We also see growth potential in North and Central America, where we were able to acquire important reference clients last vear. Plus, let's not forget India. In Asia. we're concentrating our sales activities on South East Asia in particular, with a special focus on Thailand.

Last year, the closure of your Luxembourg subsidiary led to the relocation and concentration of capacities at the Hochheim site. What was the reason for this?

The proximity to Frankfurt International Airport is clearly an advantage, both in terms of sales and maintenance visits. We can reach our customers at any time, guickly and without complication. Engineers are close to their products and sales engineers are close to their projects and to the newest information. There's also a clear advantage for our staff... a shorter commute to and from work means more free time. I've already spoken about our central location we're all benefiting, in every respect.

What are your plans for the MHT USA subsidiary, founded over 11 years ago?

Our subsidiary is extremely important for the large US and Mexican markets. We're planning a successive expansion, above all in the sales and maintenance departments. Additionally, the MHT USA subsidiary is now responsible for the Americas as a whole.

steps in one set-up. This means there are fewer transport steps, which give a boost to both productivity and quality! These complex systems are used both in preproduction and in final processing. With our specialised production, we're completely prepared for the challenges of high-cavity applications.

"WE WANT TO POSITION OURSELVES AS AN ATTRACTIVE AND MODERN EMPLOYER"

Let's talk briefly about the production line here in Hochheim. How have you set this up?

Of course, a priority is on keeping manufacturing guality high and costs low. Alongside our product-specific innovations, we have also established new, optimised and highly automated production processes. We're going to keep working on these aspects as these are the cornerstones that will guarantee our company's future. Our production concentrates on the essential components such as stack parts, wear parts and slides. The other parts - including moulding plates - are procured from our network of suppliers according to our design specifications. By concentrating on these central elements, it's possible for us to use highly complex production centres that can be adapted and developed in the best way using our existing knowledge. Thanks to the combination of different production processes, measuring systems, storage systems for raw materials and finished parts and robot equipment, we're in the position to conduct a lot of production

Can MHT also produce customised desians?

We are certainly good when it comes to customisations. Customers at MHT are sure to receive exactly the technical mould solutions they need.

Thank you for taking the time to talk to us.

DIALOGUE PARTNER

Christian Wagner COMPANY

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