

# 2013 State of the Gear Industry

## Reader Survey Results

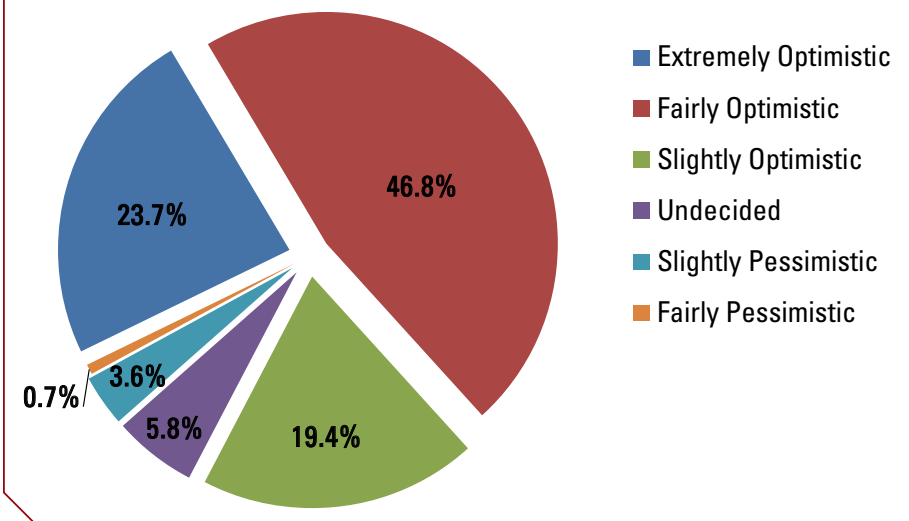
*Gear Technology's* annual State-of-the-Gear-Industry survey polls gear manufacturers about the latest trends and opinions relating to the overall health of the gear industry. As in years past, the survey was conducted anonymously, with invitations sent by e-mail to gear manufacturing companies around the world.

Hundreds of individuals responded to the online survey, answering questions about their manufacturing operations and current challenges facing their businesses.

All of the responses included in these results come from individuals who work at locations where gears, splines, sprockets, worms and similar products are manufactured. They work for gear manufacturing job shops, captive shops at OEMs and end user locations.

A full breakdown of respondents can be found at the end of this article.

Please describe your level of optimism regarding your company's ability to compete over the next five years.



### Gear Industry Optimism – About Average

Over the past eight years, approximately 89% of respondents indicated some level of optimism regarding their companies' ability to compete. However, this year's respondents were less enthusiastically optimistic than average (a greater proportion were only "slightly optimistic").

### Significant Challenges

The general economic climate and the difficulty in finding and keeping skilled labor appear to be the major challenges facing gear manufacturers today.

**"Problem finding engineers."**

**"Unemployment."**

**"Uncertainty by customer forecast."**

**"Eroding margins versus 10 years ago (via stiffer competition)."**

**"Obama."**

**"Cost of labor."**

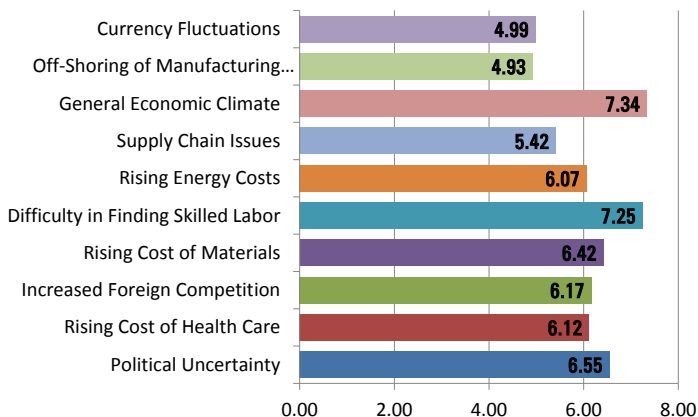
**"Our import/export fees are skewed to a 25% disadvantage for us. Six years ago I purchased a machine from Italy for 325K. I paid a 7K import fee imposed by the U.S. government I have a hard quote, if I were selling to Italy? Their fee on us? 77K This whole story that we cannot compete, all this unemployment, it's all a bunch of malarkey."**

**"Competent help."**

**"CO<sub>2</sub> regulation in automotive."**

**"High taxes."**

Rate the following challenges in order of significance to your business, with 10 being the most significant



