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Gary Shilling

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december 2007 volume 3 issue 12

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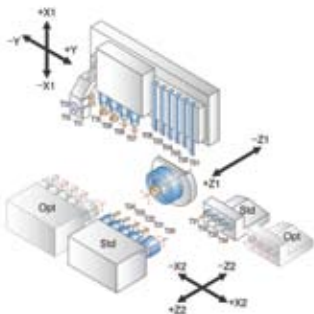
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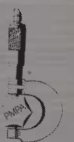
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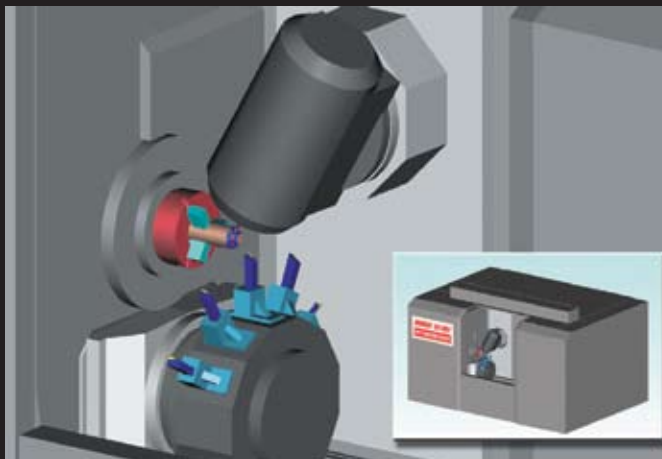
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editor's note

The Gift of Joy

Let me start by saying I completely understand and respect Christmas' and Chanukah's religious significance. I spent one Christmas at the Church of the Holy Sepulchre in Jerusalem and found it quite moving. I visited the spot where the Maccabees restored the damaged Temple, finding enough oil to burn for eight days. I see the need for a winter break for families at the end of the year.

But I don't get the almost universal fixation on gift giving, abetted by the retailing community. Why do so many people buy into the need to give presents? I am certainly not opposed to the idea of gifts or sending cards, but I reject the notion that I need to do it on cue, as part of a competition to give the best trinkets in a prescribed time frame.

I receive at least 100 catalogs at my home hawking overpriced merchandise. I open maybe one a week because I'm interested in the sales approach, not the goods.

Ok, so I'm a grinch, a Dickensian curmudgeon devoid of the holiday spirit. But give me some credit. I've watched *It's a Wonderful Life* 80 times and I cry more each time.

To me Christmas and Chanukah, like every day, is about family, connection, giving, gratitude and rebirth. The grotesque materialism the holidays have morphed into reflects the dark side of modern American life.

My gift to you is this magazine, which we at TMW do with love and commitment each month. My intellect, my curiosity and my heart are wrapped in these covers.

It is the most valuable gift I could give you – and I present it with genuine joy.

Lloyd Graff
Editor/Owner

editor's note



Lloyd Graff has an M.A. in journalism from the University of Michigan. Lloyd splits his time between buying and selling machinery, writing *Swarfandswarfblog* and playing Fantasy Baseball on Yahoo. He is married to Risa, a world champion in Tae Kwan Doe. He has three children and a granddaughter who are all above average. One of his life goals is to make 65 consecutive free throws on his 65th birthday.



Noah Graff has been working at *Today's Machining World* since 2005. He graduated from the University of Wisconsin Madison, majoring in film and history. He is the features editor for *Today's Machining World*, as well as the videographer for *TMW* and Graff-Pinkert & Co., producing training videos on screw machine maintenance and video stories for the *TMW* website. Noah enjoys investing, filmmaking and improvisational comedy. He is also a master of the sacred art of live band karaoke.



Robert Strauss was formerly a reporter for *Sports Illustrated* and the *Philadelphia Daily News*, and a news producer at KYW-TV in Philadelphia. Now a freelance writer based in Haddonfield, N.J., where he revels in his two daughters' basketball prowess and their eye-rolling at his bad puns, his work appears most often in the *New York Times*, the *Washington Post*, the *Los Angeles Times* and *Today's Machining World*.



Jill Sevelow has incorporated a few of her passions into her last three professions; teacher, department store buyer and managing editor of *Today's Machining World*, a role she's relishing. Jill is an avid gardener and dedicated mah jong player, volunteers her time & creative energy for exceptional organizations, and adores her friends and family. Her greatest source of pride has been raising daughters Jade and Tess, her two most favorite people on the planet.



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Say it Loud

While I certainly respect Haas and what his company has done, someone needed to say it. (see Editor's Note, Oct. 2007) I loved your editorial. Keep up the good work.

Brandon Rhoten
HSR Business to Business
Cincinnati, OH

Making us Think

I enjoy your magazine, your insights and comments. Here is one thought for you about your two-page ad for Graff-Pinkert & Co., "Meet the Graff-Pinkert family." When I see the ad with the three white guys in shirts and ties on one page and the other page with a woman, two more ethnic guys, and one guy with a tattoo showing, all I can think is, that's not a family, that's three guys making six-figure salaries and the four hard working souls making it happen. I'm sure you all work hard as a team, but boy that photo gets me going when I see it.

This is coming from a college educated white guy from a working class background who steps back and forth across that line every day, fixing a machine when broken or running parts when needed, but still knowing I make twice as much as the machinist who works for me. I earned it, but it still makes me think.

Anonymous

Mail Box Woes

I have been a subscriber for many, many years. However, I have sadly missed the last couple of issues, as we moved from our previous home of 41 years to a new condo in the same town. I think your magazine is without peer. My life has been in the field of machining and factory automation, and your technical articles have always been well written and accurate. But the "human interest" side of the magazine shares the spotlight so well and makes this publication so different from any would-be competitor.

Please help me by returning this part of my life to my mail box!

Jack Ubersax
Fairview Machine
Wilbraham, MA

Reclaiming Days

Dear Lloyd: I want Saturday back. I absolutely refuse to let Friday get away. End of discussion. (see Oct. Swarf)

I invite everyone in manufacturing to join me in taking Saturday back. Let's make our work and workplace so exciting that the people cannot stay away. Let's be able to pay our men and women enough that they can be able to use division of labor and hire experts to cut their grass and paint their houses, etc. They will have the money for this from all the fun and excitement from working in our shops and factories. I am serious.

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Poker Lessons

I recently saw a missive from top honchos at the “New” Chrysler detailing a complicated warranty reimbursement plan in which suppliers pick up the tab on Chrysler’s warranty claims. The language was so convoluted it would take a team of Philadelphia lawyers the size of the Eagles roster to unravel it.

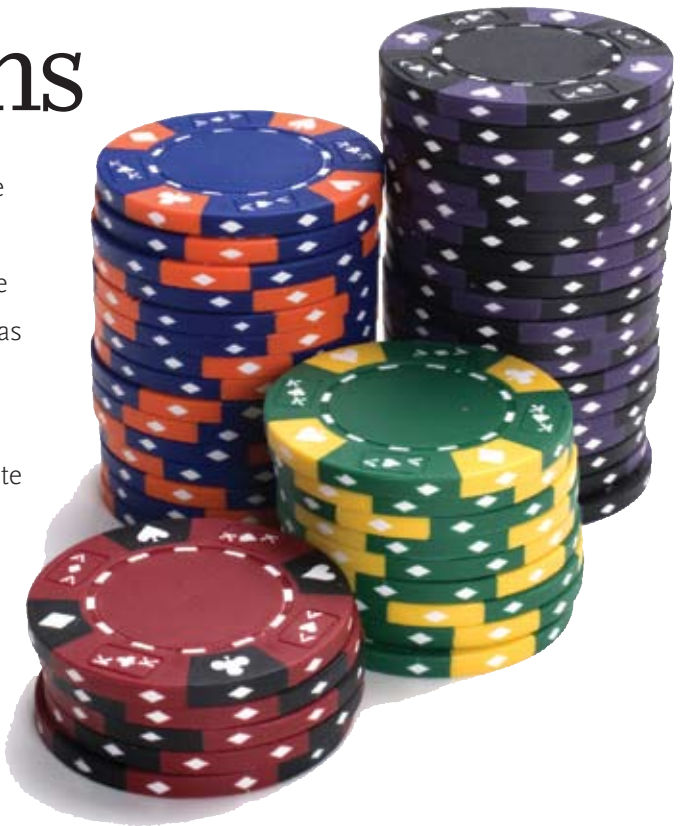
By making the formula for its suppliers to alleviate Chrysler’s warranty woes so deliberately obscure, they force a negotiation in which they feel they have the upper hand because of their deep pockets and sophisticated legal bandits.

When I ran the Chrysler scheme past a friend who does mountains of car work, he chuckled wryly. He said big automotive routinely attempts to turn its own errors into profit pools funded by its suppliers.

He recounted a story about a job his firm did for a transmission plant. They sent parts to the automotive factory that had some oily chips in the dunnage. The actual parts were in tolerance, but the quality department complained about the residue. They quickly sent out a small rescue squad to make the parts acceptable.

But a few weeks later the vendor received a bill from the car company’s quality department for \$50,000.

In his opinion the inspection department was ordered



to become a profit generator, like cops presiding over a speed trap. My friend flatly declined to pay the 50 grand and the complaint and fine quietly disappeared.

It appears that the newly private Chrysler is going to press its suppliers hard in order to wring tribute from the peasants. They will extract what they can, and then assess the players. Poker lessons are available online.

(Swarf continued on next page)

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I am writing this piece in

mid-November, but you probably will not read it for a month.

I am looking for 2008 to be a "flex" year for the American macro economy and our machining world. I use the word "flex" because I think it is going to strongly bend in both a positive and negative way for our businesses and the wider national economy.

For at least the first six months of '08, the credit markets are going to be nuts. Many of the major banks are in turmoil because of their idiotic bets on buyers with pieces of paper connected to residential real estate. I phrased it this way because the sub-prime chaos is related to potential mortgage defaults, but not directly connected to loans on individual living units. Financial institutions all over the world are sitting with "derivative" pieces of paper which are securities based on mortgages – but not the actual mortgages – on homes in Stockton, Calif., Maple Heights, Ohio, and Miami, Fla., to name a few of the saddest locations.

When the wizards of Wall Street broke the direct connection between your four walls and your originating lender in order to give liquidity to the mortgage market, they increased the readily available money available for property buyers, but they also clouded the ability of the buyers of financial investments to assess the risk of individual buyers and ultimately the "real" value of the risk they bought.

So going into 2008, we have a housing bust and extreme confusion on Wall Street in the big banks which is fanning out to Main Street.

The pessimists think that the domestic housing market will be wrecked for five years or more. I doubt it.

Most mortgages, even the sub-primes, are still performing, though foreclosures are rising, especially on condos bought on spec. My expectation is that generally prices will hit bottom by the summer of 2008, but it will be a rolling bottom for awhile. There is an army of potential real estate buyers waiting in the wings for the market to settle. The adventurous ones are already putting up billboards on the Interstates proclaiming their desire to buy houses – NOW.

My first prediction is that the residential real estate mess will sort itself out in 2008 and builders will be gearing up by the end of the year for a decent 2009. Credit markets helped by a contrite Federal Reserve will calm down by next fall. I envision a 6 percent prime rate later next year.

If you are primarily doing work for the housing sector, I think it will be a long year for Delta Faucet and Whirlpool and mediocre for Home Depot and Lowes, but when the fixer-uppers come back late in '08 things will improve. The housing market will flex but it won't break.

swarf

As big as the real estate story is,

the resurgence of American exports may be of greater magnitude to the readers of *Today's Machining World*.

Simultaneous with the repricing of mortgage derivatives is the repricing of world currencies vis-à-vis the U.S. dollar.

The dollar is cracking versus the euro, pound, and that invisible new currency – the barrel of crude oil. For almost everybody in the world except sub-Saharan Africans and Cubans, the United States is a huge after-Christmas sale.

This is going to be extremely favorable for American manufactured goods. Of course, China plays by its own rules on currency valuation, but the Chinese have so many dollars it behooves them to spend a lot of them in the U.S. where they have the most value. If they do not roll over their U.S. Treasuries, they will damage their best customer, so the dire forecast of the doomsayers will not occur – I hope.

The U.S. trade deficit is shrinking every quarter, even with expensive imported oil, and the Federal deficit is declining despite the pork and the Iraq war.

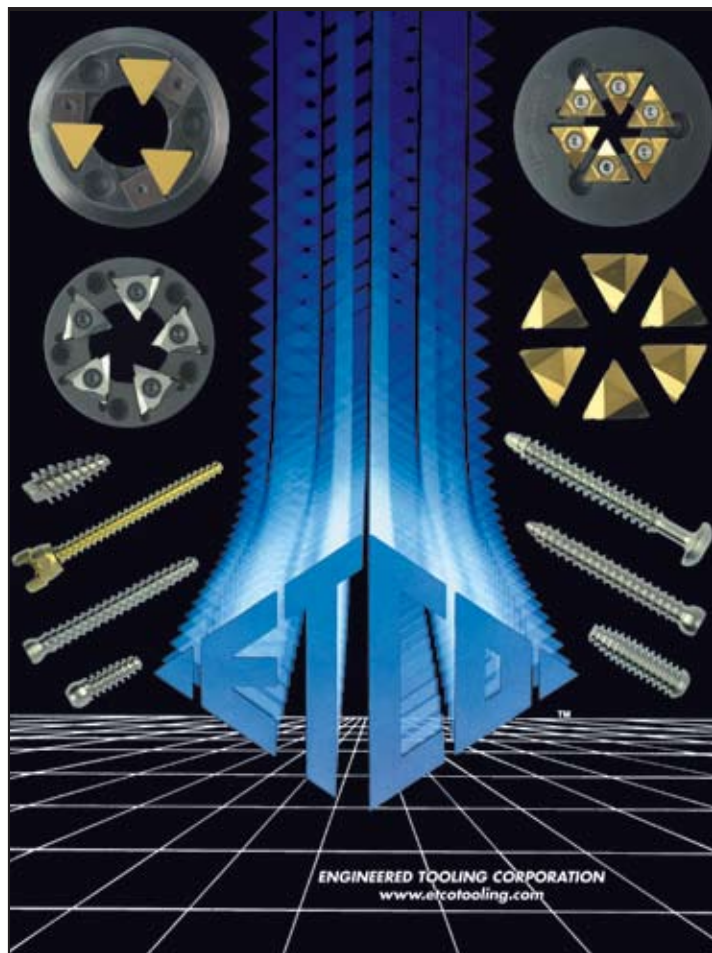
The strategy for the coming year should include trips to foreign trade shows and aligning your firm with big export-oriented companies.

This brings us to the election

in 2008. I expect Hillary Clinton will win the presidency, but it will be a close race. The Republicans will put up Giuliani or Romney. I give either one a 40 percent chance to win, with the slight edge to Romney because his message goes further than 9/11, 9/11, 9/11.

