



Why What You Don't Know Can Hurt You: **How Tax Incentives Can Increase Your Bottom Line**

Whether they know it or not, U.S. Tool and Die manufacturers have a lot in common with scientists. Or at least they do in the eyes of the federal government.

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It may surprise many Tool and Die manufacturers to know they are eligible for the same government-sponsored tax incentives that reward research facilities and medical laboratories. The research and development (R&D) tax credit has been around for several decades and is a powerful tax incentive many businesses could use to increase their bottom line. But while many associate R&D with test tubes and white lab coats, the R&D credit has an expansive application. The credit applies to companies that are simply improving or modifying an existing product or process and many times, the simple tasks that a manufacturing company performs on a daily basis can qualify for the R&D credit.

Unfortunately, many eligible manufacturing companies, including many in the Tool and Die industry, have simply failed to take advantage of this incentive.

“Self-censoring is the biggest road block to companies taking the R&D credit,” said former Chairman of the IRS Oversight Committee Jim Ramstad at one of alliantgroup’s recent ThinkTank events. “R&D is one of the biggest credits available for businesses, but the reality is that only one out of 20 small to medium sized companies that are eligible for the R&D credit actually apply for it.”

Either because they feel they would not qualify or simply that they are unaware of the tax incentive’s existence, many manufacturing companies fail to take advantage of the R&D credit, a mistake that can literally cost a business thousands of dollars.

Examples abound of Tool and Die manufacturers increasing their bottom line by applying for the R&D credit and three separate cases from the industry will help bring home the wide range of activities that can qualify for the credit. For instance, a machine shop that designs aircraft equipment recently received \$83,000 in

federal credits and \$115,000 in state credits—additional returns accrued for their business made possible only by applying for the R&D credit.

Second, a company that specializes in the design and manufacture of tooling for the automotive, lawn and garden industries, as well as various industrial applications, undertook a project to design a single cavity triple clutch housing die. The die design required two hydraulic actuated slides and required that the center section for both the ejector and cover half inserts be made with material that aids with cooling during the casting process. This project required extensive simulation to develop a design and the optimal process to produce the part in a manner that met project specifications.

The company began by examining the design of the failed die and developed computer models to find solutions to the previous die's shortcomings. For example, the manufacturer determined a need to alter the runner system and considered two options for an improved design. After modeling activities the company produced the die for testing in its shop. During this process the business utilized the die to test prototype production with a non-metal material. The company continued testing and developing improvements until achieving the optimal design.

Through trial and error, this manufacturer was able to improve upon a product they create on an everyday basis, and it is precisely this kind of innovation that the R&D credit incentivizes. For this technique and other improvements made in their die casting processes, the business earned an estimated \$130,000 in net federal R&D tax credits, additional credit accrued for simply doing their job.

Given recent economic realities, many manufacturers could seriously benefit from the additional credits provided from R&D. The downturn of the U.S. economy in recent years has been particularly harsh on small to mid-sized manufacturers, and these middle market businesses are facing harsh economic realities. Desperate times call for desperate measures, and in their efforts just to stay afloat, many businesses are cutting back; from slashing salaries to decreasing investment and downsizing their workforce. For struggling middle market manufacturers, the credits accrued from government-sponsored incentives such as the R&D credit could make a huge difference.

“In these challenging economic times, many businesses have utilized the R&D tax credit to reinvest back into their business,” said former IRS Commissioner and alliantgroup Vice Chairman, Mark W. Everson.

According to Ramstad, in the coming years the R&D credit will be a very important tool for the federal government to push the private sector forward.

“As 70 percent of American people are actually employed by small to mid-sized businesses, going forward, the R&D credit is critical to encourage innovation, grow our economy and ensure that American businesses remain competitive,” Ramstad (alliantgroup Senior Advisor) said. ***“The R&D credit is something politicians from both sides of the aisle believe in, and the current administration has time and again signaled their support for expanding and simplifying its application.”***

If a string of recent court rulings are any indication, it would appear the R&D tax credit has actually become more attainable to middle market manufacturers like never before. Changes in the treasury regulations in 2001—regulations that were reaffirmed by several court rulings in 2009—have significantly expanded what constitutes research and development activities. Of particular interest to manufacturers, specifically those in

the in the tool and die casting industry, the court ruling in *TG Missouri Corp. v. Commissioner* provided that molds and prototypes used for production, if not depreciable by the taxpayer, are eligible for the R&D credit. The court's ruling in *TG Missouri* has made it easier for manufacturers to look at certain supply costs as also qualifying for the R&D credit. Also working to the benefit of manufacturers, the court's ruling in *U.S. v. McFerrin* allowed for oral testimony and the institutional knowledge of company employees as evidence of research under the R&D tax credit, helping businesses with less than perfect records qualify for the credit.

These rulings, particularly *TG Missouri*, have expanded the reach of the R&D credit within the cast and die industry, further encouraging companies to innovate and expand their ambitions in the casting process.

For a final example, in addition to other qualifying activities, a company undertook a project to develop an oxygen pump delivery system to operate a portable oxygen concentrator tank, and received an estimated \$333,923 in net federal R&D tax credits. The development of the manufacturing process required the company to design a die in which to cast the component parts for the pump system. The manufacturer custom designed a die to cast all of the family components associated with the pump including the pump's body, piston and valve plate.

The pump, used to facilitate the transfer of oxygen from a storage unit to the device user, contained numerous small, thin-walled parts to provide a steady, uninterrupted stream of oxygen. To produce the pump and the accompanying pump components, the company developed an initial die design that stemmed all component parts from a single block of magnesium. The company also improved the die design to include a chimney gate on the transfer tube that took molten metal from the furnace to the mold chamber to draw out any excess air that was trapped within the tube, in turn eliminating air pocket formation and improving their product in the process.

With the help of the R&D tax credit, Tool and Die companies can significantly improve their bottom lines and grow their businesses. The expansion of the R&D tax credit and the broadening of its application in recent years is a huge win for manufacturers, and recent federal rulings ensure that this innovative, government-sponsored, incentive is here to stay. It is up to middle market manufacturers to wake up and finally start taking advantage of this opportunity.

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