TIP TALK

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POWERHOUSE GERMAN ECONOMY

MANUFACTURING THE REAL ANSWER FOR SUCCESS?

German Manufacturing

At the last 3P Seminar Jacob Harpaz talked about how Germany was competing well with far east manufacturing. Its trade balance - the value of its exports over its imports - is second only to China's, which is all the more remarkable since Germany is home to just 82 million people. Its 7.5 percent unemployment rate - two percentage points below U.S.A. - is lower than at any time since right after reunification. Growth is robust, and real wages are rising.

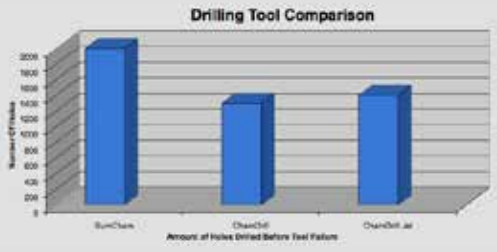
"It's quite a turnabout for an economy that American and British bankers and economists derided for years as the sick man of Europe. German banks, they insisted, were too cautious and locally focused, while the German economy needed to slim down its manufacturing sector and beef up finance. Wisely, the Germans declined the advice. Manufacturing still accounts for nearly a quarter of the German economy; it is just 11 percent of the British and U.S. economies (one reason both countries are struggling to boost their exports). Nor have German firms been slashing wages and off-shoring - the American way of keeping competitive - to maintain profits. One key to Germany's miracle is mid-size manufacturing firms that dominate the economy. The workers usually are highly skilled, and most stay with the firm for decades.

When the downturn hit Germany in late 2008, manufacturing firms' business declined the most, but subsidies from a government program called Kurzarbeit allowed firms to keep their workers part time rather than lay them off. In some cases 15 to 20 percent of workers were on Kurzarbeit. By keeping their skilled workers, companies were able to rev up production quickly when China's stimulus boosted the market for their products in 2009. They also benefit from an extensive system of vocational education and a sector of municipally owned savings banks that work solely with local businesses. Roughly two-thirds of German small and mid-size businesses get their loans from these banks. Through such radical notions has Germany thrived".
Condensed from The Washington Post.

SUMOCHAM

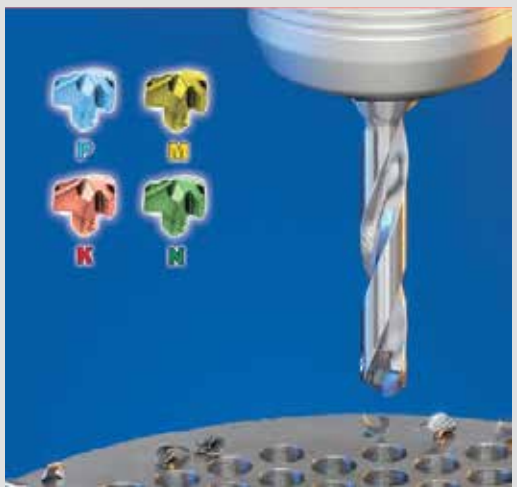
100% MORE PRODUCTIVITY

ISCAR introduced the SUMOCHAM drill family, which is an advanced evolution of the CHAMDRILL and CHAMDRILLJET very successful drill families. The SUMOCHAM drills have features similar to the CHAMDRILL, with an improved head and pocket design. An innovative clamping design enables significantly more insert indexes. The drill features twisted coolant nozzles with indexable drilling heads, which are available in different head configurations for various material groups. ISCAR's innovative SUMOCHAM drill line will provide longer tool life and higher productivity. SUMOCHAM drill heads feature four geometries designed for optimal performance and high reliability when used on various materials.