I consider Hillary a net positive for business. Like Bill, she knows that her presidency depends on keeping both Wall Street and Main Street off her back. She will have the political moxie to navigate a partial withdrawal from Iraq of American troops.

Nobody knows what to do about Iran and its nuclear program. The Israelis may attack before George Bush leaves office, but I doubt it. I think Iran will get the Bomb and then will be stuck with the dilemma that every nuclear bomb-own-



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ing country has. If you ever use it, you will take incredibly awful casualties yourself. The North Korean blackmail strategy worked for them for awhile, but even weird Kim seems to have concluded that making nukes is not worth the hassle.

As I look out six to 12 months, I want to consider the wild cards that could screw up everything.

The biggest one on my radar screen is political and economic turmoil in China. I think the Beijing Olympics will be the signal event of '08. The country has pointed toward it for a decade. They have kept the freedom genie bottled up and the credit collapse ogre in his cage, but eventually they will escape. It could be in '08, or 2010, or 2012, but it is going to happen and it will affect everybody's world. Today's Wall Street mess is small potatoes compared to an implosion of Chinese financial institutions, which have the transparency of mud.

Another wild card would be a wave of protectionism sweeping an overwhelmingly Democratic Congress. I consider this a long shot because I think Hillary Clinton would quell it with her strong ties to Wall Street, but it is something to watch. It's nothing to worry about for at least two years.

My last wild card is that the Chicago Cubs win the 2008 World Series, exactly 100 years since

their last one. I'm not so crazy to predict it, but in my bones I know it's going to happen.

Peace.

As I write this piece, writers in

Los Angeles have shut down *Grey's Anatomy* and *Two and a Half Men*, stagehands in New York have shuttered Broadway's *Lion King* and the UAW has ratified contracts with GM, Ford and Chrysler.

Is Organized Labor getting more aggressive or laying down? Is Labor waiting for Hillary to win the presidency or taking the offensive now to assess its current vigor?

In the industrial world, Labor is probably the weakest it has been in 70 years. The settlements made by the UAW recently were intelligent retreats orchestrated by Ron Gettelfinger and his inner circle. Those agreements were narrowly ratified by the rank and file. The deal set up a two-tier wage structure, similar to what it took Caterpillar a multi-year strike to obtain with its workers.

Today the UAW is a shell of what it once was, but at least it is still breathing as are the once-mighty Big Three. The breathing is an asthmatic wheeze, but it offers a hope for

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From my observation point the possibility of an American automotive rebound is higher now than I have seen in 30 years. With a \$1.50 euro a Benz or a BMW are now ridiculously expensive.

Toyota is reeling in America from defections of top people and quality slippage. Nissan's resurgence has stalled and Honda has me-too styling.

GM and Ford, amazingly, have hot cars today and are hiring top shelf talent. It's too early to evaluate the new private Chrysler, but it is starting life with a competitive Labor contract and Toyota's former American champion, Jim Press, in the executive suite.

So the long negotiations within the UAW and then between the UAW and Detroit indicate a mammoth change in perception in tradition Organized Labor. In my interview with the Teamster's James W. Hoffa, I saw a similar realism

disguised by the window dressing of China bashing and Republican baiting. Hoffa sees himself as the CEO of a big business. UPS is his biggest client and he is determined to keep them satisfied. FedEx is the client he covets. If he cripples UPS he has no chance of winning the other big one over.

Where Labor is strong and getting stronger is in services – hotels, hospitals, government and teachers. A hotel or hospital can't move to Mexico or China, so globalism has little effect on their business. If the immigration crackdown continues to bite, the low wage bed makers and orderlies will be harder to find, strengthening the hand of workers and unions.

Unions representing knowledge workers like writers, therapists, programmers and animators are going to be fascinating to watch. In the information service-based economy they are the critical talent that differentiates the product. If Big Business disregards their contributors, they may be inclined to organize and strike. In a world where the private contractor is the model du jour we might also see the union movement totally rejected by knowledge workers. My guess is that we will see hybrid organizations that negotiate association health care plans while workers increasingly see themselves as individual entrepreneurs.

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Gwendolyn Bounds wrote an

excellent article in the November 6 *Wall Street Journal* about a support group for entrepreneurs in New York City. The group meets weekly and enables its members to vent about their lives – personal and professional – to people who share many of the same issues.

The sessions have strict rules regarding feedback, advice giving (frowned upon) and judging.

I was in a similar kind of support group for 10 years – though it was not specifically aimed at entrepreneurs. It's defining element was that the members had to be adult men, but the ground rules were similar.

All the guys in the group (it varied from six to 12 people) had gone to a retreat called "The Men's Room" for two days and nights in Wisconsin. The retreat was run by a psychologist and social worker who tried to draw out each man's most salient lurking psychological issues not for instant resolution, but to let each man know he was not alone with his fears and doubts about himself.

I found it a powerful and lingering emotional experience and I wanted it to go on. The support group was the vehicle that a small group of the retreat's participants chose to keep the momentum going.

The men in the group became confidants, sometimes friends, and validators of each other's authenticity within the group. I learned a lot from those guys, and having a planned time away from my wife and children to just share with other men was an energizing and cleansing experience.

The group had one significant problem. It had no professional leader. We had guidelines, but over time we began to stray, particularly from the "no advice giving" structure. Eventually people moved, or moved on, and the core group dissipated. I joined another group of Men's Room alumni, but I never clicked with their chemistry. After 10 years of bi-weekly Sunday night meetings I pulled out, much the wiser for the experience.

I know there are groups of this kind around the country. Check it out.

he could synthesize one thing which had enabled him to be successful in business.

He said one word: "procrastination." He then went on to say that he withholds judgment and action if a decision is a close call – as most important decisions are.

He said that he had found most people made decisions before they had crucial information which could affect the call. He said the most important point in making a decision is understanding that in most cases, there is no virtue in making them sooner than you have to make them. When you wait for more information to come in, you find that many decisions that seemed hard to make ultimately make themselves because the answer is revealed to you.

I find that I often feel impelled to make a decision because of anxiety or social pressure. If I just step back and look for more data or seek out advice, hard choices tend to get easier.

I often cite Reinsdorf's story when a tough issue comes up. Unfortunately, there are times when additional input still leaves me in doubt. Some calls are fuzzy 50/50, flip a coin toughies.

I asked Reinsdorf about that. He said that in those cases you make a choice and then do everything you can to make it the correct one. The commitment to the choice is often crucial to making it work for you.



For many years I've been a student

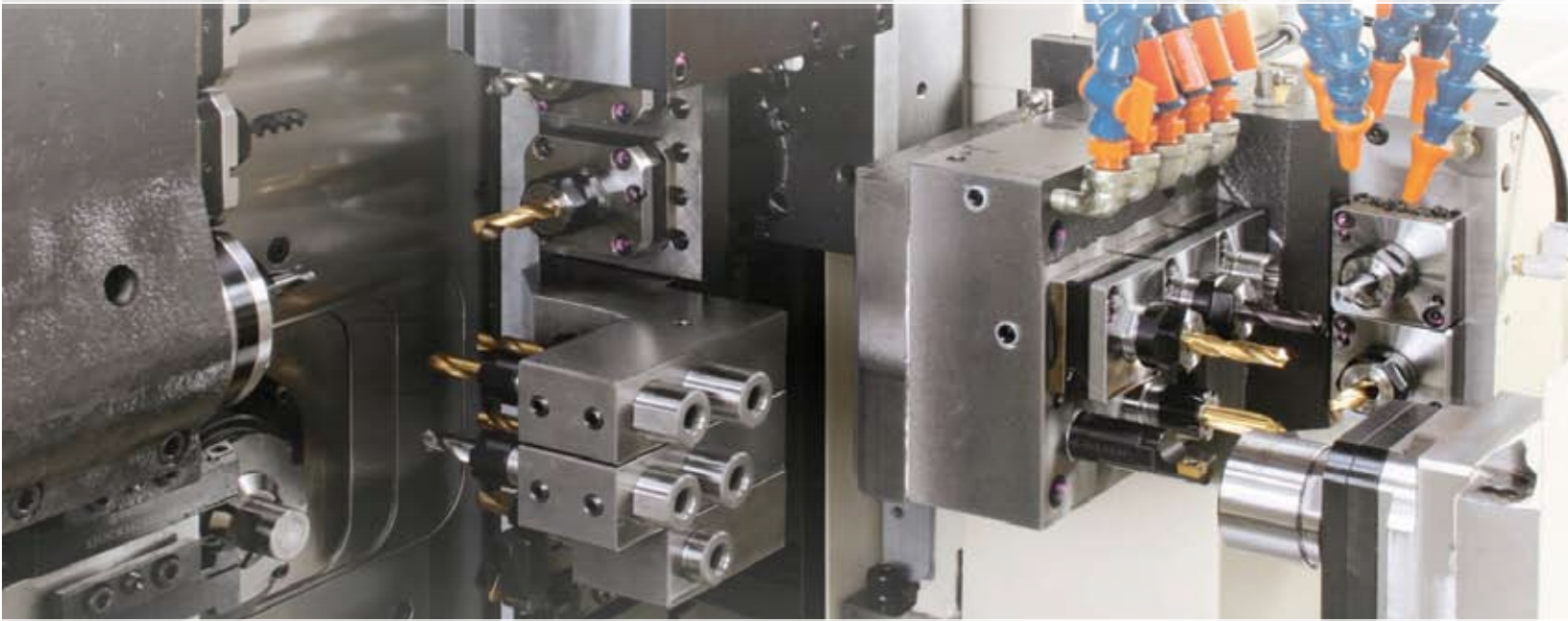
of decision making.

One of the most cogent explanations of effective decision making I've heard came from Jerry Reinsdorf, the managing partner of the Chicago White Sox and the Chicago Bulls of the NBA.

I met Reinsdorf at a family business organization luncheon where he was the guest speaker. I asked him if

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BY ROBERT STRAUSS

It's Not About The Truth

The library in the high school was filled, and parents and kids were overflowing in the hallway. There probably had not been such a crowd for a school board meeting in decades. The town citizenry in Haddonfield, New Jersey had, unprecedentedly, rejected the school budget for the second straight year. This meeting, though, was about something apparently more important than fixing the school's air conditioning systems or getting a new foreign language teacher or keeping the third-grade classes under 25 kids.

It was about lacrosse. Our middle-class school system has poured out athletes over the last decades, and Haddonfield has won the Shop Rite Cup every year for winning the most state or regional championships.

Lacrosse, formerly a sport mostly reserved for elite prep and upper-class schools, seemed a new bastion to conquer. Despite the rejection of a bare-bones school budget, dozens of parents were petitioning the school board to ante up for new programs in lacrosse for boys and girls. My daughter, like many of her friends, had been playing club lacrosse, and now constituted a brigade of web-sticked, mouth-guarded, knee-padded, and helmeted advance guard, ready to make lacrosse the next in line of Haddonfield sports legacies-to-be.

Lacrosse is booming despite the scandal at Duke University last year. That Duke case centered around an exotic dancer accusing three male Duke lacrosse players of sexually assaulting her at a party at their team captain's house in March, 2006. They had hired her, along with another woman, to do a strip tease at the party. Though the players acknowledged underage drinking and hiring the women to strip, the rape charges were later dropped when the woman changed her story several times. Michael B. Nifong, the district attorney who pursued the case, was fired and disbarred. The team was disbanded for a year and its coach, Mike Pressler, was dismissed.

Pressler has written a book with former *Sports Illustrated* editor Don Yeager, *It's Not About The Truth: The Untold Story of the Duke Lacrosse Case and the Lives It Shattered*. It is, unfortunately, a book well worth avoiding. The whole Duke story is a lose-lose. The players may not have been rapists, but they certainly don't seem like pleasant folks, even given

Pressler's personal spin on the story. They do seem like privileged louts, circling the proverbial wagons any time someone speaks the least bit ill of Duke lacrosse. They gave loud parties, drank illegally, disrupted the neighborhood and generally abused people who didn't like their jockiness.

They were winners on the field, though, and Pressler liked that. Many got good grades and were headed for good, high-paying jobs after their college careers. They even got the Mike Krzyzewski Seal of Approval – the legendary Duke basketball coach's daughter being one of Pressler's wife's best friends.

Ironically, it seems the publicity surrounding the whole Duke mess has only enhanced lacrosse's profile, and more among newbies than its core elite school cadre. The National Federation of State High School Associations reported that lacrosse is the fastest-growing high school sport in the U.S., with 2,604 high school teams in 2005, more than three times the number 10 years before. Only 10 states had their own lacrosse associations in 2000; now 17 do, including football power states such as Georgia, Michigan and Florida.

"When I was being recruited, there was no Duke, no Georgetown," said Dave Pietramala, the coach of the Johns Hopkins men's lacrosse team, national champions last year. Pietramala went to Johns Hopkins after growing up in the lacrosse hotbed of Long Island and was the national collegiate player of the year in 1989. "There was no Denver and Albany State. Lacrosse isn't just an elite sport any more. State schools have it. Kids from Colorado and Michigan play it. It's a perfect compliment to football and soccer, and schools like that."

When my older daughter was in 5th grade, we were at a

Comments? You can email Robert Strauss at rsstrauss@comcast.net.

high school girls basketball game and she leaned over to me, saying, “Daddy, I am going to play tennis in the fall, basketball in the winter, and crew in the spring in high school.” Basketball I could understand, as she’d been playing in the biddie leagues for a couple of years. Tennis, maybe she had picked up a racquet once, but crew? Where did that come from?

It basically came from the vast array of sports available to girls these days that were not – or at least not in such propensity – just a generation ago. My wife laments that “sports” in her suburban Detroit high school in the 1980s pretty much meant cheerleading. There were some girls sports, but few among the school’s hip and trendy played them.

Now the jock girls are the popular girls, playing in the big stadiums with extensive local newspaper coverage. They are getting lots of college scholarships, too.

“There really is an upsurge in what we like to call the ‘Olympic’ sports, men’s and women’s on a relatively equal footing,” said Michael Karwoski, the associate athletic director at Notre Dame. Karwoski is the head of compliance, the guy who makes sure his school doesn’t break any rules when recruiting. It used to be football, basketball and ice hockey were the vast bulk of recruiting time at Notre Dame, but now Notre Dame has 26 varsity teams, with 700 students on them.

Judging by the growth of lacrosse, there are more sports to play and more kids playing them in high school and college – and more of them are girls. The National Federation of State High School Associations said that 7.2 million children played high school sports in 2005-06, an 80 percent rise from the 1971-72 school year. And 80 percent is fueled by girls’ participation.

On the college end, while male participation in NCAA sports increased 23 percent from 1971-2001, when Title IX, the legislation demanding the end of sex discrimination in sports, passed, until 2001, women’s participation went up a whopping 403 percent – from 30,000 to 151,000 college athletes. Yet only 26,000 more women participated in the five years since then.

