



## Customer Interview: Simulation and Optimization



AMP specializes in mold design and manufacturing, plastic injection molding, 3- to 5-axis CNC machining, and 3D metal printing. AMP Taiwan headquarters was established in 1995, followed by establishing the AMP (Thailand) branch in 2023. The company has been certified with IATF16949, ISO9001, ISO14001, ISO22000, HACCP, and ISCC. Its business spans various sectors, encompassing the production of plastic products such as automotive parts, air conditioning appliances, food containers, office furniture, electronic components, and industrial accessories. With a comprehensive organizational structure and system, as well as a full range of production equipment, including injection molding machines ranging from 30T to a super-large 4000T, the company offers comprehensive and integrated services.

[www.amp-taiwan.com](http://www.amp-taiwan.com)

### Interviewee

Wang Zhicheng

General Manager  
of Aplus Molds & Plastic Co., Ltd



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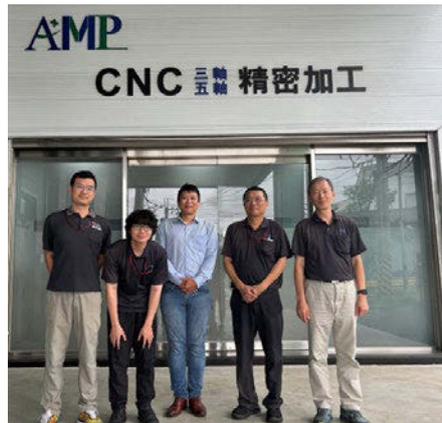
After the introduction of hyperMILL® VIRTUAL Machining, night time machining has become more accessible and simpler with machine utilization and production capacity also increasing significantly.

**AMP is a company active in the mold industry. In order to produce high-quality parts, innovation is a key factor. To support this, you purchased the hyperMILL® CAD/CAM solution in 2021. Programming and operating large 5-axis gantry machines can be quite challenging. So, how important is it to have pioneering technologies for generating NC programs and simulating them?**

Due to our use of five-axis large gantry machines, we cannot tolerate any possibility of collision for safety reasons. Furthermore, we cannot tolerate any risk of equipment errors to maintain high-quality mold manufacturing. Therefore, we believe simulation processing technology can ensure safety is met in our production to the greatest extent possible. In terms of technology, while other CAM software has limitations in swivel head travel paths, the Optimizer module of hyperMILL® VIRTUAL Machining can intelligently determine the optimal paths and plan, allowing us to focus more on process optimization while leaving safety control to hyperMILL®.

**Thanks to hyperMILL® VIRTUAL Machining, you can carry out significant amounts of unmanned machining at night. How has this impacted you?**

With hyperMILL® VIRTUAL Machining, we can confidently implement large-scale unmanned night time machining within the factory. Since we operate at night, we don't need to keep employees on call, which reduces the loss of working hours due to overnight shutdowns. This significantly increases the machine utilization rate from 57% to over 80%, resulting in a substantial reduction in labour costs. We are very grateful for the virtual machining module, which has enabled us to achieve a win-win-win situation: significantly increased production capacity, reduced labor costs, and improved machine utilization rate. Furthermore, programmers trust the programs generated by hyperMILL®, making our colleagues feel very safe. Even if the night workers are not in the factory, there is no need to worry about the risk of collision.



OPEN MIND application engineers with the AMP engineering team.

**How do you rate the current programs and processes compared to the past when you did not use hyperMILL® VIRTUAL Machining (VM)? Does it give extra benefits to your current programming skills?**

Using VM technology enhances visualization, allowing for 1:1 realistic machining simulation confirmation with actual machines, tools, fixtures, and other equipment. During machining, workers do not need to monitor the operation for extended periods, making the process much safer and worry-free. This is because everything depicted in the software's graphics accurately reflects the cutting conditions inside the equipment, thus achieving the device's digital twin. In addition, with the introduction of VM, our colleagues can dedicate more time to programming and development. If we occasionally forget about unprocessed blocks of leftover material during programming, we can rely on the VM to monitor and alert us if there is excessive material residue. All we need to do is initiate the program by pressing the start button, and the machine can proceed without any concerns, leaving us with more time to handle other matters.

**Besides VM technology, have you gained any other benefits from using hyperMILL®?**

We're using the finishing module of the performance package hyperMILL® MAXX Machining. Using a conical barrel cutter, we significantly enhance machining efficiency. Compared to using disposable tools, the machining time is reduced by 56%. In addition, we also utilize a tool database, which enables us to coordinate machines, tools, and NC programming most efficiently, ensuring consistent machining quality

and preventing defects in machined parts caused by incorrect parameter input.

**How would you describe and evaluate the hyperMILL® CAD/CAM solution in comparison to other CAM software?**

Firstly, when it comes to virtual machining modules, they are not merely post-processing units or simple NC code simulations. The value they bring lies in their exceptional reliability. Thanks to the reliability and trustworthiness of hyperMILL® and the virtual machining technology, we have achieved unmanned machining at night, reducing costs while increasing production capacity. The machine utilization rate can be significantly improved by 23%. For business managers, this is a highly worthwhile investment. With their absolute trust in software security, employees can work without any worries when programming and operating. In addition, regarding the overall value that OPEN MIND brings us, as we focus on maintaining our customers, we can update our software versions annually to align with the latest technologies developed by the German headquarters. Furthermore, the real-time service provided by OPEN MIND is also excellent, enabling us to address technical challenges quickly. Employees have also reported that hyperMILL® is very easy to learn and use overall, making it a highly user-friendly software. Ultimately, this led us to decide to replace our original CAM software. ■

Visit our website to learn more about all features and benefits of hyperMILL® VIRTUAL Machining.



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