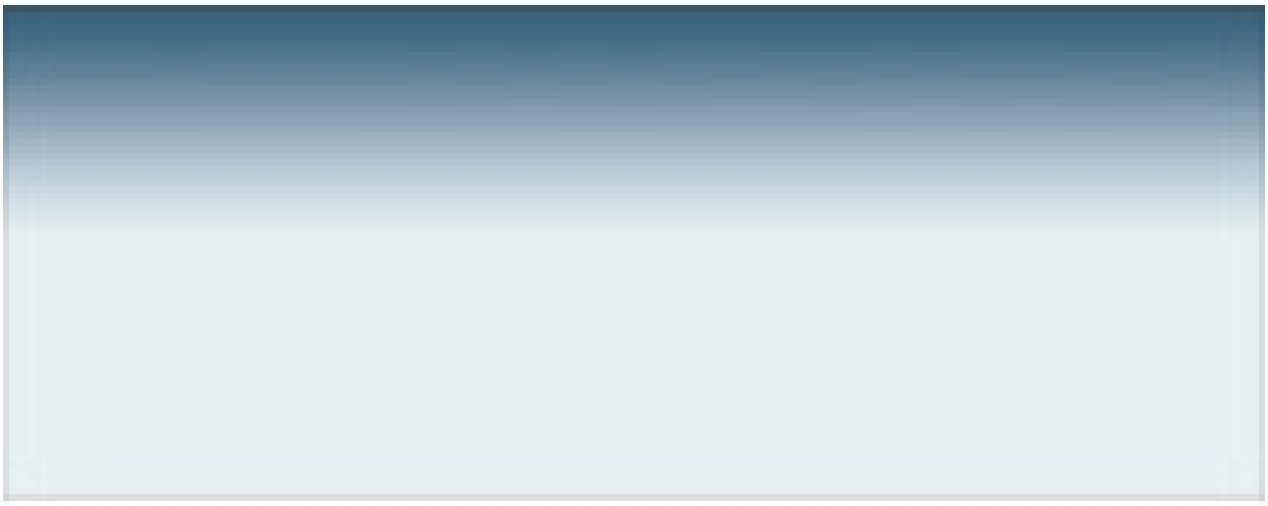

Large Machine Shop Publishes Post On Why Reverse Engineering Is Crucial For Product Longevity

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Central Machine & Marine Inc. (CMM), which is based in Sarnia, Ontario, Canada, has announced that they have published a post on why reverse engineering is crucial for product longevity. They explained that reverse engineering is a process by which an existing part is examined with regards to how it was produced in order to find a way to duplicate it or enhance it.

A spokesperson for Central Machine and Marine explains, "When producing plastic and rubber parts there are numerous advantages to utilizing reverse engineering. When you take the reverse engineering approach instead, you will reduce the amount of time that it takes to produce parts and in the process save money. Any company that produces parts should always explore the option of reverse engineering."

The blog post discusses some of the key reasons why manufacturing companies should use reverse engineering on their parts. First of all, it can be used to make those parts stronger and more durable. This is because it allows a closer examination of a part to determine where enhancements can be made. Second, reverse engineering can help companies in finding ways to enhance the functionality of parts. Third, it can allow the company to save time and money. This is because engineering new parts from scratch can take a

lot of time and money. Reverse engineering greatly reduces the time required to design and produce parts.

Meanwhile, the company offers a CMM | Reverse Engineering service is available and they want to clarify that they do not use the process as a way to copy the products manufactured by other companies. This service is only provided for those instances when the original equipment manufacturer (OEM) has gone out of business.

The CMM spokesperson explained the steps they take in reverse engineering apart to help in determining why that particular part had failed. The first step is to obtain the component and discuss with the customer the primary reason for the failure. Oftentimes, the original part was produced through a casting but the foundry had already discarded the pattern. Thus, CMM usually has to machine the part from a solid piece of the base material. To determine the material, CMM uses a positive material identification (PMI) gun.

While waiting for the delivery of the base material that they ordered, CMM makes use of their in-house FARO arm 3D scanner and CAD software to produce an exact three-dimensional model of the component. For those areas that are worn or where the customer has specified a modification, they modify the 3D model until it complies with the customer's specifications. Next, after the material has arrived, a CNC machining software is used to produce a 3D component from the base material.

For those parts that will be used as a rotating component, it is vital that it is perfectly balanced. To ensure this, CMM makes a custom mandrel and then uses their in-house balancing machine and custom software to ensure it is perfectly balanced. With the help of a trained technician, they are able to remove tiny bits of the material until the component is perfectly balanced up to speeds of 30,000 rpm.

The last step is to inspect the component to make sure that its dimensions are within the tolerances that have been specified by the customer. A trained technician makes use of an in-house coordinate measuring machine to perform this task. After this, the component is shipped to the customer with a data package that confirms that the manufactured component complies with the customer's specs.

The spokesperson says, "CMM is equipped with a wide array of state-of-the-art CNC and conventional machinery for the manufacture and repair of small parts to large components weighing several tons. We invest in ongoing equipment upgrades, CNC machining center, and CNC boring mill technology development at our shop facility."

CMM is a large machine shop that was established in 1973. Its location is strategic in that it is found in the middle of the Great Lakes water system, which facilitates the company's marine repair services. The company has steadily grown to what is now a 60,000 square foot facility that can handle projects up to a maximum of 60 tons.

CMM stocks a wide range of plate and bar materials, such as non-ferrous and cast iron, chrome, several nickel alloys, stainless steel, and carbon steel. They also have several items that are of pressure vessel quality. All of these materials can be machined or cut to exact specifications in a small amount of time and are shipped with certified material test reports.

Those who need more information can visit the company website or go and visit their actual CMM location.
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For more information about Central Machine & Marine Inc., contact the company here:Central Machine & Marine Inc.Central Machine & Marine Inc.(519) 337-3722shop@centralmm.ca649 McGregor RoadSarnia (On)N7T 7H5

Central Machine & Marine Inc.

CMM is a large scale machine and fabrication shop founded in 1973. Our southwestern Ontario location is strategically situated at the center of the great lakes waterway system to facilitate our marine repair and service division.

Website: http://www.centralmm.ca/

Email: shop@centralmm.ca

Phone: (519) 337-3722