“There is still an equalization going on,” said Mike Lane, the women’s crew coach at the University of Pennsylvania. “More big schools are seeing the necessity to have women’s teams in many sports. This year, for the first time, I am recruiting against the University of Alabama. Crew in Alabama? It is just a case of womens’ opportunities becoming greater everywhere.”

Some traditionally regional sports for girls are becoming

more standard in other parts of the country. Field hockey, for instance, was primarily a Northeastern game, and when girls wanted to play in college, they primarily looked to Ivy and other Northeastern schools. Now, among the powers in collegiate field hockey are the Universities of Michigan, Iowa, North Carolina and Virginia. While they still primarily recruit from places like New York, New Jersey, Pennsylvania and Maryland, they have given interest to programs in Southern and Midwestern high schools that, prior to the last decade, wouldn’t have known a field hockey stick from a pitchfork.

A lot of the impetus for this expansion into girls sports is from larger universities looking to equalize their football program numbers to meet the requirements of Title IX. Each crew boat with a coxswain takes nine girls, while a field hockey or lacrosse team can bring in 20 or 25 girls. Swimming, tennis, and gymnastics teams have dwindled, since they usually have fewer athletes. Men’s Olympic sports, particularly those with big numbers, have felt the negative pressure of Title IX, as they are usually sacrificed to keep football numbers higher. Wrestling, men’s crew and soccer have suffered, even while the women’s equivalents have prospered.

This filters down to the high school level, especially where those minor girls sports did not even exist before. Lacrosse in Colorado; crew in Chicago; soccer in Texas; field hockey in South Carolina, these are places that didn’t offer girls the opportunity to do more than a sport or two a season, but now have them competing for college scholarships.

Two years ago, Camden County, N.J. built a big boathouse on the Cooper River, where my daughter, now a coxswain for Haddonfield High and the South Jersey Rowing Club, rows out of. There are at least five other high schools, only one a Catholic prep school, rowing out of there as well. The starting line for the longer races is in Camden, the city with the lowest per capita income in the country. Clearly, if rowing has the image of privilege, we in Camden County don’t see it that way.

Yale and Princeton may still be rowing through the Ivy, but when I went to the collegiate nationals on the Cooper this year, there were Tulsa and Wisconsin and that NCAA Final Four darling George Mason, public schools all, from the Southwest, the Midwest and the South. A record 52,004 fans attended the doubleheader for the national men’s semifinals in NCAA lacrosse this year in Baltimore, the largest crowd ever to see a college lacrosse game.



Here, Kita Kita (right)

Kitamura's new Bridgecenter-8F Double Column Vertical Machining Center offers #40 or #50 taper spindle options. Both configurations offer positioning accuracy of 0.000078" and repeatability of 0.000039". The design of the Bridgecenter-8F allows for a reduction in fixturing and set-up of parts. In addition, the Bridgecenter-8F offers the operator wide door openings and a table work area for loading and unloading of parts up to 98.4"L x 42.7"W x 30.3" in height.

On the #40 taper configuration, a 20,000 rpm, 4 speed gear driven spindle is standard for lighter cuts with fine-finish capabilities at higher speeds. The #50 taper configuration offers 3 spindle speeds (3,500 rpm, 6,000 rpm, 10,000 rpm) for heavy duty, high torque cutting. The Dual Contact Spindle design is standard on both machine configurations. The Bridgecenter-8F is equipped standard with high speed rapids of 945 ipm on the X, Y and Z axes. A 30 Tool upgradeable ATC is standard with a 2.8 tool-tool change time.

For more information, please visit Kitamura's website at www.kitamura-machinery.com.



Gibb or Tek (below)

Gibbs and Associates and Kubotek USA, creators of geometry-based KeyCreator® CAD software, announced they have teamed to develop integrations linking Kubotek's KeyCreator software with GibbsCAM. A newly developed one-button interface allows models to be sent directly to GibbsCAM from within a KeyCreator session with the touch of a single button. Additionally, GibbsCAM now has the ability to directly read models from the KeyCreator CKD file format.

Kubotek USA focuses on developing direct modeling CAD design tools that use geometry-based format. This empowers manufacturing engineers with the ability to modify and prepare designs for manufacturing, without having to repeat a structured or "parametric history-based" formal design process.

For more information about Gibbs and Associates, call 1-800-654-9399 or visit the company www.GibbsCAM.com.



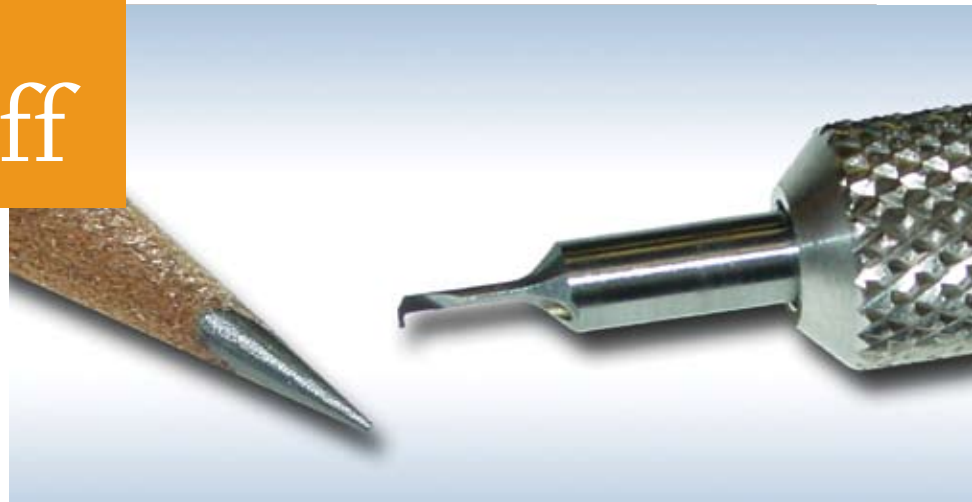
fresh stuff

Do the Jig (below)

Mori Seiki has introduced the JIG 1200 High Precision Horizontal Machining Center. The JIG 1200 provides axis strokes of 47.2" x 43.3" x 43.3" with a 49.2" x 39.3" table that is capable of supporting over 5,500 lbs. The JIG 1200 provides positioning accuracy of .99 mm

Precision maintained by the JIG 1200 requires nearly perfect flatness, straightness and squareness on and between all guide-ways and axes. To attain this, hundreds of hours of hand scraping are required during the final assembly process. The JIG 1200 contains a high output motor and No. 50 taper high-speed spindle with a maximum spindle speed of 12,000 rpm.

For more information, please contact Mori-Seiki at 847-593-5400 or visit www.moriseiki.com.



Bore-ing, Not Boring (above)

Genevieve Swiss Industries, Inc. has introduced the Multidec MICRO-BORE system. The boring bar incorporates an angled back that locates the bar less than .0004" against a positive location pin in the bar holder. Simply hand tightening a fine pitch threaded knurled nut applies the force needed against boring bar snap ring. The boring bar necks feature a multi-faceted surface for reduced harmonics. The MICRO-BORE system provides high quality internal machining operations including chamfering, spotting, threading, I.D. grooving and internal profiling. The solid carbide MICRO-BORE bars range in size from 1mm to 8mm. In addition, every boring bar and holder has thru-coolant capability. Different coatings are available to suit application requirements.

For more information, please contact Genevieve Swiss 413-562-4300 or visit www.genswiss.com/microbore.htm.



fresh stuff

It Ken Cut (right)

Kennametal has introduced KY4300™ ceramic, suited for aerospace parts-machining applications involving Inconel, Stellite, Waspalloy, Hastelloy, and other high-temperature alloys. When machining Inconel 718 you can increase speeds four to five times, according to Kennametal. It can be productive in the automotive industry, machining alloyed gray cast-iron brake disks, and in the roll products segment removing casting crust or heavily worn rolling surfaces.

KY4300 inserts are composed of aluminum oxide reinforced with silicon carbide whiskers. These whiskers possess high mechanical strength and act like reinforcing steel bars in concrete, improving the strength and fracture toughness of the cutting insert.

For more information, please contact Kennametal Inc. at 800-446-7738 or visit www.kennametal.com.



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Robotic Pal (below)

FKI Logistex has announced the launch of its new high-speed robotic palletizing solution. Robots use servo wrists to rotate packages. A multiple-robot palletizing cell may also be an alternative to traditional palletizing in facilities where floor space is at a premium.

The FKI Logistex high-speed robotic palletizing cell enables four-way orientation of cases. With full control of package label positioning, customers can easily showcase the same graphics on all four sides of the pallet, or orient barcodes to streamline scanning operations.

For more information, contact FKI Logistex at 877-935-4564 or visit www.fkilogistex.com.



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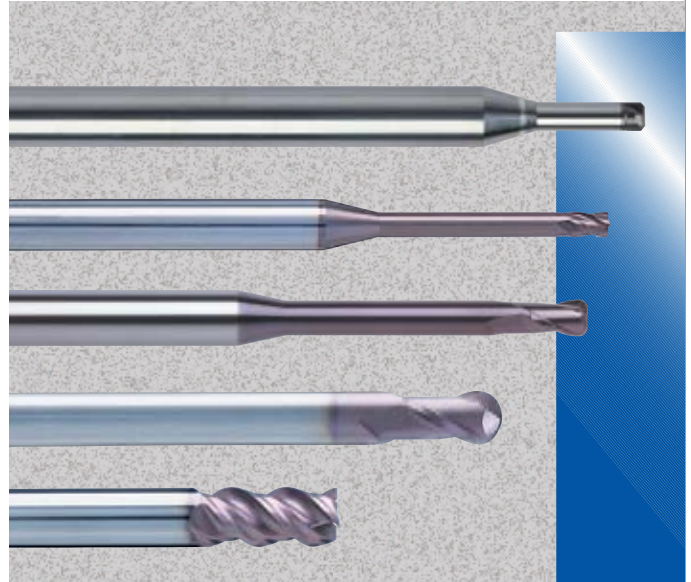
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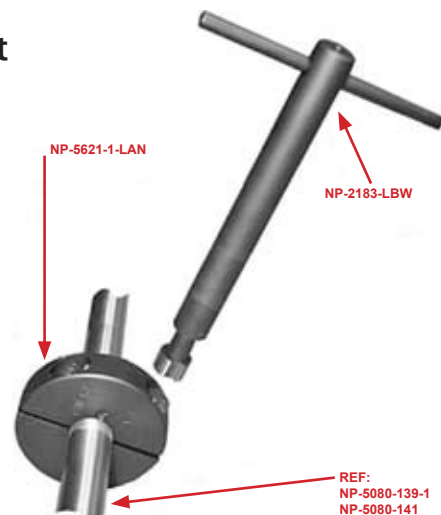
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Rail Away (right)

Pacific Bearing® Company has added the Mini-Rail® Low Profile Mini-Slide to its family of Mini-Rail branded products. Mini-Rail Low Profile Mini-Slides, interchangeable with other manufacturers, are available in four sizes, have operating temperatures of -35C to 65C, and are resistant to corrosion, lubricants, fuels, dyes and weak acids. Material includes an HDPE carriage that has a UL 94 HB flammability rating, molded-in stainless steel thread inserts, and anodized aluminum rails. Like other Mini-Rail products, the Low Profile Mini-Slides are precision manufactured for overall best performance.

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An Interview
with
Economist

Gary Shilling

BY LLOYD GRAFF

Gary Shilling, the noted contrarian economist, predicted the Internet bust in the late 90s, and the recent housing depression. He believes China is at the same point today that Japan was at in the mid-1980s.

LG: Gary, I have watched you numerous times on TV, and you're always telling us news we don't want to hear.

GS: Guilty, Your Honor, with an explanation. One of my long held principles is to add value in this trade by finding something out there that's nowhere else, strange and exotic. In other words, the consensus view of the world in my [opinion] is fully built into business plans and into markets, so rehashing the popular view doesn't add anything.

LG: I am running this interview in conjunction with our annual survey, which is primarily done with people who are smaller manufacturers in the metalworking field. Tell us what you think will be the effect of this housing downturn or depression in the real world our readers live in.

GS: Of course, it's housing itself, and there are a lot of manufactured products that go into houses: copper tubing, appliances, hardware, fittings, fixtures, a huge number of manufactured products in construction. Then there's the bulldozers that prepare the site, the saws and drills and all the hand tools that go into building the house. Our estimates are that we now have two million extra houses in the country. I think within the planning horizon of most manufacturers in this area, they ought to be looking at a pretty subdued picture. That's only the start, because the next step is the rollout to other consumer spending areas. On average, people have reduced their saving rate a half percent a year, which means their spending has grown a half percent a year faster than their after-tax income.

LG: Do you see the housing disaster spreading across the gamut of the American economy?

GS: I think so, because we're not only seeing this affect the sub-prime slime, but all of housing, and that's happening because of the credit crunch. Even the jumbo mortgages, those over \$417,000 which cannot be bought by Fannie Mae or Freddie Mac, are affected.

LG: So what's the good news, Garry?

GS: I think the good news is a lot of Midwest manufacturers have been conservative with their finances. They have strong balance sheets. They have not gone wild on borrowing and expansion. They're probably better positioned to handle what lies ahead than some mortgage lender who's now filing for bankruptcy.

"I think the good news is a lot of Midwest manufacturers have been conservative with their finances."

If we're right that the downturn leads to mild deflation, we'll probably see 3 percent yields on long Treasuries versus 4.9 percent today, and the shorter rates will be comparably lower. Commodity prices have been run up by two factors. One is global economic strength. The second one is all these pension funds and balance funds and so on were told that commodities are an investment class, so they invested very heavily in that and pushed up commodity prices. If you look at non-ferrous metals today, in a lot of cases they are selling at twice the cost of reproduction. So I think increasing supply is going to devalue commodity prices tremendously, and that certainly does work to the advantage of users.

LG: Where does China play into this?

GS: China is very interesting. A lot of people think China is the growth engine of the world, and that consumer attitude is what we saw in Japan in the late 80s. That was one of the reasons we then came out with a well publicized forecast that Japan was going to enter a depression, which they literally did, as you know, in the 90s. What we now see with China is what we saw for Japan in the late 80s. If you remember back then, people thought everybody would be working for a Japanese company or run out by one, and that to me was one of the signs that something was going to happen.

LG: I remember Crichton's book, *Rising Sun*.

GS: Yeah, you've got it. I think China is the same today. Our analysis of China is that, yes, they are industrializing; they're moving ahead, but there's a couple factors to consider. One is that their use of a lot of raw materials today is over exaggerated because they're doing manufacturing that was previously done in a lot of other places – Europe and North America, in particular. In other words, it's not really net new manufacturing activity. It's simply moving it to one area of concentration in China, where it's very visible to everybody. Beyond that, we're convinced that China does not have a big enough middle-class to sustain domestic growth yet. I think the biggest gain from the industrial revolution was the development of middle-class. Before that the guys on top had infinite wealth and were actually big savers despite their fabulous lifestyles, and the guys on the bottom had nothing; they spent everything but they didn't have anything. The reason I say the guys on top were big savers is because that was the era of mercantilism; that was the era when everybody wanted to export to everybody else, and what they wanted in return was gold. Japan and now China are marketing to us the same way. They don't want gold, they'll take U.S. Treasuries. But it's the same policy.

