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VOIT Automotive: on the way to e-mobility and zero emissions

Innovative capacity, agility and process expertise as key attributes in the transformation to electromobility and CO₂ neutrality

In an interview with OEM&Supplier, Christopher Pajak, Chief Corporate Officer of VOIT Automotive GmbH comments on the transformation process within the automobile industry, current developments and the outlook for the VOIT Group

Mr Pajak, VOIT Automotive is a system supplier to the automotive industry with multinational operations and manufactures products for some of the largest OEMs and suppliers in the world. The VOIT Group has around 1,000 employees at its main location in St. Ingbert and employs a total workforce of around 2,000 employees worldwide. The technology enterprise, with a longstanding tradition, develops and manufactures high-precision, customized aluminium die-cast components with machine-finished functional surfaces and finished castings as well as modules and components using forming technology (stamping, drawing and roll-bending technology). The solutions range from product and process engineering, prototyping, toolmaking, manufacturing, surface finishing, assembly mounting and functional trials to just-in-time delivery of ready-to-install series production parts.

You have been Chief Corporate Officer of VOIT Automotive since October 2020 and succeeded your father, who became a member of the Supervisory Board, as Managing Director. What initial conclusions do you draw as Managing Director after nine months during the corona pandemic?

Christopher Pajak: The generation change in the management had been planned for some time and was then realised in October 2020. In the last few years, I had already been involved in all strategic decisions in the company. Of course, my father continues to have a strong presence in the VOIT Group through his activities as a member of the Supervisory Board and as a Managing Partner of the parent company.

After the global financial crisis of 2009, the corona pandemic and lockdown in spring 2020 was the second biggest global crisis within almost a decade which had a major impact on us as a corporate group. Yet, compared to the financial crisis, the pandemic significantly influenced both the supply and

demand situation on the global markets to the same degree. We had to cope with huge losses in turnover compared to the previous year 2019, largely without any opportunity for preparation. Irrespective of this, the automotive industry is in the process of the largest phase of transformation for decades as it moves towards electromobility and autonomous driving. This transformation will require an extremely large number of resources, in particular human capital, as well as a high level of liquid assets for investments. In combination with the political discussion on tighter regulations regarding CO₂ emissions and the targeted climate neutrality in the industry, the situation on the market remains very challenging.

From a personal point of view, I look back on the very intense months of the crisis with a positive attitude since we had already

elaborated various strategic, structural, operative and financial measures with the whole management team in 2019 and these have been stringently implemented or are now still being implemented. The implementation of the measures requires a lot of effort but the increased profitability, compared with the level before the crisis in 2019, validates our activities. In addition, on the basis of our order book, we are on a sustainable growth path that is characterized by electromobility.

Can you give more details on the operative measures that you mentioned?

The difficult situation on the market or, to put it more precisely, the global sales situation, already came to a head at the end of 2018, long before the pandemic. In Europe, Brexit and Dieselgate changed consumer behaviour and, in addition, the trade dispute affected the global demand for cars. The market conditions also meant that margins in the supplier industry came under increased pressure. In order to counteract this development, we thoroughly examined the whole organization and, in mid-2019, we drew up corresponding measures for efficiency. Structurally, we optimized our overheads. In close consultation with members of the works council and the unions, we drew up a "Pact for the Future" for the employees which gives us a certain flexibility as a company in paying out collectively agreed special payments, depending on the profitability. In return, the company agreed to make investments in the mid-double-digit million euro range in new projects in the field of electromobility and to provide a guarantee of employment. On the operative side, we set up numerous partial projects of which some focus on measures to increase productivity, for example, while others are oriented toward optimizing

Christopher Pajak
Chief Corporate Officer
Managing Director



Great depth of vertical integration: Process flow cell housing

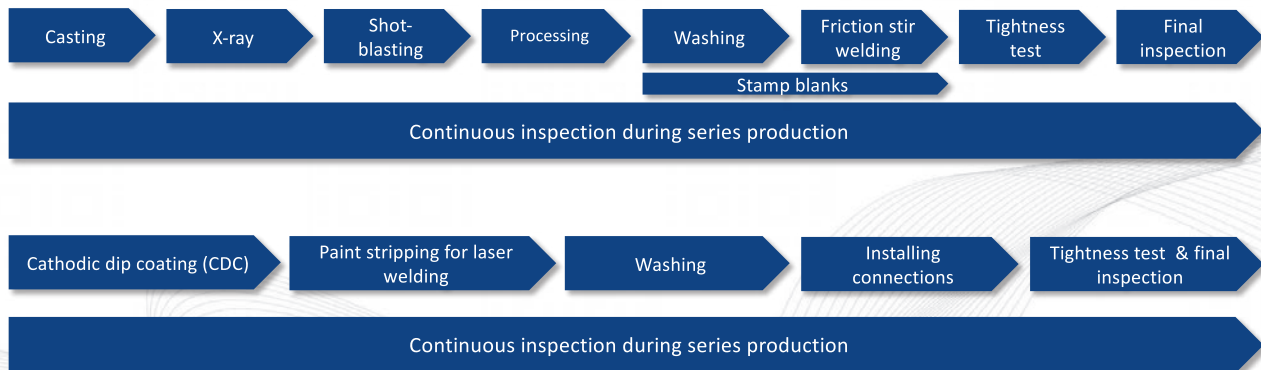


Fig 1: Process flow for the cell housing project at VOIT Automotive GmbH

procurement or pricing measures. Strategically, new business with a promising future in the field of electromobility is the decisive factor combined with the right location strategy. In order to optimize our competitiveness in the value-adding network, in 2018, it was decided to massively expand the plant in Poland to a total production area of over 16,000 m². Together with our financing partners, we created a financial foundation which allows us to make large investments in future projects.