**"Cost control, reduction in volumes & JIT supplies."**

**"Time-to-market for new products."**

**"High taxes!"**

**"Overall forecast for medium and heavy duty."**

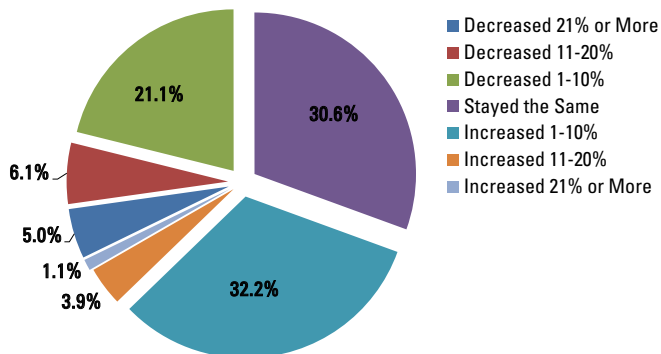
**"Business conditions for our customers."**

**"EPA regulation, other domestic competition."**

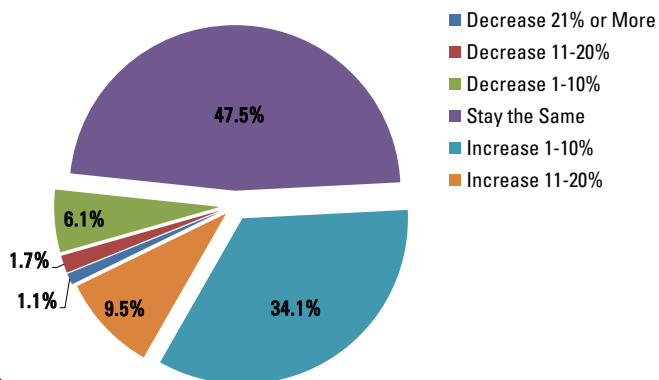
## Employment

Responses were about equally divided between companies who added employees and those who downsized in 2013. According to the extended responses, many of those who downsized did so because of increased automation and more efficient manufacturing processes. Other declines were due to softening in specific customer industries, such as mining and construction. Those who added employees cited increased business and introduction of new products/product lines.

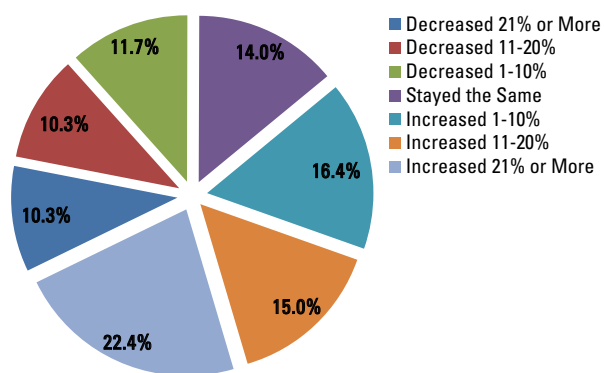
### How has your location's LEVEL OF EMPLOYMENT changed in calendar year 2013 vs. 2012?



### How do you anticipate your location's level of employment will change in 2014 vs. 2013?



### How does your location's employment level compare with its employment level 10 years ago?



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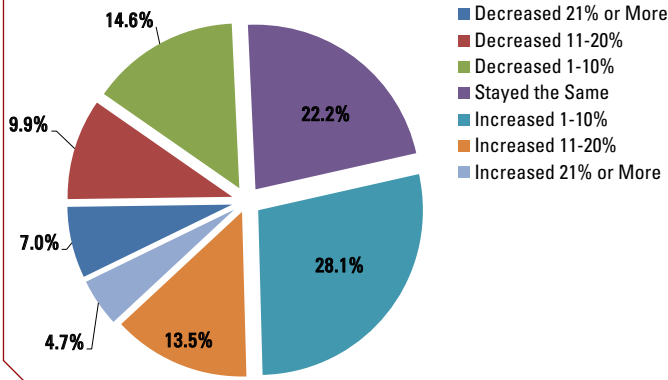
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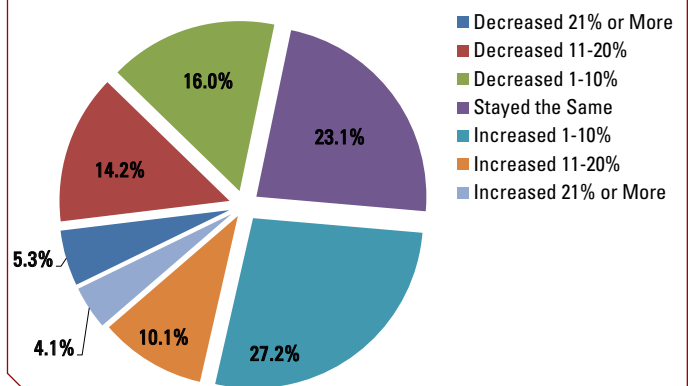
**Production Output**

How has total PRODUCTION OUTPUT (unit volume) changed over the last 12 months?