Another thing that's important about China is that they're building capacity helter-skelter. It takes a lot of steel and cement to build steel and cement plants, and that's what's going on there. The government is very aware of this; they're trying to slow it down. But the point is when this whole thing breaks, they're going to end up with a lot of excess capacity and no one needs to build any for quite some time. Direct foreign investment



will dry up; exports will be under pressure. I think in a few years or up to a decade China will end up just like Japan did in the 1990s and into this decade.

LG: When is it likely that the Chinese buying to build infrastructure will abate? Do you think it will be after the Olympics?

GS: That's an interesting point. If we're right and the U.S. is close to or maybe is already in a recession, I think it will affect China before the '08 Olympics. Next year things could look pretty dicey. Maybe it won't really be apparent until after the Summer Olympics, but that would be an added reason for China to take a nose dive.

LG: Do you look at politics as being a part of this?

GS: Yes, a little bit.

LG: Why have things have been quiet politically in China since Tiananmen Square in 1989?

GS: Number one, they've got a combination of a free economy and a very highly controlled political structure. Number two, they are trying to look very good going into the Olympics. To cut down on pollution in Beijing today, if your license plate ends in an odd number, you get to drive on Monday, and if it's even, you get to drive on Tuesday. They're also trying to keep political dissent down and corruption down by resorting to their age old practice of simply shooting people when they are convicted of corruption. By the way, the family pays for the bullet. It's a very interesting strategy.

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LG: What do you mean?

GS: If a young executive is convicted of embezzlement, he's executed by shooting him in the back of the head, and they send a bill to the family to pay for the bullet that was used to shoot him.

Another factor of course, is that China has had this rapid growth and rapid growth covers a multitude of sins. They probably need 5 percent or 6 percent growth now just to keep even with the number of people moving from the hinterland to the coastal cities. Their economic growth of 11 percent a year is going a lot beyond that, and the government is concerned, I think rightly so, that it's building too much excess capacity.

LG: Is the world economy more dependent on Chinese growth than it is on American consumer spending?

GS: No, not at all. I think it's exactly the reverse. You start with a spendthrift American consumer and the rest of it pretty much unfolds from there. I just don't see that independent growth. There's no question that the urbanization of China is an important factor, and all the growth takes place to accommodate the people streaming in from the countryside. But you ask, "What finances that? What allows it to happen?" Again, the prime mover in my estimation is exports directly or indirectly to the U.S. consumer.

LG: In a recent article in the *Wall Street Journal* they talked about the shift in the U.S. trade deficit from the huge deficit that the United States is currently running to either breaking even, or the U.S. actually running a surplus. Do you think this is a trend? Is this something we should look forward to or be afraid of?

GS: Both, because what's happening is that the U.S. economy is decelerating, and that means the growth in everything is subdued, including imports. For every 1 percent growth in GDP, imports grow 2 percent to 3 percent. So as the economy grows more slowly, imports are affected with a multiplier. That is happening at the same time that exports are still strong. But that's only a timing issue, because if we're right that there's a usual six-month lag between the U.S. slowing and the rest of the world, then the rest of the world will catch up. It's not what you would hope. You would hope that the trade gap gets reduced by the rest of the world buying more of what we have on a long-term basis as opposed to us buying less of what they're selling. But so far, and I think into the next couple of quarters, it's going to

be a matter of softer U.S. growth in imports as opposed to strength abroad.

LG: So if you're correct and things are potentially going to get as bad as you think they're going to get, what should we do? Should we sell all of our stocks? Sell our companies? Invest in long-term Treasuries and hide under the bed?

GS: Well, you never want to bet the ranch on any one forecaster's strategy because there is that slim, remote, infinitesimal, tiny probability I'm dead wrong, and I have been. I would certainly run a business with extreme caution right now.

LG: Do you own your own home? From a strictly rational point of view, do you think it's smart to own your own home?

GS: I do own my home, but it's probably not [smart]. My wife and I bought our place in 1968. We raised our four kids there. I've got the pride of homeownership. I do everything; clean the gutters, trim the trees, mow the lawn. I'm also a beekeeper. So I'm not rational at all on this. But I think a rational individual, and I know a few who've done this in the last couple of years, would sell their house and rent.

LG: Is it difficult to get work when you're constantly bringing people bad news?

GS: Good question. Obviously what we do doesn't appeal to everybody, and there's no question that our clients tend to be people who have similar views. Ours at least are sympathetic or have a very open mind and want to hear all sides. Of course, there are a number of those people around that were able to do well. I'm regularly on CNBC every week on the *Larry Kudlow Show*, and he always has me debate bulls, and there are people who, in my view, just deny reality and now they're sucking a lot of wind because they said, "Oh, this sub-prime thing is a tiny confined area."

LG: Are you a positive person?

GS: Oh, I hope so. I'm still alive.



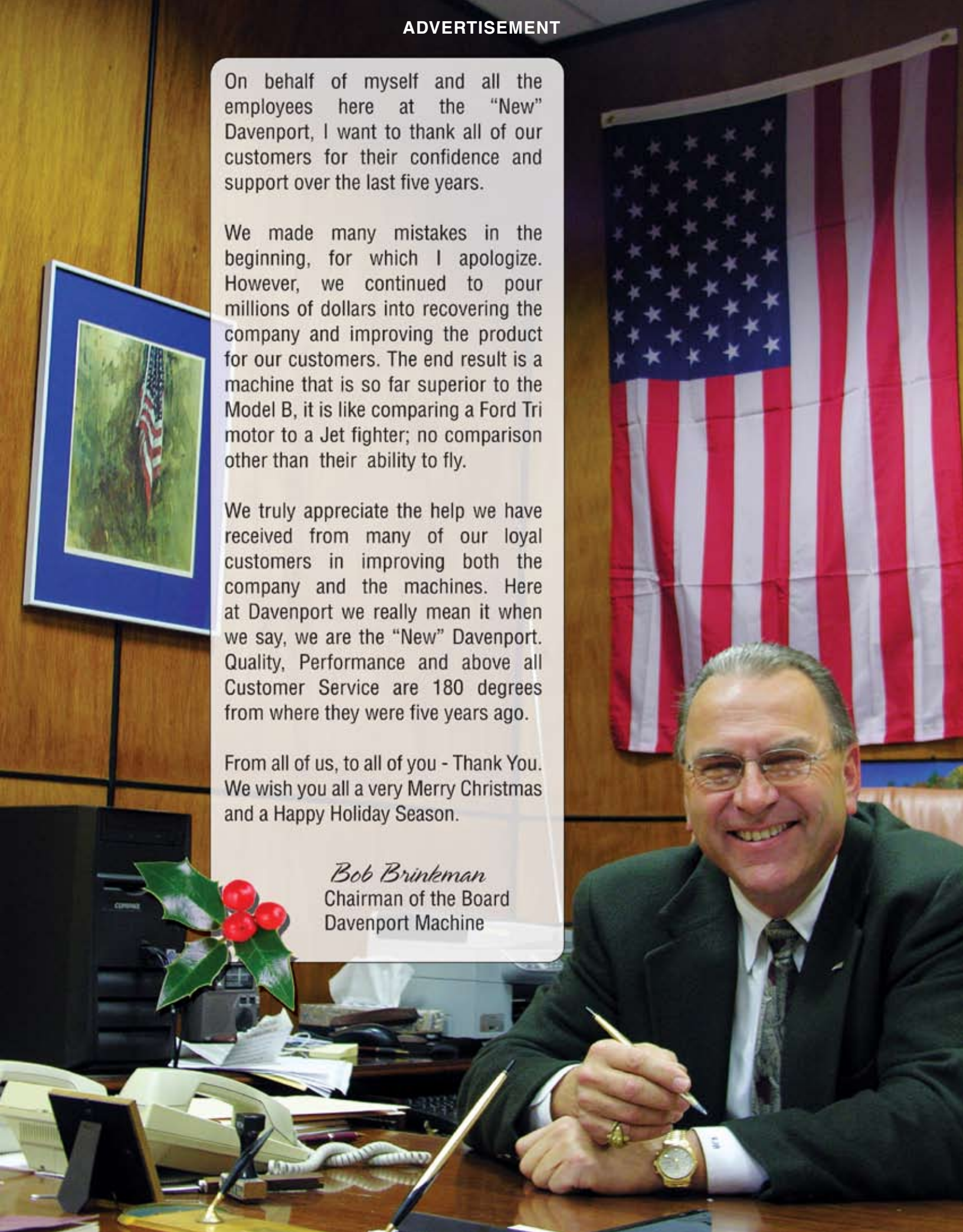
On behalf of myself and all the employees here at the "New" Davenport, I want to thank all of our customers for their confidence and support over the last five years.

We made many mistakes in the beginning, for which I apologize. However, we continued to pour millions of dollars into recovering the company and improving the product for our customers. The end result is a machine that is so far superior to the Model B, it is like comparing a Ford Tri motor to a Jet fighter; no comparison other than their ability to fly.

We truly appreciate the help we have received from many of our loyal customers in improving both the company and the machines. Here at Davenport we really mean it when we say, we are the "New" Davenport. Quality, Performance and above all Customer Service are 180 degrees from where they were five years ago.

From all of us, to all of you - Thank You. We wish you all a very Merry Christmas and a Happy Holiday Season.

Bob Brinkman
Chairman of the Board
Davenport Machine



2008 Annual Survey & Forecast



The *Today's Machining World* annual survey conducted early November of 2007 indicated surprising confidence in the machining and manufacturing segments of the domestic economy, considering the onslaught of doomsday predictions descending from the popular media.

The survey was conducted by Irwin Broh & Company of Des Plaines, Ill., using randomly selected names plucked from the *Today's Machining World* subscriber ranks. Broh sent out 2,500 questionnaires and received a 20 percent response rate. The respondents received no money in the survey envelope, and the replies were anonymous. According to the data, 95 percent of the respondents personally buy, specify or recommend their firms' purchasing.

The survey simply asked whether 2008 sales volume would exceed that of 2007. A resounding 54 percent answered "yes," 31 percent answered "not sure," and

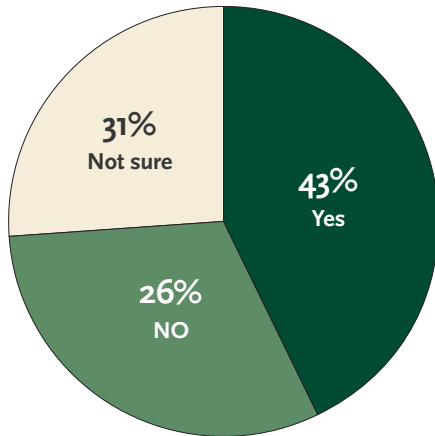
only 15 percent said "No." The respondents were heavily weighted with job shops having an average sales volume of \$5.3 million, located all over the United States. This tally is a strong reflection of confidence in the American manufacturing sector. I find this number particularly shocking because of the drastic downturn in residential real estate and construction. Tons of machined parts go into a house or condo. The predicted fall in real estate values is expected to cramp home equity loans and car purchases, yet the primarily job shop owners answering the *TMW* survey affirmed their optimism in their own businesses.

One of the problems that the economists or pundits have is that they tend to disregard data that does not jibe with their preconceived biases. As a humble scribe and machinery peddler, I suggest we consider that the manufacturing economy may be a little better than the negativists expect.

BY LLOYD GRAFF

Hiring expectations

About two out of five respondents indicated they plan to add employees in 2008.



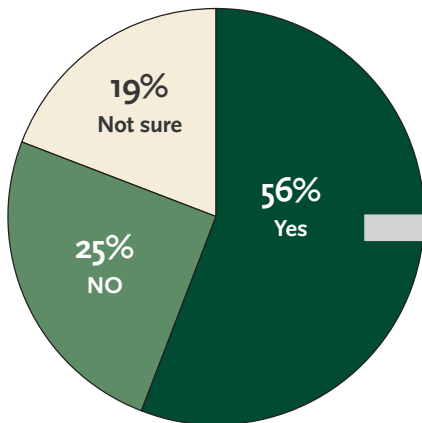
Our readers are in the market for machinery, with 42 percent planning to purchase CNC lathes next year and 36 percent looking to acquire CNC machining centers. More than a quarter of the respondents expect to purchase a CNC Swiss lathe. Almost 40 percent think they will buy a piece of inspection equipment, and with 23 percent of respondents saying they will buy training, it is understandable that the major machine tool builders are spending on tech centers, training seminars, courses and webinars.

I was a bit surprised that 15 percent of the respondents are planning to buy EDM equipment. This probably means that the trend is accelerating for developing in-house tooling capability, even with the rising tide of CNC machining.

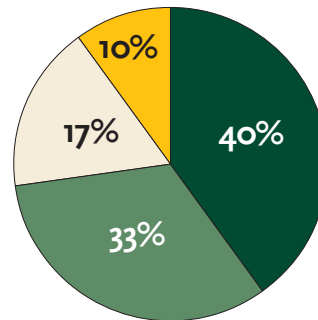
With all of the landmines threatening American

Estimate of 2007 sales volume Just over half of the firms expect their 2007 sales volume to exceed 2006 levels, primarily by 5-10%. Fewer than 1 in 5 of those expecting an increase project it will be an increase of 20% or more.

Has 2007 exceeded 2006?

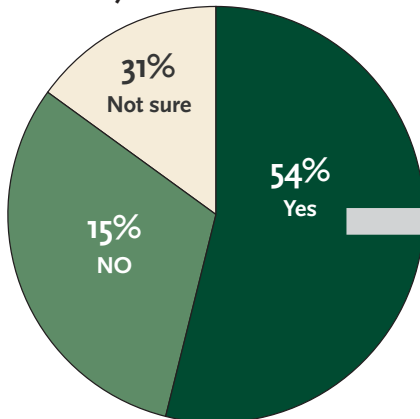


By how much?

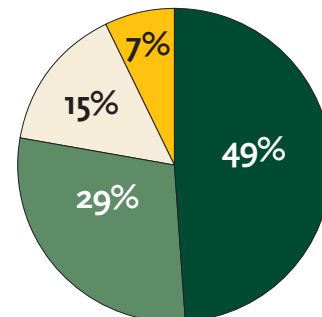


Estimate of 2008 sales volume Over half of the firms expect their 2008 sales volume will exceed that of 2007. Nearly half predict an increase of 5-10 percent, with only 7 percent expecting an increase of 20% or more.

Will 2008 exceed 2007?



By how much?



Percentage of Increase Less than 5% 5% to less than 10% 10% to less than 20% 20% or more

manufacturing firms, finding skilled labor once again surfaced as the top problem facing our readers. Almost two thirds ranked it number one or two on the list of woes. Health care costs were a close second at 61 percent. Foreign competition was the third most terrible issue at 38 percent. Our readers fear China, but they feel they can compete if they can recruit top people.