You are investing hugely in future business. Can you give us an insight into your order book? What challenges does the new business entail?

Besides our existing business, our order book is full of large projects which are either in the industrialisation phase or are already being ramped up. Particularly noteworthy here are, for instance, a motor housing and corresponding compressor head for an electric coolant compressor, two housings and corresponding lids for e-axles with integrated transmission for all-electric vehicles and battery housings with integrated power electronics. We were able to acquire the battery project punctually for the lockdown in April 2020 while the order volume is more than EUR 170 million. The project covers several variants for different OEMs and is to be industrialised at various locations.

The high degree of vertical integration with numerous process steps (c.f. Figure 1 – Process Flow) and the technical demands of the casting, in particular, are what make the project so complex. All process steps

except for the cathodic dip coating are implemented in-house in order to reduce the complexity of the interface management and to ensure compliance with quality specifications all under one roof. The projects mentioned are connected to huge development efforts, change management and a very tight timeframe. The design of the new product is tangibly optimized right up to the SOP. Depending on the project, several hundred changes are carried out between the awarding of the contract and SOP. The project management is incredibly labour-intensive. Resources have to be available in all specialist departments round the clock during this phase of the project and they have to act fast. Finally, I would like to mention that, in addition to aluminium die casting, we are currently industrializing future business in deformation technology for e-mobility on our large presses (up to 12 steps / up to 1,900t pressing force) and that these are not less significant regarding the development effort, complexity and tolerance requirements.

Is the VOIT Group therefore already fully in the process of transformation?

Our technology roadmap is designed for electrified drive systems, electrified auxiliary units, power electronic applications and autonomous driving applications. In addition, we are following the development of the fuel cell and its applications. We have already been following this roadmap for several years. Our location in France co-developed and industrialized the first e-axle for the Renault ZOE in 2010. In St. Ingbert, we have been producing components for plug-in hybrids for ten years.

The automotive sector is characterized by disruptive technologies, the transformation process in the VOIT Group is already fully underway, our product portfolio is largely electrified. I expect that this process will last until beyond the year 2030. As soon as autonomous driving has asserted itself, this will also change the whole automotive market, new business models will make the industry more interesting.

What are the success factors that distinguish VOIT in the fierce competition when new projects are being awarded?

Success factors in acquiring and implementing the projects besides the price (total project value) are our innovative capacity, agility and process expertise. Furthermore, our organisation is able to drive the development and industrialization of such large projects forward and to implement them successfully, even parallel at several locations. With regard to Corporate Social Responsibility (CSR), we work together proactively with our clients.

What is your assessment of the shifts that will take place till 2030 between the different types of drives for vehicles with combustion engines, hybrids and all-electric drives?

Consumer behaviour varies from one region to another. In large cities, electromobility will assert itself faster and the proportion of all-electric vehicles or plug-in hybrids with a range of up to 100 km will be very high. A tangible shift away from the purely combustion engine will take place when there is an offer for attractive electrified vehicles on

the market. Due to active model strategies by the OEMs towards electrified vehicles in the coming years and increased range, I do not see any real problems on the supply side. I anticipate that in 2030, we will see a global market share of over 60% of new electrified vehicles. Furthermore, the demand for electric cars will benefit from the aid of state subsidies and additional privileges.

Which prerequisites need to be created to enable comprehensive electromobility? Where do you see a need for action on behalf of politics and industry?

Besides setting up a charging infrastructure, clean energy generation (renewables) need to be enforced in sufficient quantities by industry and politics. The battery problem regarding charging times, range and sustainable manufacture and recycling of batteries have not yet been finally resolved.

Keywords clean energy and CO₂ neutrality in production: How are you dealing with the requirements regarding CO₂ reduction in the company?

We have not just been occupying ourselves with the topics of energy and the environment and, superordinated, CSR for a few years. For us, ecological and

economic success go hand in hand, in particular as an energy-intensive company at manufacturing locations in Germany. With ambitious targets and with the right energy management, a comprehensive strategy and energy controlling, we are making significant savings while achieving optimum efficiency.

Around 5 years ago, for example, our combined heat and power plant (CHP) went onto the grid at our headquarters (Plant 1) in St. Ingbert and, with savings of approx. 2,700 tonnes of CO₂ annually, the system makes a sustainable and resource-saving contribution to the plant's own energy supply. On the route to CO₂ neutrality, in May 2021, the construction of a new highly efficient melting furnace commenced in our production and this will allow us energy savings of approx. 5,000 MWh or 900 tonnes of CO₂ per year. These are just a few projects out of many more to successively reduce CO₂ emissions.

It is still a long way until CO₂-neutral production can be implemented but it is a path that we have to follow over the next 15 years. I see here a further potential for us to differentiate ourselves as a company. Our customers are increasingly including the price of CO₂ ownership in their calculation

of their Total Cost of Ownership (TCO). Companies which refuse to take on this societal challenge will not survive on the market.

You therefore presume that you will achieve CO₂ neutrality within the corporate group by the year 2035?

I am convinced that we will be very close to the target of CO₂ neutrality in the year 2035 across all of our sites.

Thank you very much Mr Pajak!

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