-ICP for use on carbon and alloy steel (ISO P). The drill head has a honed cutting edge.
-ICK for use on cast iron (ISO K).The drill head is produced with a ground chamfer and a honed cutting edge.
-ICM for use on stainless and high temperature alloys (ISO M).The drill head features a T-land on the cutting edge.
-ICN for use on aluminum (ISO N). The drill head is manufactured with a sharp cutting edge and polished flutes made from ISCAR's uncoated submicron grade IC08. This is a most advanced coating which results in excellent insert performance and increased tool life.

Productivity can be increased substantially.



ER Collet Chuck VS Shrink In

The Concept: Tool trials to assure compliance with the standard for high quality tool holders and to create a benchmark of comparison between tool holding technolgies. This test evaluated an ER collet chuck versus a Shrink In tool holder under “real world” conditions.

Test Conditions: This trial was performed on a CNC Vertical Machining Center with a BT 40 taper. Identical tool paths, spindle speeds, feed rates, material conditions, holding devices, coolant delivery, end mills and chip loads were utilised to isolate the performance of these tool holding technologies. The test cuts were in 4140 Prehard (30-32 Rc) using 3 flute uncoated carbide center cutting end mills. The identical tool paths involved a variety of cutting directions.

Tool Life: The most significant comparison between these tool holding technologies is in the area of tool life. The end mill in the Shrink In tool holder showed dramatically less wear (Shrink In photo) compared to the end mill used in the collet chuck (note the fractured surface). There was significant fretting on the taper of the ER collet chuck tool holder while there was virtually no fretting on the Shrink In holder. This was attributed to the superior wear characteristics of H-13 tool steel over 8620. These results back up other reports that Shrink In allows 4 to 7 times the tool life of other tool holding technologies.

Cutting Ability: During four machining test passes of 3mm depth of cut, the Shrink In tool holder required less spindle load than the ER collet chuck tool holder. The increased rigidity of Shrink In created a more balanced chip load during cutting. This was observed in a better machining sound.

Conclusion: This independant test conducted by the American company Teknics confirms our experience here in the NZ market. Shrink In has 4-7 times more tool life than collet chucks.

ER Collet Chuck

Shrink In

Commodity Prices Keep Climbing

Tungsten APT prices continued to climb on global markets as Tungsten carbide tooling manufacturers reported increasing difficulty securing offers from China. Tungsten is also expected to have supply shortage issues in 2011 stemming from export restrictions from China as that country is the biggest producer of the metal. The lion’s share of tungsten is produced in China, and it is Chinese economic activity that arguably has the greatest effect on tungsten metal prices. When China has flooded the market with tungsten export, prices have historically fallen, sometimes precipitously.

However the price of tungsten APT has risen 81 percent year over year from US$185 per MTU to its current price of $335 per MTU as China, recently began depressing tungsten exports. Just this week the price for tungsten APT is quoted at $380 per mtu. These prices are well over the record highs reached last month of $450 per kg. With tungsten metal prices exceeding their previous historical highs, it’s possible that producers in other areas of the world with tungsten reserves (such as Vietnam) will come online to take advantage of the current favourable economics.

Iscar Expands H400 Range

ISCAR has expanded its popular line of HELIDO ROUND H400 fine-pitch mills to improve profile machining and ramping over a wider range of applications. Included are 10,12, and 16 mm inserts. Cutters sizes cover 20-32 mm diameter for end mills and 40-125 mm for face mills. Unlike true rounds, HELIDO 400 ROUND inserts have a periphery that consists of bounding arcs with radii that would be found on round inserts twice their size. It permits very high feed rates, while fitting more densely into a given size cutter **equaling more feed!**

The inserts are double sided, with helical cutting edges for gentler entry plus top-face geometry to create a 10° positive rake. They feature ISCAR’s innovative SUMO TEC post-coating treatment that improves performance 35% on average. Together with a dovetail clamping design in the cutter, the unique HELIDO 400 ROUND insert shape also creates four fixed indexing positions and firmer no-twist seating able to withstand high cutting forces. Fixed indexing positions ensure that all four edges are used, and eliminates the uncertainties that lead to discarding round inserts, which still have good edges. The more cutting forces applied, the better gripping forces obtained.