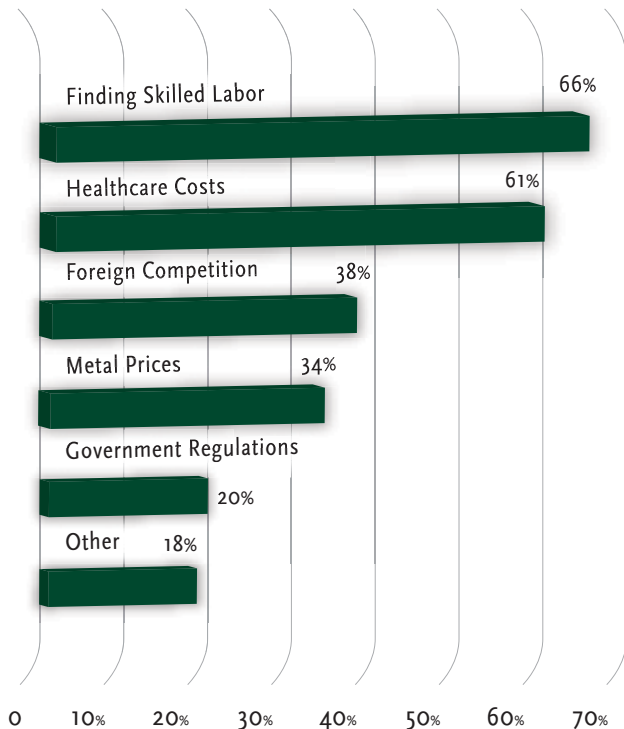
Today's Machining World has been doing this survey for four years. It gives us a glimpse of the attitudes and expectations of our readers, and we think it helps us get out of the bubble we live in daily – talking to the same people, reading the same media, and following our own shadows.

Our readers generally think '08 is going to be a good year. As a group they know a lot more than me.

They also read the magazine – 77 percent of the respondents. I know it is a skewed sample but 77 percent is an impressive number, even for free throw shooting in the NBA.

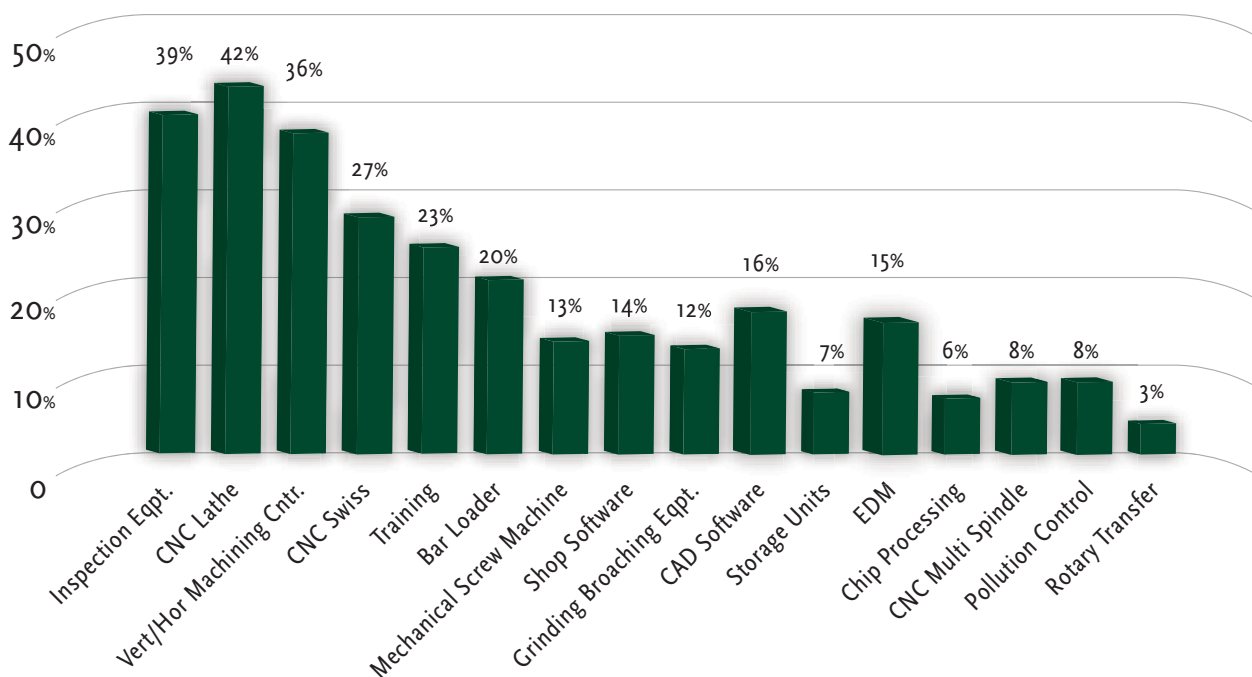
Issues of most concern:

Finding skilled labor is the issue respondents are most concerned with, followed by healthcare costs. The lowest concern is placed on government regulations.



Purchases Planned for 2008

Roughly two out of five respondents plan to purchase CNC Lathes, Inspection Equipment, or Vertical/Horizontal Machining Centers for their firm next year. The least likely purchase is Rotary Transfers, cited by 3 percent of respondents.





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1" 6-spindle, 1960-1992 (9)
1-3/8" 6-spindle, 1967-1979 (3)
1-3/4" 6-spindle, 1965, 1993 (10)
1-3/4" 8-spindle, 1970
2-1/4" 6-spindle, 1962, 1973-79 (3)
3-1/4" 6-spindle, 1982
5-5/8" 6-spindle, 1979
6-5/8" 6-spindle, 1979

ACMES

1-1/4" RA6, , 1974, thdg., pickoff
1-5/8" RBN8 - 1995-1981
1-5/8" RB8, 1980, rebuilt 2002. pickoff
1-5/8" RB8 thdg., pickup '68 (2)
2" RB6, 1979, Direct Drive Rebuild (2)
2" RB6 collet chucker, 1980
2-5/8" RB6- 1950, rebuilt

GILDEMEISTER

Gm-35, 1992

BROWN & SHARPE

#00 1/2", 1980

INDEX CNC MACHINES

Index 42mm ABC, '96

SCHUTTE

SF 26 DNT, 1989
SF 67, 1973
SE 16, 1968 (2)

SWISS-CNC SLIDING HEADSTOCK

Citizen L-20, 1998

NEW BRITAIN

Model 52, 1980, thdg.
Model 62 2-1/4" 6sp., 1975, heavy thdg.

DAVENPORT

3/4 Davenport, 1995
3/4" thdg., pickoff, longbed (4)
3/4" chucker, 1991 (4) Tamer
3/4" thdg., pickup, 1977-66 (8)

MISCELLANEOUS

Davenport slotting, 1950
Hydromat flanges for HW25-12
Reed B-18 thread roll attachment

Winter 125 thread roller

Davenport chucking package **\$1250**

Mectron laser measuring machine mfd. 2000

Trion air cleaner (10)

Ring-type for chucking for 1-1/4" RA6 (2)

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Elb 10x20 surface grinder

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HB45-12 1997-1995

HB45-16, 1987

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WITH NOAH GRAFF

shop doc

Today's Machining World's

*"Shop Doc" column taps
into our vast contact base of
machining experts to help you
find solutions to your problems.
We invite our readers to contrib-
ute suggestions and comments
on the Shop Doc's advice. If you
consider yourself a Shop Doc or
know a potential Shop Doc, please
let us know.*

**Have a technical issue you'd
like addressed? Please email
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com. We'll help solve your problem,
then publish both the problem and
solution in the next issue of the
magazine.**

Image: Fracture indicates all taps were screwing
into hole before breaking.
Possible causes: flute packing or wrong selec-
tion of taps for material
and material hardness.

Dear Shop Doc,

Our company has been processing a family of parts made from high strength, low alloy, 60 and 80ksi minimum yield steel plate. After laser cutting and Mig welding, we machine a series of holes using conventional drills, spade drills, boring bars and taps. The problem is we keep breaking taps of all different sizes, $\frac{5}{16}$ "-18, $\frac{3}{8}$ "-16 and even $\frac{3}{4}$ "-10. We have approached a number of industry representatives who keep moving the taps to successively more expensive versions intended for alloy cutting, but they don't solve the problem. In order to produce a good part right now, we need to destroy the tap that was in the hole, clean the hole out, weld it shut, and re-machine the hole by hand. As you can imagine, this issue is killing delivery performance and profitability.

Flummoxed in Fort Wayne

Dear Flummoxed,

We had a situation that sounds quite similar to yours.

Our local sales reps also offered expensive solutions that didn't work, so after enough grief, we finally got some advice from some technical directors at Kennametal and Emuge Corporation.

We sent our used taps back to Emuge and their technical director put them under a microscope to analyze their wear patterns and fracture patterns. The real reason our taps were being damaged was because when the tap was inserted, too many chips were collecting in the hole, or "bird nesting." When the tap was put in reversal mode, the bird nested

chips bound up the tap, broke the teeth, and caused the tap to snap off at its shank.

After this discovery, rather than recommending a more expensive tap, Emuge recommended a less expensive tap with a more aggressive chip removal spiral. We've been using the new taps for three weeks now. The bird nesting is gone and no taps have been broken yet. I have asked Emuge to send you some of these higher spiral taps for you to try. I understand that you have also provided Emuge with some sample plates that they can use to replicate your processes. I'll be quite interested to see the results from those tests.

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A continuing column in which we ask smart people to discuss their views on topics related to the future of business

next

BY NOAH GRAFF

In five years will a significant amount of cars be sold on the world market for under \$5,000?

India's Tata Motors plans to produce a small car that will sell for around \$2,500.



Concept Car by Indian automaker Tata Motors
Source: Autoblog Spanish

My general sense is no. The \$5,000 car is largely a pipe-dream and, even if someone like Tata Motors comes up with it, the market will be smaller than expected. To achieve this number would require major breakthroughs, both at the engineering and manufacturing levels, and probably require severe compromises in terms of safety and emissions (never mind a total lack of amenities). Some years back, Chrysler rolled out its CCV (China Concept Vehicle) prototype, with a tiny 2-stroke engine and plastic body, expecting that would set the Chinese market ablaze. In reality, while some bare-bones products are sold there today, China's consumers want cars more in-tune with Western products, and authorities are demanding safer and cleaner technology, not less. I expect India to follow the same pattern. So, while such a bridge vehicle might serve a purpose, I would expect it to never amount to much more than a niche segment.

Paul Eisenstein
The Car Connection

Nearly 75 percent of the growth of light-vehicle sales – or about 10 million units – over the next five years will be concentrated in the emerging markets such as China, India and Russia. Driving this growth will be what we call “basic transportation.” We expect basic vehicles to grow from sales of about 5.5 million in 2007 to 7.1 million in 2012. Of this segment, vehicles under \$5,000 are very minimal. Renault, through Dacia, offers the Logan at approximately \$9,000 and has had great success; they have also announced the desire to sell a \$2,500 car in India, but only if feasible. The key word is feasible! Toyota, General Motors, Hyundai and others are looking at lower cost cars as well. Our view is that the bulk of low cost car growth in the next five years will be in the \$5,000-\$10,000 range, but not under \$5,000. Beyond five years, this area may be more feasible.

Jeff Schuster
Executive Director of Global Automotive Forecasting
J.D. Power and Associates

Low Rides

Tata Motors' plans would produce, in real terms, the cheapest car ever made.

Car	Year introduced in U.S.	Horsepower	Price*
Model T	1908	20	\$19,700
Beetle	1956	24	11,333
Mini	1961	34	11,777
Tata Motors	2008	33	2,500

*Adjusted to 2007 U.S. dollars.

Source: Tata Motors; Ward's Auto World; Edmunds.com.

the facts:

The market for a sub \$5,000 car is not proven as yet, though income trends and demographics in key markets such as India and the interior of China hold great promise. Those entering the market for the first time or are driving 2- or 3-wheeled transportation presently are potential buyers. The global market for such offerings could reach over 1 million units per year by 2013. Low technology markets with less stringent safety and emissions standards are key for these offerings. Out-of-the-box thinking will enable makers such as Tata to skirt the usual infrastructure, and focus on cost effective development and vehicle build.

Michael Robinet
CSM Worldwide

Middle-class Chinese often spend more than a year's income for even a low-end car, and 89 percent pay in cash, according to J.D. Power and Associates. Businessweek.com

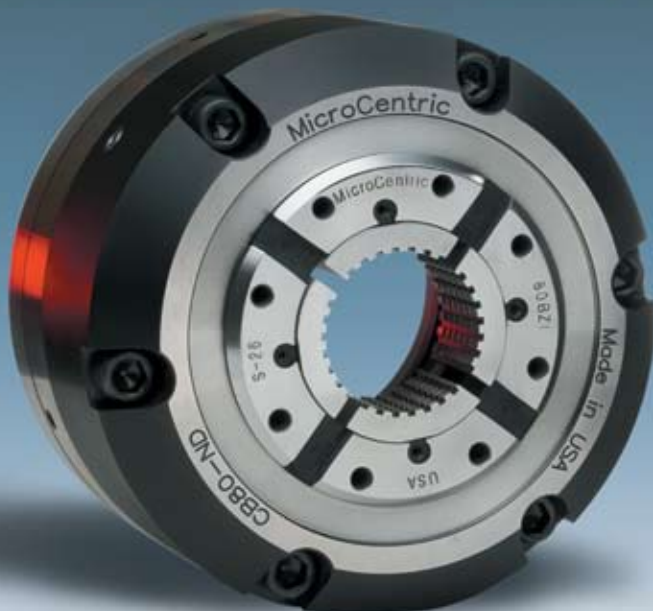
The number of private cars on **China's roads nearly tripled** from 2000 to 2005, rising from 6.25 million to 17 million. *China Daily* www.chinadaily.com.cn

Forbes.com \$2,500 is three times higher than India's annual per capita income. The average pay for factory workers at Tata Motors is \$5,500 a year. Forbes.com

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Author Sara Bongiorno attempted to go a year without buying anything made in China.

Sara Bongiorno and her family attempted to boycott Chinese products for one year. She documented this experience in her book, *A Year Without "Made in China."*

NG: What gave you the idea to boycott Chinese goods?

SB: It was about two days after Christmas at the end of 2004, and the toys and gifts from the holiday were all over the floor. I started picking them up and noticed that most of the stuff was made in China, then realized, as I looked around the room, that that was the case with so many of the other items in our house. I turned to my husband and said, "Hey, do you think that it would be possible for a family like ours to actually go a whole year without buying anything made in China?"

NG: Did you do this for idealistic purposes, or was it more of an academic experiment?

SB: It was just a practical experiment to see if it was even possible. I didn't do it for factory workers in China or American workers who have lost their jobs. I was in a way setting aside politics and a lot of the concerns that a lot of people have, myself included.

