

Transforming Die Design: How Williams Tooling & MFG Leveraged ANSYS FORMING Software for Cost Efficiency and Superior Results

Introduction In the competitive world of die design and stamping, efficiency and cost-effectiveness are crucial. Williams Tooling, a prominent player in the industry, faced challenges with their previous software solution, AutoForm. The software's high cost and excessive features that did not align with their needs prompted a search for a more streamlined and cost-effective solution. This led them to adopt ANSYS FORMING software, a move that has since redefined their approach to die design and production.

About Williams Tooling Williams Tooling is a leader in die design and stamping solutions, dedicated to providing high-quality products and services to a diverse range of industries. With a commitment to innovation and efficiency, they continually seek out technologies that align with their goals and drive business success.

Challenges with AutoForm

AutoForm, though robust and feature-rich, proved to be a double-edged sword for Williams Tooling. The software offered numerous features, including:

- **Advanced Quoting Tools:** Aimed at providing cost estimates but adding complexity.
- **Integrated Designer Software:** Allowing simulation within the software, but often redundant for those who prefer using CAD systems.
- **One-Step Solver:** Designed for preliminary quoting, which was not always necessary for Williams Tooling's needs, adding another layer of complexity.

The multitude of features, while impressive, led to increased costs and a cluttered user experience. Williams Tooling found themselves paying for capabilities they rarely used, driving up the software's overall cost and complicating their workflow.

The Shift to ANSYS FORMING The transition to ANSYS FORMING software represented a significant shift for Williams Tooling. Here's why ANSYS FORMING stood out:

- **Cost Efficiency:** ANSYS FORMING offers a more affordable solution without the unnecessary extras, aligning better with the company's budget constraints.
- **Streamlined Features:** The software is designed to be direct and to the point, providing only the essential tools needed for die design validation. This simplicity contrasts sharply with AutoForm's extensive, and sometimes overwhelming, feature set.
- **Enhanced Material Library:** ANSYS FORMING provides a comprehensive material library that offers more accurate data compared to AutoForm's limited options. This has been crucial for Williams Tooling, which often dealt with generic material representations in AutoForm.

- **Trim Line Development:** The trim line feature in AutoForm is analogous to the Trim Line Development feature in ANSYS FORMING. This tool simplifies the process of developing trim lines by offering intuitive features that enhance both accuracy and efficiency.
- **User Experience and Feedback** The ease of use with ANSYS FORMING has been a game-changer for Williams Tooling. Key benefits observed include:
- **Improved Simulation Accuracy:** ANSYS FORMING effectively visualizes forming issues such as tearing, wrinkling, and stoning, leading to more accurate simulations and better results in press testing.
- **Responsive Support:** With a more intuitive interface and prompt support, including valuable input from experts like Jeannie He, Williams Tooling has experienced fewer disruptions in their workflow. This support has been instrumental in overcoming initial learning curves and optimizing software use.
- **User Interface:** The overall user interface in ANSYS FORMING is better and more intuitive, in my opinion said Jordan Richardson. I really like the restarting feature that allows me to make changes in a later operation without having to rerun the entire simulation from the beginning. AutoForm had a more cumbersome method for doing that.

Business Impact and Industry Response Since adopting ANSYS FORMING, Williams Tooling has seen a notable increase in business. They have successfully executed several projects using the new software, with promising results from preliminary tests. The improved efficiency and cost savings have positioned them competitively within the industry.

Moreover, the software has garnered attention from major industry players, including Dupont and Ford, indicating a growing recognition of ANSYS FORMING's advantages in die design and production. The broader exposure and positive reception are expected to lead to further business opportunities as the automotive industry ramps up production.

Conclusion Williams Tooling's transition to ANSYS FORMING software has underscored the importance of aligning technology with business needs. By opting for a more cost-effective and streamlined solution, they have not only reduced their operational costs but also enhanced their design capabilities, particularly through improved trim line development. As the industry evolves, Williams Tooling remains committed to leveraging cutting-edge tools to drive efficiency and innovation in die design.

Call to Action For companies facing similar challenges with their current software solutions, evaluating ANSYS FORMING could be a transformative step. Contact Joe Hama at AutoStamped for more information on how this software can enhance your die design processes and lead to substantial cost savings.