VisualCAMc at West Penn Manufacturing Technologies!

West Penn Manufacturing Technologies (WPMT) located in Cresson, PA is a 40,000 sq. ft. manufacturing and fabricating facility with 80+ years of combined manufacturing experience on site. Their services include a full range of metal and nonmetallic cutting from .005 thick to 6 inches thick using waterjet, LASER, HD Plasma, MIG and TIG welding, CNC bending and punching, and machining of metal, plastic and foam products.

Established in 2018, West Penn Manufacturing Technologies was founded as a Metal Fabricating facility and has grown to offer new materials as well as engineering design and full product manufacturing. WPMT has quickly grown to service clients of all sectors including some of the country’s largest rail car and heavy equipment manufacturers, aggregate and mining equipment manufacturers and the Department of Defense (DoD) and other military and defense related companies.
The VisualCAMc Difference

George Bohrer, Chief Operations Officer at WPMT has been in manufacturing for over 40 years with such powerhouses as Newport News Shipbuilding and BMI Defense Systems. For Computer-Aided Design (CAD) George has previously used SOLIDWORKS and ProE but has completed a 100% migration to the Onshape Product Development Platform for the past 2 years. For Computer-Aided Manufacturing (CAM) George has previous experience with Mastercam and Gibbscam but has recently migrated to VisualCAMc for Onshape from MecSoft Corporation.

“We really like how VisualCAMc is nested right in with Onshape. As soon we’re done drawing a part we can add VisualCAMc to the document and create the CAM file right there in Onshape. VisualCAMc saves us a lot of time, it’s convenient, easy to use and the price is right!”

George Bohrer
Chief Operations Officer
WestPenn Manufacturing Technologies Cresson, PA
WPMT is a “build to print” manufacturer with approximately 1,000 different components being manufactured for a range of world-wide companies. The typical CAD/CAM workflow begins with a PDF component document drawing with dimensions and specifications. This is then 3D modeled in Onshape to the customer’s exact specifications. If the part requires CNC (Computerized Numerical Control) milling, the VisualCAMc app for Onshape is used to generate the toolpaths strategies and g-code needed to drive their CNC mill directly from within Onshape.

Below are just a few examples of components modeled in Onshape and milled using the VisualCAMc for Onshape app. Click here to add VisualCAMc to your onshape account today!
Sheetmetal & Hole Configurations

This formed and machined component has multiple design configurations within the Onshape part document. VisualCAMc understands these configurations and allows you to automate the g-code generation for all configurations at once!

The component is displayed in the Onshape Product Development Platform.
This component has 4 configurations for Hole Diameter and Bend Angle.
The component is shown here with its VisualCAMc Machining Job that includes a 1.125 diameter pre-drill and 1.500 finish drill operation.
2½ Axis Machining

WPMT makes extensive use of the VisualCAMc Hole Making and 2½ Axis toolpaths strategies for the control and precision needed to meet their most rigid customer specifications. Two examples of these applications are shown below.

In this formed sheet metal component, a 2½ Axis Pocketing toolpath operation is used. The tooltip popup dialog displays machining information at a glance including Tool, Cut Feed and Machining Time.
In this component Drilling is used to rough the two hole features. Hole Profiling is then used to finish the diameter to the required dimension and tolerance. You also see a series of 2½ Axis Profiling operations.
3 Axis Machining

VisualCAMc also includes 3 Axis roughing and finishing toolpath strategies. 3 Axis Horizontal Roughing is shown in the example below. Sometimes referred to as Z-Level Roughing, this toolpath strategy removes stock in successive Z level cuts accounting for 3D part shape and stock allowance. This strategy provides an extensive set of cut parameters including separately controlled core and cavity cut patterns, stepover and cut direction. Cut level controls include stepdown, cut levels ordering, Z level constraints and the automatic clearing of flat surfaces. 3 Axis finishing strategies include Z Level Finishing, Parallel Finishing, Radial Finishing and Spiral Finishing.
A 3 Axis Horizontal Roughing toolpath is shown. Each Z Level cut adhere to the part’s 3 dimensional shape, tolerance, stock allowance, cut parameters and cut level controls.
For More Information

We would like to extend a special thanks to George Bohrer and West Penn Manufacturing Technologies (WPMT) for allowing us to showcase their work! To learn more about WPMT, we invite you to visit them online at LinkedIn and Facebook. To learn more about Onshape we invite you to visit them at www.onshape.com or read more in the Onshape CAD blog. For more information about VisualCAMc we invite you to visit the VisualCAMc product page and learn more in the MecSoft Tech Blog.

For the complete features list, we invite you to visit the VisualCAMc Product Page: mecsoft.com/visualcamc/

Try VisualCAMc Today!

Powerful production CAM for Onshape users!