NG: What was the most difficult item to find?

SB: Electronics and toys were really difficult – any kind of small electric or household gadget. If you start looking at what's in your house, it's amazing if you see anything that has a phrase other than "Made in China" on it.

NG: Was there a time you thought a Chinese item was actually superior to that of an American one?

SB: I don't remember thinking anything was superior. But if you go to a typical store and you're looking for luggage or a cell phone, you will only find options from China. It's interesting because sometimes the trade statistics will say that there are other options out there, but I spent a ton of time looking for things and I don't know where they are.

NG: Did you spend more money that year than you normally do?

SB: I think in the end it was probably a wash. But that was because there were so many things we just couldn't buy because we couldn't find them. For instance, if we had dropped a cell phone and needed a new one, we would not have been able to buy one. We definitely spent more for things that would not have been in our budget otherwise. My son's sneakers were too small and after calling stores across the country [and not finding anything], I had to order shoes made in Italy from a catalog. With the shipping I think they were \$68.

NG: Your husband worked in France for the summer in 2005. Was it easier for him to find goods there that weren't made in China?

SB: There are a ton of things from China there, but you don't necessarily know what's made in China because they don't require labeling the same way we do. It's interesting because their [items] have very detailed information that says, "Complies with European Regulation Number..." But information on where they are actually made is [often] not provided for a lot of items.

NG: What's the most important thing you've learned from this experience?

SB: I think the overall lesson I took away from this was that even if you have a lot of concerns about trade policies and politics and human rights treatment in China, and of course lost jobs here at home, we're so far down the road that it's really impossible to back up. I'm not saying that there can't be corrective actions, but at this point we're interconnected with the rest of the world, specifically with China, and it goes down deep to the level of the individual consumer.

how it works

TMW's First Ever Best Chili Recipes

BY JILL SEVELOW

Chili. The word conjures a feast of the autumn senses for me, along with the smell of outdoor bonfires, the feel of my back after raking 14 bags of leaves, and the bi-annual “Changing of the Wardrobe,” where multiple extra-large plastic storage bins filled with bulky winter wear (we are a family of girls) are ceremoniously hauled down from the attic and swapped with spring clothes, which are then banished back to the attic ‘til the first serious thaw. To celebrate our wacky wardrobe escapade, there’s the first batch of chili.

I’ve learned to accommodate my vegetarian daughters, who are long on conviction but were short-changed for years in the “hearty” department, until I found a recipe using vegetarian crumbles – also known as soy – that gave the consistency of a fine, meaty chili. I go spicy – they are a little on the wimpier side, and scratch their heads at my obsession with a kick that can make you cry.



The Genesis of Chili

Chili, in all its glory and manifestations, is really just a spicy stew-like dish. The name “chili con carne” is Spanish for “chili (peppers) with meat.” Chili con carne is the official dish of the U.S. state of Texas. Texas may have given us George Bush, but at least they’ve got their gastronomical priorities in order.

Chasing the origins of chili isn’t easy – some websites say chili was invented in Mexico during the 1840s, as a replacement for pemmican, which is a traditional Native American food made with strips of lean dried meat pounded into paste, mixed with melted fat, dried berries and fruits; other sites place its origin in Tijuana, Baja California or Ciudad Juárez, Chihuahua, Mexico.

According to the “What’s Cooking America” website, the origins of chili did not originate in Mexico. In an article called San Antonio: An Historical and Pictorial Guide, San Antonio writer Charles Ramsdell said: “Chili, as we know it in the U.S., cannot be found in Mexico today except in a few spots which cater to tourists. If chili had come from Mexico, it would still be there. For Mexicans, especially those of Indian ancestry, do not change their culinary customs from one generation, or even from one century, to another.”

But the Mexican origin theory holds that it was created as

a complimentary dish served at cantinas, especially to please outsiders, who wanted something spicy and “Mexican” to eat, but also free or cheap. It was made with leftovers from the meals prepared in the cantina and served for free to drinking customers!

The Americanized version consisted of dried beef, suet, dried chili peppers and salt, which were pounded together and left to dry into bricks, which then were boiled in pots on the trail. An alternative theory holds that chili was born in Ensenada, Mexico in the 1880s as a way of stretching available meat in the kitchens of poor Tejanos, people of Hispanic descent born and living in the U.S. state of Texas.

A Little Spicy History

According to Wikipedia, in downtown San Antonio during the 1880s: “brightly-dressed Hispanic women known as ‘Chili Queens’ began to appear, building charcoal or wood fires to reheat cauldrons of pre-cooked chili, and sell it by the bowl to passers-by. The aroma was a potent sales pitch, aided by Mariachi street musicians, who joined in to serenade the eaters. Some Chili Queens later built semi-permanent stalls in the mercado, or local Mexican marketplace.”

However, in September of 1937 the San Antonio health

department implemented new sanitary regulations and the “street chili” culture quickly disappeared. But San Antonio’s mercado was renovated in the 1970s, and local merchants began staging re-enactments of the Chili Queens, and the “Return of the Chili Queens Festival” is now part of that city’s annual Memorial Day festivities.

If there is any doubt about what Mexicans think about chili, the Diccionario de Mejanismos, which was published in 1959 but still gets a mention, defines chili con carne as “detestable food passing itself off as Mexican, sold in the U.S. from Texas to New York.”

Famous Chili Calls

Will Rogers (1879-1935), popular actor, cattleman, banker, and journalist, called chili a “bowl of blessedness.” Will Rogers judged a town by the quality of its chili. He sampled chili in hundreds of towns, especially in Texas and Oklahoma, and kept score. He concluded that the finest chili (in his judgment) was from a small cafe in Coleman, Texas.

Jesse James (1847-1882), outlaw and desperado of the old American West, refused to rob a bank in McKinney, Texas because that is where his favorite chili parlor was located.

And Mrs. Lady Bird Johnson had “chili pangs” for President Lyndon Johnson’s, 36th President of the United States, “Pedernales River Chili” and had cards printed with the LBJ chili recipe.

Chili Association

There really is a Chili Appreciation Society International, Inc. Its mission is to promote chili and raise money for charity. They are involved in over 500 chili cook-offs per year and raise over \$1,000,000.00 annually for local charities. They also educate the public about the historic and cultural significance of chili – an indigenous American tradition. They are actually working for the adoption of chili as the National Food of the United States.

Corporate CASI puts on an annual Terlingua International Chili Championship, which, after expenses, contributes close to \$60,000 to charity. Good food for a good cause – CASI has got it right.

Scott Walker of Mitsui-Seiki has the first word on recipes: He says the secret ingredient for any chili is adding a chocolate bar to the batch. I like how he thinks.

CHILI RECIPES:

Flying Squirrel’s Holiday Valley Chili

Submitted by: Mike Vining
Mitisco Machinery Sales

“This recipe has evolved over the years after being served to visiting race officials and coaches for lunch at downhill ski races at Holiday Valley in Ellicottville NY. My son was nicknamed the Flying Squirrel after falling 12 feet from a chair lift while at Holiday Valley at the age of five into soft snow underneath. When he started ski racing, to his chagrin, the name stuck. We generally put a small sign near it that warns, ‘Not suitable for small children or wimps.’”

- 2 lbs** white beans or navy beans, soaked in water overnight
- 2 c** diced onions
- 2 c** diced celery
- ½ c** diced carrots
- 5 garlic cloves**, chopped well or pressed through garlic press
- Approx ½ c** or less vegetable oil, divided use
- Butter to add for sautéing
- 1 lb** or more of boneless skinless chicken thighs, diced (Breasts may be substituted)
- ½ c** white wine or dry sherry for deglazing
- 8 c** water with 4 tablespoons chicken base or for less salt, use **8 cups** home made stock or low sodium chicken stock
- 1** bay leaf
- 1 (7-oz) can** chopped green chilies
- ½ t** oregano, cumin, dry mustard, basil, Old Bay seasoning
- ¼ t** Cajun seasoning
- 1** pickled jalapeno, chopped
- ½ of 7 oz can** chipotle peppers in adobo, chopped w/sauce (secret ingredient – do not substitute.)
- ½ c** or more heavy cream

In a large stockpot, sauté diced salted chicken in some oil and a pat of butter. When browned on all sides, remove and set aside. In the same pan, sauté salted onion, celery and carrots in more oil and butter for 5 minutes or until onions are translucent. Add garlic in hot spot on bottom in center of pan and sauté for about one minute longer. Add oregano, cumin, dry mustard, basil, Old Bay, Cajun seasoning in center of pan for about 1 minute. Glaze with wine or sherry. Add reserved chicken and any juices and stir to coat with spices. Add chilies, water with chicken base or chicken stock, bay leaf, pickled jalapeno and chipotle in adobo sauce, and simmer for 1½ hours, stirring occasionally.

Add drained beans and simmer for 1 hour or more, stirring occasionally until beans are tender. Taste and adjust salt. Add

how it works

heavy cream and warm through; do not allow to boil. If allowed to cool and then re-warmed before serving, the chili will be a more traditional thick consistency. If serving immediately, before adding cream remove about 1 cup of the cooked beans, mash and add back with cream. Thin out with chicken stock if it's too thick when re-warming. Garnish soup with carrots strings and sour cream for wimps who can't eat spicy food.



Dorri J. Smith's Green Chicken Chili

Horst Engineering & Manufacturing
East Hartford, CT (Winner of Horst's 2nd Annual Chili Contest)

- 1 **T** olive oil
- 1 **large** onion, chopped
- 3 **cloves** garlic, crushed
- 3 (4 ounce) **cans** chopped green chile peppers
- 1 **T** ground cumin
- 2 **t** dried oregano or Italian seasoning
- 1 **t** ground cayenne pepper
- 2 (14.5 ounce) **cans** chicken broth
- 1 **can** water
- 3 **c** chopped cooked chicken breast
- 3 (15 ounce) **cans** drained white beans... mix them up (white navy's, black eyed peas, white kidney) whatever.
- 1 **can** black beans
- 1 **large can** diced tomatoes
- 1 **cup** shredded Monterey Jack cheese

Heat the oil in a large saucepan over medium-low heat. Slowly cook the chicken and onions until chicken is white. Mix in the garlic, green chile peppers, cumin, oregano and cayenne into it. Continue to cook and stir the mixture for about 3 minutes. Mix in the broth/water, beans and tomatoes.

Simmer 15 minutes or longer (good in crock pot on low all day too), stirring occasionally.

Remove the mixture from heat. Top with cheese if desired. Have a bag of "Tostitos Scoops" on the table – I use them instead of a spoon!!



2 Big Pots Men's Church Supper Chili

Miles Free, PMPA Director,
Industry Research and Technology

One pot for chili, one to make the spaghetti noodles to serve it over. This is always the first dish gone at men's pot lucks at my

church. This is a Cincinnati style chili. Easy to remember how to make - when in doubt, add two!

- 2- 2½ **lbs** ground chuck
- 2 large onions, diced
- 2 **large** green peppers (diced)
- 2 **cans** (14 oz) beef broth
- 2 **cans** (6 oz) tomato paste
- 2 **cans** (14.5 oz) crushed tomatoes (drained)
- 2 **t** Worcestershire sauce
- 2 **cloves** garlic (crushed)
- 2 **t** chili powder (two tablespoons if you like it hot!)
- 2 **t** unsweetened cocoa (or 2 pieces of baking chocolate)
- 1 **t** cinnamon
- 1 **t** allspice
- 1 **T** apple cider vinegar
- ½ **t** ground cayenne pepper
- 3 - 4 bay leaves
- 2 **boxes** spaghetti noodles
- ½ **t** olive oil
- 2 **bags** cheddar cheese (finely shredded)

Brown ground chuck in a large stock pot with 2 large diced onions and crushed garlic. Pour off excess fat. Add all the twos: two cans of beef broth, tomato paste, crushed tomatoes, chopped peppers, Worcestershire, chili powder, cocoa or baking chocolate. Bring to a boil, then lower to a simmer and add the ones: one teaspoon of cinnamon, allspice and vinegar. Throw in the bay leaves and the optional Cayenne pepper and simmer 2 hours. Salt and pepper to taste.

In second pot, boil water, add ½ teaspoon olive oil. Add spaghetti noodles. Noodles are done when one can walk down the wall behind the stove when thrown against it. Drain.

Place noodles in deep bowl. Ladle chili over noodles. Pile high with shredded cheddar. Serve with French bread torn into chunks. Goes great with an icy cold Molson Golden.



Jill's Vegetarian Chili

- 1 **tablespoon** olive oil
- ½ **medium** onion, chopped
- 2 bay leaves
- 1 **teaspoon** ground cumin
- 2 **tablespoons** dried oregano
- 1 **tablespoon** salt
- 2 stalks celery, chopped
- 2 green bell peppers, chopped
- 2 jalapeno peppers, chopped

(Continued on next page)

how it works

(Continued from previous page)

- 3 cloves** garlic, chopped
- 2 (4 ounce) cans** chopped green chili peppers, drained
- 2 (12 ounce) packages** vegetarian burger crumbles
- 3 (28 ounce) cans** whole peeled tomatoes, crushed
- ¼ cup** chili powder
- 1 tablespoon** ground black pepper
- 1 (15 ounce) can** kidney beans, drained
- 1 (15 ounce) can** garbanzo beans, drained
- 1 (15 ounce) can** black beans
- 1 (15 ounce) can** whole kernel corn

Heat olive oil in a large pot over medium heat. Stir in onion, season with bay leaves, cumin, oregano, and salt. Cook and stir until onion is tender, then mix in the celery, green bell peppers, jalapeno peppers, garlic, and green chili peppers. When vegetables are heated through, mix in the vegetarian burger crumbles. Reduce heat to low, cover pot, and simmer 5 minutes. Mix tomatoes into the pot. Season chili with chili powder and pepper. Stir in the kidney beans, garbanzo beans, and black beans. Bring to a boil, reduce heat to low, and simmer 45 minutes. Stir in the corn, and continue cooking 5 minutes before serving.



Old Bennington Vegetarian Chili

Barbara Donohue, *TMW* writer

- 2 T** olive oil
- 2 c** chopped celery
- 2 c** chopped peppers (red and/or green)
- 2 large** carrots, chopped
- 3 good-sized** onions, chopped
- 3 cloves** garlic, minced
- 2 large (28 ounce) cans** whole tomatoes
- 3 cans (16 ounce)** red kidney beans
- 1 T** chili powder
- 1 c** raisins
- ¼ c** wine vinegar
- Chopped leaves** from 1 small bunch of parsley
- 1½ t** basil
- 1½ t** oregano
- 1½ t** cumin
- 1 t** allspice (really!)
- ¼ t** black pepper
- ¼ t** hot pepper sauce (Tabasco)
- 1** bay leaf
- 1 bottle (12 ounces)** of beer
- 1 c** cashew nuts
- Grated** cheddar cheese

Heat olive oil in a large pot. Cook celery, peppers, carrots, onion and garlic until tender. Cut tomatoes in pieces. Add tomatoes, beans, raisins, vinegar and seasonings to the vegetables in the pot. Simmer, covered, 1½ hours. Add beer and cashews. Simmer, uncovered, 30 minutes more. Serve in big bowls with a sprinkling of cheese.

