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Q&A with Advance Pump & Equipment

Advance Pump & Equipment's use of 3D modeling Q&A with Wayne Vanden Berg, President/Owner of Advance Pump & Equipment.

When Advance Pump & Equipment opened in 2003, using a Digital Prototyping 3D modeling environment was a key priority for them. As a result, they are able to produce a better product, faster, for their customers & with minimal waste, saving them time & money.

- 1 *Advance Pump has been migrating from 2D and 3D drafting tools to the next generation of 3D modeling and Autodesk Digital Prototyping. Can you tell us what you've been working on since that decision was made and where the implementation stands today?*

3D Modeling has been used for the most part since our business began operations in 2003. I have worked with 2D at previous employers and at the time of startup here I knew 3D was where we needed to go.

- 2 *Moving to an Autodesk Digital Prototyping solution offers some obvious and not-so-obvious benefits. Can you cite a few key reasons why this decision was made, and the specific benefits you were looking to achieve?*

I sometimes feel that Advance Pump is like the custom motorcycle builders on TV: custom-building each piece to fit the needs of that particular customer in a production environment. Troy Runde, one of our Design Engineers, says "The ability to "build" the entire truck, tank and pump systems on the computer has created a portal into the answers we need prior to the purchase and assembly of all the components in our product."

Advance Pump outsources most of our metal forming to a local machine shop. Much of the material we work with has a polished mirror finish, so the more accurate "fit in place" components we can bring in the door, the better fit and finish on the final product. Working with Inventor allows us to accomplish this with minimal waste and re-work because 3D Modeling keeps the trial and error process in the digital environment where there is a smaller investment instead of the production floor where the investment would be much greater.

- 3 *Some parts of the manufacturing community do not fully understand the value and downstream benefits of Digital Prototyping. Do you have any words of encouragement for them at this point?*

I couldn't see our company operating with 2D anymore because the third dimension brings so much life to our designs. In fact, we are now sending 3D models to our customers for their design approval. One client is even using an overhead projector in their meeting room to review our 3D models. We set up a conference call to review the truck design and they are seeing a 3D model of the completed product—they absolutely LOVE it. None of them have ever enjoyed this ability before. Our customers used to wait anxiously and nervously about what "their" truck would look like, but not anymore. Visualizing the 3D model has really brought some serious value to a purchase of one of our products.

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- 4 One concern that some companies seem to have about transitioning to a comprehensive Digital Prototyping solution is the availability of resources to help them migrate to this platform. What other resources might you recommend companies consider to learn more about this transition and the new design platform?

Plan on attending the training classes – we have found them very useful. We also find the online users group a great help. Because we started out using 3D modeling, we never really went through a “transition” so it’s hard for me to speak too much on this, but I would highly recommend looking at a move to 3D modeling.

- 5 What advice or recommendations can you offer to ensure a successful implementation?

Two key aspects for us were investing in the proper hardware necessary for fast operation of the software and having two monitors per designer.

- 6 What are the next steps for your team?

We are now implementing the Vault File & Data Management System. We are starting a new part numbering system that initially has no intelligence in the numbering sequence, so we will rely upon the Vault system to organize, assemble and search all of our assemblies and components, thereby minimizing duplicates. We feel this next step will be integral to our component purchasing and our “just-in-time” inventory goals.

To learn more about Advance Pump & Equipment, visit their website:
www.advancepump.com

To learn more about Autodesk Digital Prototyping, visit: www.mastergraphics.com/dp