



Cutting NEWS

EXOCARB® Diamond Drills Proven Technology for the Aerospace Industry

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Opportunity **Editorial**

Doug Brubaker, District Manager

Don't you just love to pick up a newspaper these days or turn on your local news to see what's happening? Me neither. With headlines like "Company A announces 20,000 job cuts," "Company B lays off 1,000 employees," and "Company C planning to eliminate nearly 30,000 jobs over the next three years," who can blame you? There is not a day that goes by that

"I get up every day on a positive note and I focus on where I can grow my business."

you are not hearing about cutbacks somewhere to some degree. We all know someone who has lost their job or is directly affected including each of us. I have gotten to the point where I have cancelled my newspaper subscription and do not watch the news nearly as much as I used to. Can you blame me? The media would have us believe that the world is coming to an end and there is no stopping it. Why even get out of bed in the morning?

I have a luxury that many people do not, it is called a job. I get up every day on a positive note and I focus on where I can grow my business. Just because the economy has slowed, does not mean it has stopped.

Customers that were unable to take the time to test products before are

testing them now, and in most cases they are seeing a cost savings. Now is a great time to educate customers about new products and even old products. We have to get in front of the customer and show them what we can do or they will never know.

So where are these opportunities?

The power industries have a great need for threading. The power (oil) generation industry has an approximate four year backlog. The U.S. also created 35,000 new jobs in the wind power generation industry while expanding wind power capacity by 50%. The U.S. has now moved up to number one in wind power, in terms of energy production via wind, overtaking Germany. As for the medical industry, well it is booming with baby boomers! By 2015, 45% of the population in the U.S. will be 50 years or older. That means the U.S. will need more surgical equipment, artificial joints, operative ancillaries, etc. Lastly, between

composites and high temperature alloys, the opportunities with regard to aerospace work are numerous to say the least. All of these segments depend on taps, drills, and end mills to help produce finished parts.

With all these opportunities out there I am not going to allow the news to ruin my day and turn it into a negative event. Instead, I am going to take this opportunity to plant the seeds for the future.

"... I am going to take this opportunity to plant seeds for the future."

There are many opportunities out there; you just have to look for them. It is

time to think outside the box and get creative. I ran across a quote recently and it really does put things into perspective:

"The future? The thing that got us here will not get us there."

Stay positive and keep your focus.





Hard Jobs Feature

Ron Portwine, District Sales Manager

Much of what I hear in the shops, pertains to high-temperature alloys, such as; Inconel, Titanium, and A286. More shops are taking on the difficult-to-machine jobs because the gravy work has all come and gone. All that is left is the tough stuff.

Approximately 26% of job shops have in essence been forced by the economic down turn to seek out more work, and take in the exotic materials that they would have turned down before, to keep everyone working and the doors open. They all have said the same basic thing, "We are taking in this work because the easy jobs are staying with the manufacturer and they are farming out the harder jobs." The economy is forcing everyone's hand at some level.

"...the cutting tools they use will either make them money or cost them profits."

these premium materials so they are calling and asking for direction on what end mills, drills, and taps are best to machine those materials. They are well aware that the cutting tools they use will either make them money or cost them profits. This provides a great opportunity to sell different products to existing customers, but to also train machinist on exotic alloys and the tools to be used in processing them. The more they know and understand about these materials, the easier it will be for them to machine, and the more jobs they can gain with their newly acquired expertise.

*Figure based on personal surveys administered to manufacturing personnel in South Central Region of USA.

Their experience is minimal in

EXOCARB® Diamond Drills

100% of all design and manufacturing is completed in-house, including the application of OSG's patented ultra-fine CVD diamond coating.



Oh So Green Tip: Green Energy

More than half of all electricity consumers in the U.S. now have the option of purchasing green power from their utility. Find out how you can buy green power by visiting the Department of Energy at: www.energy.gov for a state-by-state list of providers. You can also check with your own utility to see what is available.

EASTEC 2009 **Insider**

Booth #5411, May 19-21



Be sure to visit OSG Tap & Die at EASTEC 2009 in booth #5411!

OSG has introduced many new cutting edge technology products that will be showcased at EASTEC this year such as; the EXOCARB® Aero™ ROUGHER, ideal for the Aerospace industry, is specially designed for maximum metal removal in exotic materials, and

a smoother surface finish. Also showcased at EASTEC this year will be the new HELIOS™ drill, which features new patented technology that gives it the ability to process deep holes without the use of internal coolant supply.

The EASTEC Show will be held May 19-21, 2009 at Eastern States Exposition in West Springfield, Massachusetts.

Register today at www.sme.org.



New Product

Aerospace Exotics

Introducing the new EXOCARB® Aero™ ROUGHER from OSG Tap & Die... specially designed for maximum metal removal in exotic materials such as Stainless Steel, Titanium, and Inconel. The combination of the shallow profile serration and the 45° helix provides a much smoother surface finish. The uniquely configured serrations on the cutting edge reduce friction, thereby generating less heat and requiring less horsepower than standard or variable helix carbide end mills. The EXOCARB® Aero™ ROUGHER is available in ¼" to 1" diameters, and corner radii ranging from 0.030-0.190.

To learn more about the Aero™ ROUGHER contact OSG today at 800-837-2223.



Short Cuts

The aerospace sector is still booming with business for cutting tools. There are many variables that may decide what is going to happen in this country in the next five or so years, but one thing is already known: large commercial aircraft manufacturing has an approximate 6 year backlog. That is an impressive figure, but not nearly as impressive as the fact that it excludes aircraft models not yet being delivered. Overall, it is a backlog of about 7,500 aircrafts.