Famous Chili Quotes

“Congress should pass a law making it mandatory for all restaurants serving chili to follow a Texas recipe.”

Harry James (1916-1983) band leader and trumpeter

“Wish I had time for just one more bowl of chili.”

*Alleged dying words of Kit Carson (1809-1868),
Frontiers Man and Mountain Man*

“Chili is much improved by having had a day to contemplate its fate.”

by John Steele Gordon

“Chili is not so much food as a state of mind. Addictions to it are formed early in life and the victims never recover. On blue days in October, I get this passionate yearning for a bowl of chili, and I nearly lose my mind.”

by Margaret Cousins, novelist

“The aroma of good chili should generate rapture akin to a lover’s kiss.”

Motto of the Chili Appreciation Society International

“It can only truly be Texas red if it walks the thin line just this side of indigestibility: Damning the mouth that eats it and defying the stomach to digest it, the ingredients are hardly willing to lie in the same pot together.”

John Thorne, Simple Cooking

“Chili concocted outside of Texas is usually a weak, apologetic imitation of the real thing. One of the first things I do when I get home to Texas is to have a bowl of red. There is simply nothing better.”

Lyndon B. Johnson, 36th President of the United States



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product focus

Each month, *Today's Machining World* works to help you understand how the precision parts marketplace works, what's available in the industry, and how you can use available resources, as well as knowledge, to run a more efficient and effective shop.

In this issue, however, we're focusing on innovative gifts. With all the remarkable technology we've got – not to mention the brainpower and know-how of smart and talented people, we've found gifts to delight the mind – or anyone on your list.

We love the choices out there – from a two-person three-wheeled scooter (for the indulgent side of you) to buying a sheep, (for the socially conscious) our Product Focus is “things you just don't find everywhere else.” **Enjoy – and happy holidays!**



Ion USB Turntable

It's a sad life being an outdated media format like the vinyl record. Once you were hi-tech and new with amazing sound... now everyone shuns you in favor of soulless shiny metallic discs. Is that the treatment a true audio pioneer deserves?

Don't let your vinyl die a slow and lonely death moldering in your basement for years. Plug this high-quality turntable into the USB port on your PC (Windows or Mac) and use the included Audacity software to rip your vinyl directly to MP3 (or WAV format) for playback on all your newfangled devices like the iPod. You can use the Audacity software to give your vinyl a digital facelift by removing unsightly clicks and pops. Now your vinyl can fade away happily knowing its brain has been transplanted digitally into the future.

It can move your recordings to iPod or burn them to CD (Free iTunes and 45 RPM playback speeds; supports the recording of 78 RPM records USB compatibility with both Windows (XP, 2000, Vista) and Mac OS X; and is packaged with all necessary cables to interconnect with both a computer and stereo playback system.

From www.thinkgeek.com.



The Two-Person Three-Wheeled Scooter Coupe

This is the coupe that can achieve 30 mph when propelled by its 50cc air-cooled four-stroke engine, yet is safer than a conventional scooter because it operates on three wheels. At only 56 inches wide, it can be stored in a 5' x 8' trailer or towed behind your RV or SUV, and with a 1½ gallon fuel tank that provides a range of 100 miles for two riders up to 400 lbs. total, it has an average fuel efficiency of 60-80 mpg. It has automatic transmission with independent all-wheel suspension and shock absorbers that provide a smooth ride on its 13 inch alloy wheels and rubber tires; front disc brakes and rear drum brakes bring the coupe to confident stops. Driver and passenger are secured with two-point restraint seatbelts, and the coupe's steel tube frame is covered by a fiberglass body with a high-gloss gel coat finish. It has front, side, and rear turn signals integrated into the headlights, folding side mirrors and brake lights, and the chrome dashboard includes gauges for fuel, a speedometer, and tachometer. And yes, you can specify the color: red, yellow, green, or blue.

www.hammacherschlemmer.com





Bicycle Drivetrain

The ATC NuVinci Continuously Variable Planetary (CVPs™) for bicycles is a design using spheres instead of gears to give the bike rider an infinite number of speed ratios to seamlessly and continuously adjust your ride. The ATC NuVinci Smooth Cruise CVP revolutionized drivetrain technology with a new class of adaptable and scalable continuously variable transmission (CVT). Transmitting mechanical power with spheres, the NuVinci is a replacement for internally geared hubs and derailleurs on comfort, cruiser and commuter bicycles.

Essentially, the ATC NuVinci CVP provides a smooth transition from low- to high speed range without needing to shift gears. It is all done with a simple twist of the CruiseController. The ATC NuVinci CVP is applicable to virtually any product that uses a transmission. In addition to bicycles and light electric vehicles, the transmission is highly scalable and ideally suited for use in agricultural equipment, automobiles and utility-class wind turbines, among others.

www.atcnuvinci.com.



Space Navigator

You can get a grasp on the universe with this hand-held star-locator computer. Just enter the time and your location in the Northern Hemisphere on the keypad and the navigator shows them exactly where to find 66 of the brightest stars, 56 constellations and four visible planets.

It can also track thousands of astronomical events through the year 2020, and includes 20 star charts with varieties of details that can be discerned under the computer's built-in red, blue and violet lights.

from www.redenvelope.com

product focus

Oxfam America

Oxfam America is an international relief and development organization creating solutions to poverty, hunger, and injustice. Together with individuals and local groups in more than 120 countries, Oxfam saves lives, helps people overcome poverty, and fights for social justice.

How is your money spent? Let's unwrap the whole Unwrapped process.

The items selected represent project goals from grants disbursed by their seven offices around the world. Your donation will be used where it is needed the most – to help people living in poverty throughout the world. Basically, you purchase an item, the card goes to your friend, but the gift goes to those who need it most.

For \$18, you can provide a family with treated bed nets. It's simple and effective. The gift of mosquito nets reduces buzz while helping a family get their sleep while protecting them against malaria and other deadly insect-borne diseases. For \$35 you'll go to the head of the class by purchasing a school desk and chair, offering a stable environment where a child can learn.

And for \$100, you can help a farmer, a fisherman, a basketweaver, or other enterprising people to start their own small business. Your support will provide the important resources that a small business owner needs to get started.

And yes, for \$45, you can buy someone a sheep.

Oxfamamericaunwrapped.com.





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www.sharperimage.com.

Khet-The Deflexion Laser Game

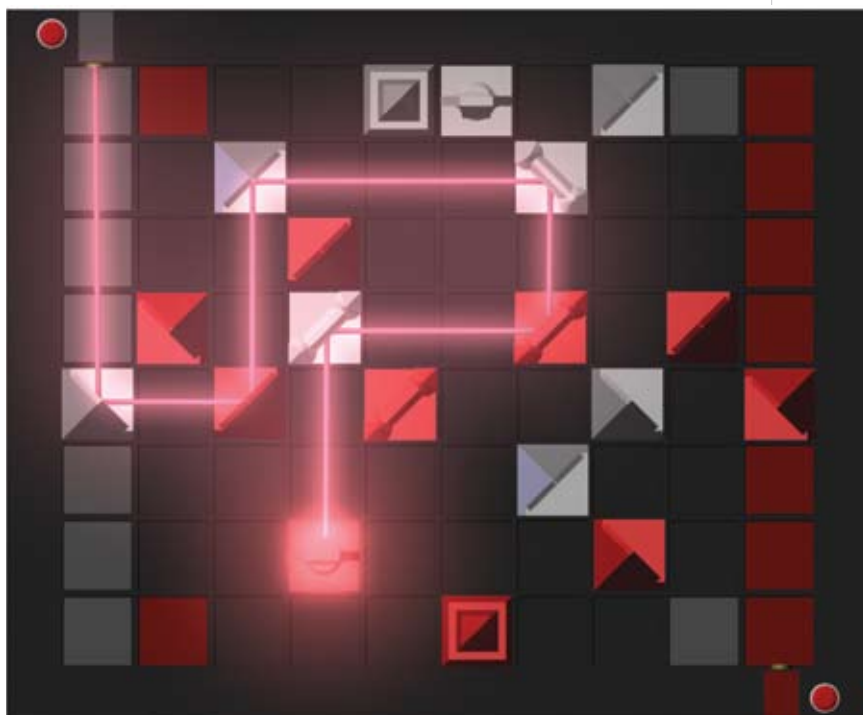
Combine classic strategy with the physics of lasers and optics to master this game of skill.

Egyptian themed pieces with one, two, or no mirrored surfaces move about the game board in any number of directions, including rotation by $\frac{1}{4}$ twists. Each turn ends by firing a laser beam built into the board which bounces from mirror to mirror on a series of pieces.

When the beam finally lands on a non-mirrored surface, that piece is removed from play. In maneuvering each piece, the aim is to illuminate your opponent's pharaoh and eliminate them from the game, while shielding your own pharaoh from harm.

Designed for two players ages nine and up, the game comes with required batteries.

www.scientificsonline.com.



product focus

5 Servomotor Robotic Arm Kit

Using this kit, you can build a 10"-high robotic arm. One of the components you will make is a 5-position servomotor controller (soldering required) that will allow the robot to manually grab, lift, lower, wrist rotate and pivot.

The robot is capable of 180-degree base rotation, 180-degree shoulder-moving range, 180-degree elbow-moving range, 180-degree wrist rotation range, 32mm (1.25") gripper open and 3.0 oz lifting capacity.

Windows (98/XP) control software (included) lets you control the robotic arm's movement through your PC. The software has a scriptwriting feature that allows you to program the robotic arm with thousands of movements with full, precise and repeatable control of each movement. Scripts may hold a maximum of 10,000 movements (including pauses) with a maximum repetition of 10,000.

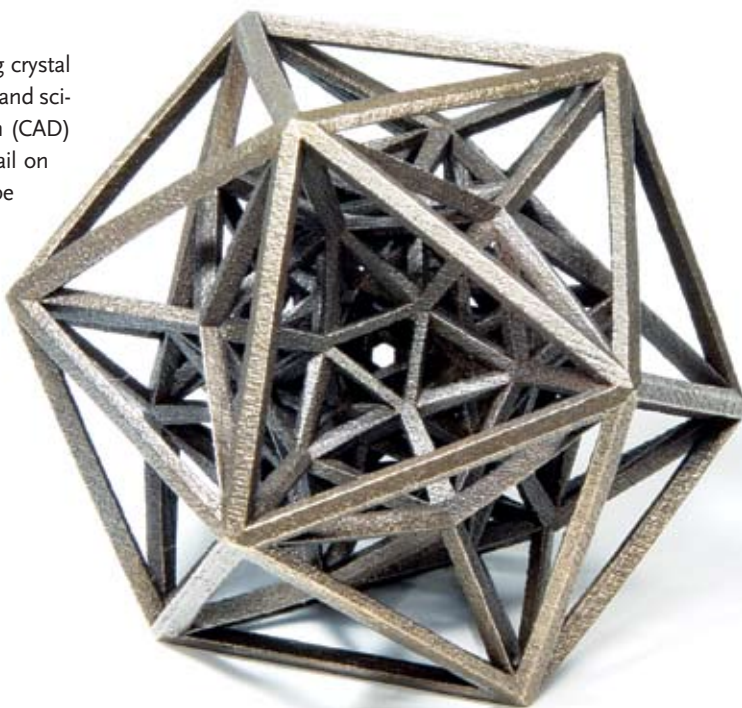
www.scientificsonline.com



Geometric Masterpieces

Bathsheba Grossman is still at it in a big way – sculpting crystal proteins and geometrical shapes into a perfect blend of art and science. She creates her pieces using computer-aided design (CAD) and metal printing technology. Her website goes into detail on her choice of programs and tools (Rhino, a Microscribe digitizing arm, Ex One's 3D printing are mentioned) but it's her mathematically-bent artistic brain that contemplates the shapes and creates these masterpieces. Her newest piece is in the Math Models group, a 4-dimensional solid known as the "Snub 24-Cell." Her work is being shown in galleries and exhibits and on TV, and I'm finding her pieces on other websites as well. I gather Sheba-Mania is not too far beyond, and with good reason.

www.bathsheba.com.



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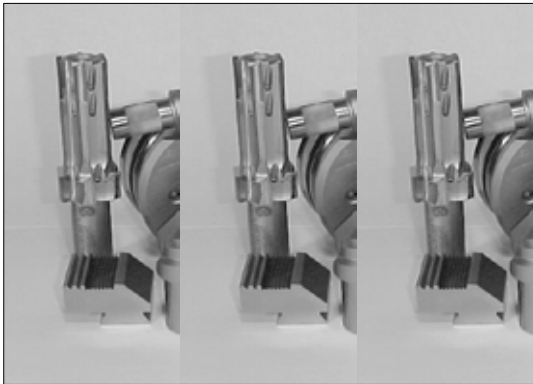


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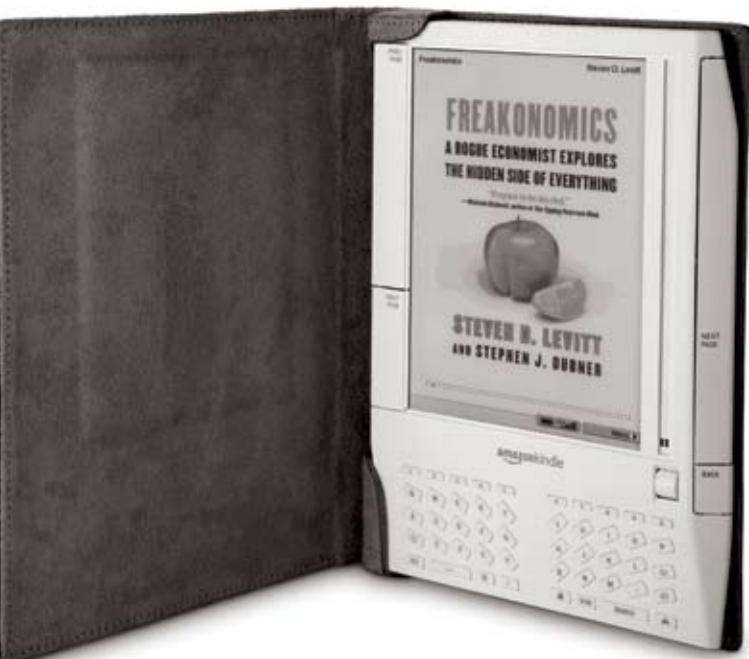
Kindle

Amazon.com has introduced Kindle, a portable reader that wirelessly downloads books, blogs, magazines and newspapers to a crisp, high-resolution electronic paper display. More than 90,000 books are now available in the Kindle Store, including 101 of 112 current *New York Times* best sellers and new releases.