Diamond Drills **Testimonial**

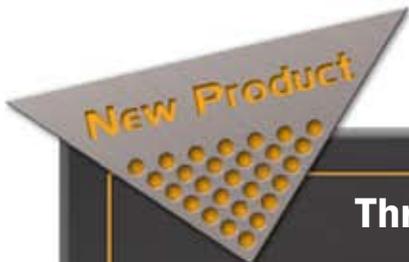
Sean Wirtz, District Manager

Most of the new airplanes being manufactured by one of my customers are composed of Carbon Fiber Reinforced Plastic (CFRP). In fact over 80% of the airplane is composed of this composite material. CFRP is a less expensive material and thereby, reduces

"The disadvantage of CFRP is that it is difficult to machine, but not for OSG!"

production costs. The new airplanes will be lighter and therefore, able to travel using approximately 20% less fuel. The disadvantage of CFRP is that it is difficult to machine, but not for OSG! CFRP can be dispensed like a piece

of tape. One layer is about as thick as a piece of construction paper. Each layer has unilateral fibers running through it and is stacked on a 45 degree turn from its previous layer. This is layered until a desired thickness is reached. Issues arise, however, when the cross fibers and the resin heat up during drilling and milling. Airplanes that are manufactured with



Threaded Fasteners for the Aerospace Industry

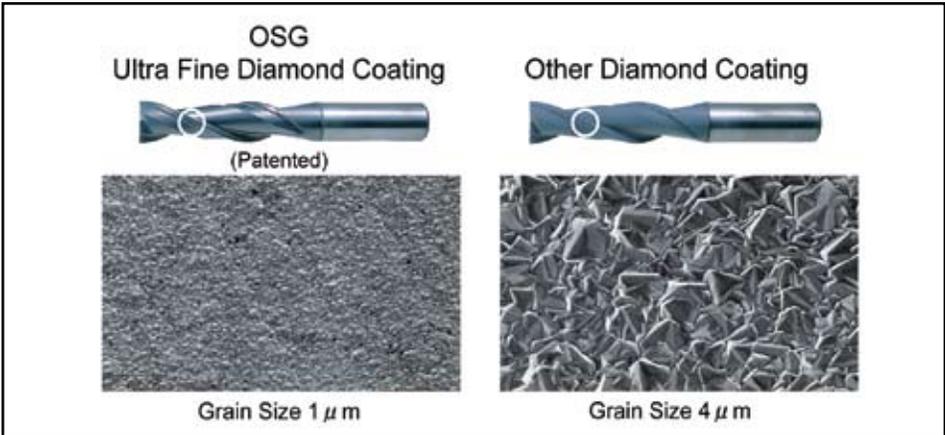
OSG's answer for the production of threaded fasteners for the Aerospace Industry is the HY-PRO® AERO™-F tap series. This newly designed spiral point tap incorporates unique 3x eccentric relief, which drastically reduces drag and friction, thereby increasing tool life. Additional features like premium Vanadium High Speed Steel and Titanium Nitride coating further increase wear resistance in materials like A286, Stainless Steel, and Titanium.

Field tests have already yielded 2~5 times tool life results versus the competition. The new lineup of taps provides the threaded fastener industry with a truly tailored design specific to the demands of manufacturing Aerospace fasteners.

A wide range of stocked sizes and Pitch Diameter limit ensures a tap for every fastener size. Stock centers in Illinois and California ensure prompt delivery for manufacturers on both the west coast and east coast.

To learn more about the AERO™-F contact OSG today at 800-837-2223.





aluminum enable the heat to be displaced into the material. Now, with CFRP, the heat is absorbed by the tooling, which can cause the fibers to break and the resin to melt. This is called delamination and would not pass inspection. My customer has switched to using diamond tools to try to eradicate the problem of delamination.

“...now all their parts pass inspection without any signs of delamination.”

The problem here is that MOST diamond coatings are too thick and provide a honed edge that does not cut this type of material effectively. This is NOT true of OSG’s diamond coating.

OSG’s diamond coating has a finer grain structure than the competition’s; therefore, keeping a sharper cutting edge. In direct testing with a 0.251” drill, OSG’s

diamond coated drills have nearly doubled the tool life my customer was previously getting. Running on a flex track machine, the drills run at a constant 3000 RPM (200 SFM). Previously, my customer was satisfied to get 100 linear inches out of each drill. Now with OSG’s ultra-fine diamond coating, they can now expect 185-225 linear inches per drill!

Not only did my customer gain more tool life, now all their parts pass inspection without any signs of delamination. With my customer holding a backlog of airplane orders, OSG is positioned at the forefront whenever it comes to holemaking and diamond drills.



Short Cuts

When the subject turns to aerospace, it is important to understand that it generally encompasses defense related business as well. Defense is a pretty broad area and along with aircraft it includes many other items. The general consensus is that the defense sector has hit a plateau after nearly 10 years of sustained growth, and that there will only be modest increases moving forward.

Keep in mind though, that even without the growth, current Department of Defense spending levels are high. Although some speculate the change in Washington will affect that, even if that proves true, there are already programs and projects online that will be manufactured for years to come. These are long term efforts that lend stability to those that supply tooling.



ENGINEERED PEACE OF MIND



EXOCARB[®] Diamond Drills

Proven Technology for the Aerospace Industry

Contact OSG for more information.



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