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Kindle uses a high-resolution display technology called electronic paper that provides a sharp black and white screen. The screen works using ink, but displays the ink particles electronically. Kindle weighs only 10.3 ounces, yet its built-in memory stores more than 200 titles, and hundreds more with an optional SD memory card. Kindle fully recharges in two hours.

www.amazon.com.



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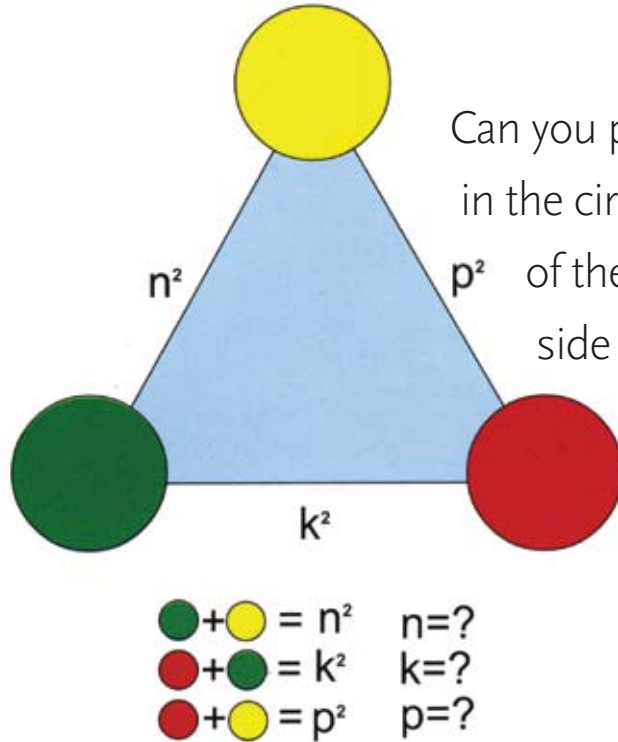
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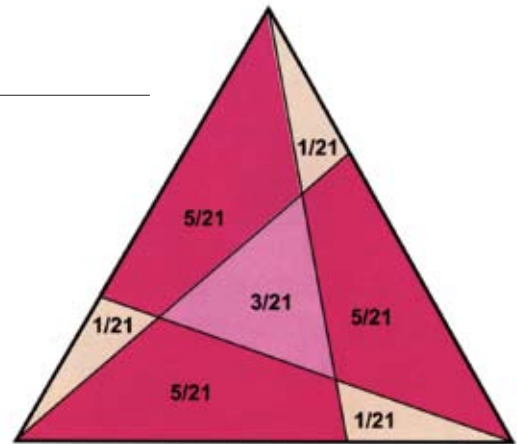
think tank



Squares in Squares

Can you work out the proportional area of all seven regions?

Each trisecting line divides the triangle into $\frac{1}{2}$ or $\frac{7}{21}$, which is again divided into three parts, which tells us can only be $\frac{1}{21}$, $\frac{5}{21}$ and $\frac{1}{21}$. It follows that the central triangle is $\frac{3}{21}$.



Who trisected correctly?

Alex Kass from Design Core in Baldwinsville, NY; **Steve Richards** from Yamazen, Inc. in Franklin, WI; **Mike Kinney** of Camcraft in Hanover Park, IL; **Adam Doughty** of Wave Armstrong Venture in Aberdeen, MD; **John M. Weber Sr.** of Weber Systems, Inc. in Menomonee Falls, WI; **Greg Fassbender** of Action Mold & Machining, Inc. in Grand Rapids, MI; **Pat Muscarella** of PLM Teknologies, Inc. in Penfield, NY; **Ron May** of Hunter Engineering in Bridgton, MO; **Uli Koster** of Blaser Swisslube in Rohnert Park, CA; **Chris Morgan** of K & M Precision Products in Dexter, MI; **Rick Stein** of Key Products in Milwaukee, WI; **Douglas Edwards** of Borg/Warner Emissions/Thermal Systems in Fletcher, NC; **Doug Pav** of A.M..S. in Clinton Township, MI and **Tom Mahon** of Honematic Machine Corp. in Boylston, MA.

postings



Noteable and newsworthy
information and events for
the month of January.

Aluminum Symposium

Marco Island, FL

Jan. 20 - 22

[www.platts.com/
Events/
2008/
jc803](http://www.platts.com/Events/2008/jc803)

ATX

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www.atxwest.com

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www.madeintheusa-cairo.com

Jan. 17th
thru
Jan. 19th

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CA

Jan. 29th
thru
Jan. 31st

www.cesweb.org

Pacific Design & Manufacturing Show

Anaheim, CA

Jan. 29-31

[www.pacdesign
show.com](http://www.pacdesignshow.com)

Green Manufacturing Expo

Jan. 29 - 31

Anaheim, CA

[www.greenmf
expo.com](http://www.greenmf
expo.com)

Int'l Consumer Electronics Show (CES)

Jan. 7-10

Las Vegas, NV

www.cesweb.org

Birthday Martin Luther King Jr.

Jan. 15, 1929

www.nobelprize.org

Beer

in cans
first sold in

Richmond, Virginia

Jan. 24, 1935

www.rustycans.com

First Texas oil gusher discovered at Spindletop

Jan. 10, 1902

www.wikipedia.org

From all of us to all of you....



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Lloyd - Jill - Noah - Terry - Bill - Charlie - Dianne

ad index



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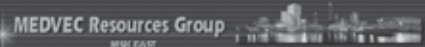
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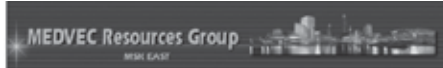
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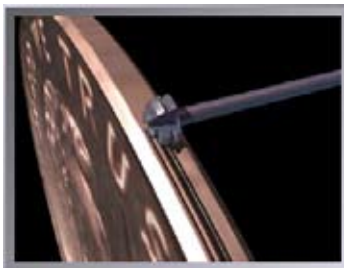
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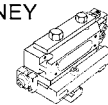
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afterthought

Losing My Bearings

“Where have all the bearings gone?” This is the sad refrain of anybody looking to rebuild a machine whose mechanical joints depend on Timken tapered roller bearings. As far as Timken and most of its resellers are concerned the new chorus is “so long, it’s been good to know you...”

At Graff-Pinkert we were recently confronted with this serious issue when we sold a National Acme 1½" 8-spindle screw machine with new spindle bearings. This is still a very popular piece of machinery in the fittings world, and ironically, still a staple of some bearing manufacturers. Rex Magagnotti searched the usual suspects to buy the cups and cones in the well-branded orange boxes wrapped in oily paper, only to hear the words every buyer fears: “Out of stock, 18-week delivery.” To an Acme guy, this is like hearing that McDonald’s is out of french fries, or Wal-Mart is sold out of D-batteries.

“They are rationing bearings in the marketplace, challenging resellers to expand orders.”

I have always regarded Timken as a basic utility of the industrialized universe. I never thought they would ever fail to keep all of those zillions of balls – excuse me – tapered cylinders in the air. But the Timken scions in North Canton, Ohio have pulled the plug on their lifelong customers in their homage to the lean gospel and the bottom line. Now it’s 18 weeks, if you’re lucky, to secure spindle bearings for that growling Acme or centerless grinder that may be the core of your operation.

I talked to people at Timken, and the customer relations lady was frank. She told me that Timken has limited capacity so the part numbers that do not sell in significant quantities get pushed out until the run justifies a new setup.

They are rationing bearings in the marketplace, challenging their resellers to expand orders and daring them to stock the increasingly pricey cups and cones. The big resellers of bearings, also worshipping at the temple of lean, are reluctant to stock the expensive orange boxes that may sell in double digits each quarter.

If the real demand is out there, the market will eventually correct itself. I would not be surprised to see prices double for scarce spindle bearings like those for the workhorse 1-5/8" RBN-8 Acme Gridley as users decide to hoard them and specialty sellers see an opportunity for profit. We will see orange boxes of Timkens mysteriously emerge from dusty Vidmar cabinets around the

world as industrious prospectors search for gold in the orange flotsam of defunct automotive plants.

Spindle bearings are high precision bearings in matched groupings. Taper Roller Bearings of Lexington, Ky. has developed a thriving business by purchasing standard grade Timkens and, by using sophisticated measuring techniques, matching them up to get the equivalent of Class 3 precision bearings. They are now suffering in this market because they cannot obtain enough standard or commercial grade bearings to meet the demand.

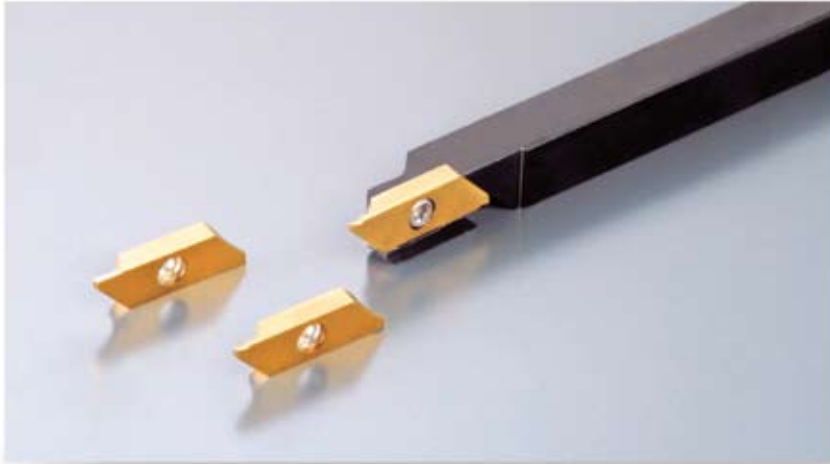
After years of shrinkage and neglect, the old screw machine world has reached a period of equilibrium, according to Andy McCarty of Taper Roller Bearings. Almost all of the workhorse machines are producing product, which means they are wearing themselves out. It also means more cash flow available for replacement bearings.

Meanwhile Timken, which makes its own steel in its own mills, is short of raw material for its bearing plants. They blame overwhelming global demand, especially China, which puts more pressure on the bosses to ration bearings to the statistically insignificant buyers of high precision spindle bearings, slighting National Acmes that aren’t even being made new anymore. Hard to blame them for concentrating on sexier, higher volume product streams.

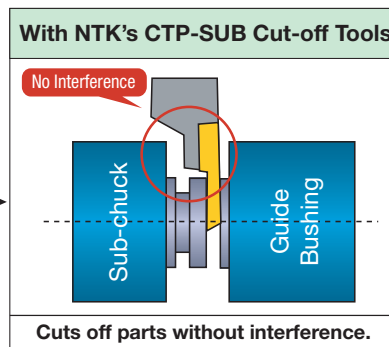
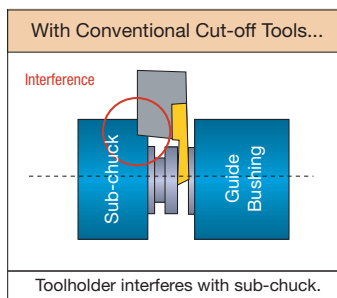
It is hard for me not to lose my bearings when I’m struggling to fill an order from a vital customer. From experience, I know that if you search hard enough and are willing to part with serious money, commodities will suddenly materialize, but this is a hard way to run a business. I could also journey to Timken in North Canton and beg. Meanwhile, can anybody spare a set of bearings? I’ll replace them with interest in five months – I hope.

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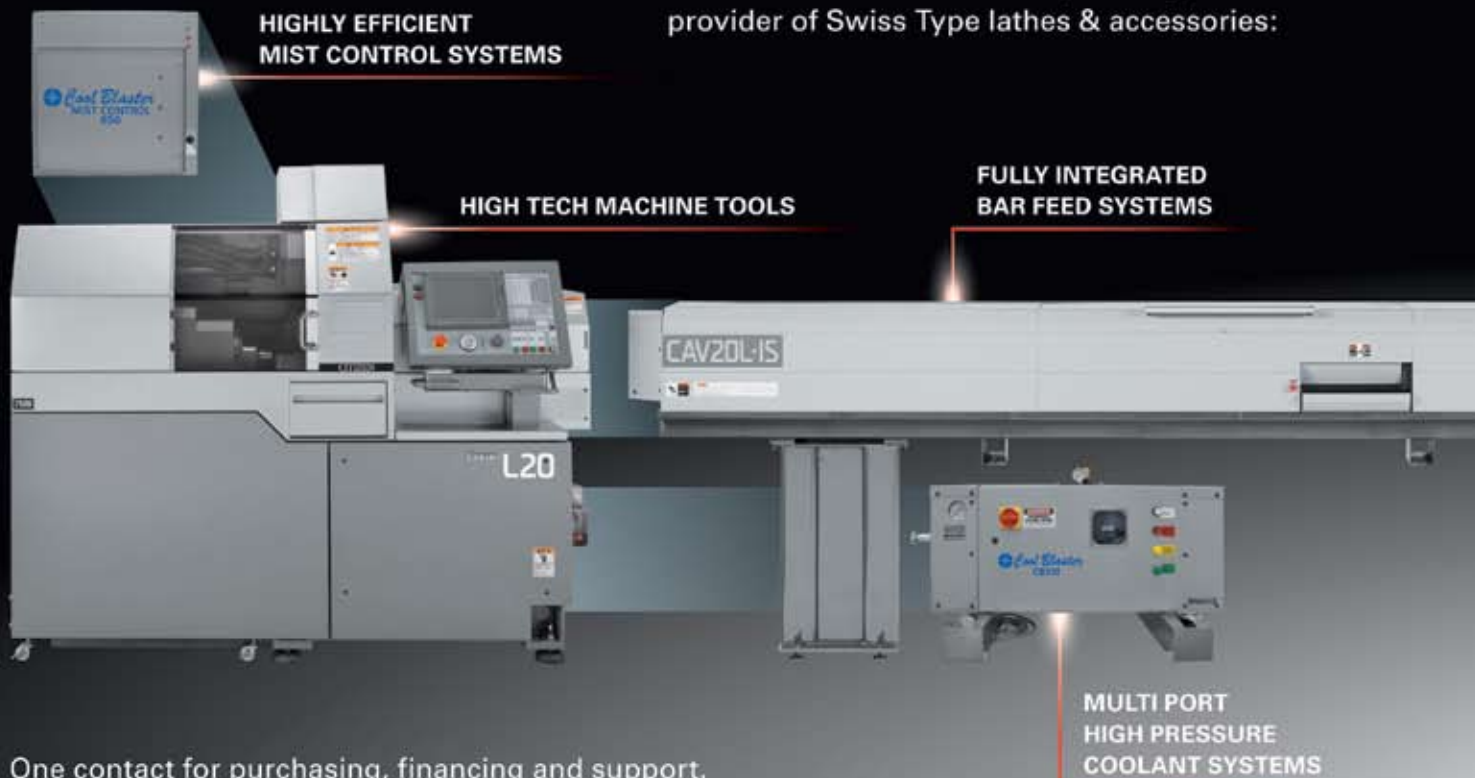
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