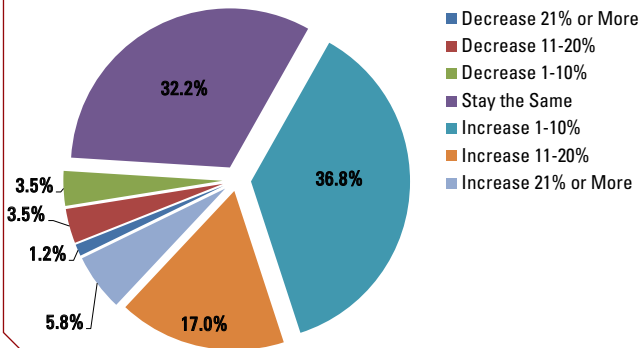


**Sales Volume**

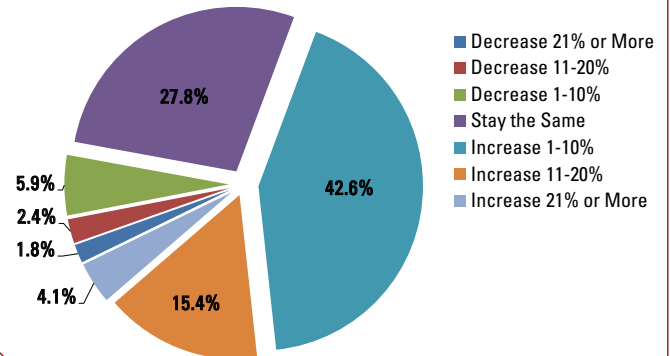
How has total SALES VOLUME changed over the last 12 months?



How much do you expect production output (unit volume) to change over the NEXT 12 MONTHS?

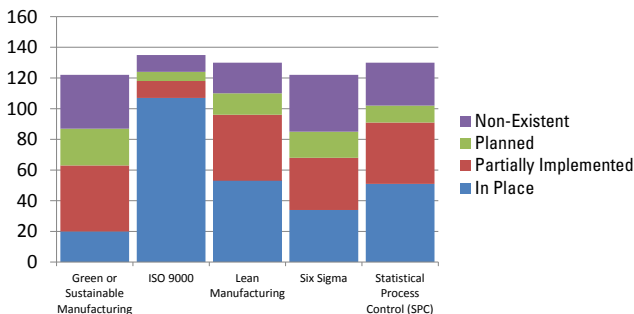


How much do you expect SALES volume to change over the NEXT 12 MONTHS?

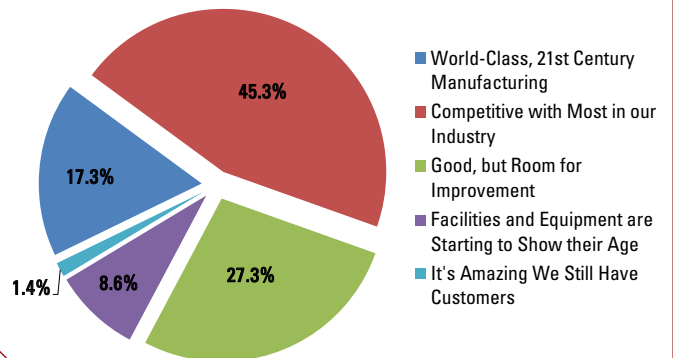


**Quality**

Choose how each of the following quality processes/philosophies is used at your location.



Classify your company's manufacturing operations and technology.



**80%** of respondents work at ISO 9000 accredited locations

How GREEN is your location?

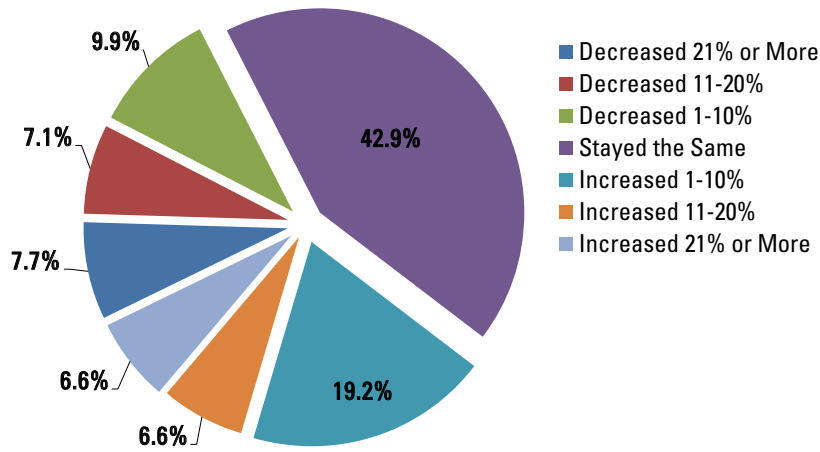
**18%** have green or sustainable manufacturing practices in place, **34%** have them partially implemented, **20%** are planning to implement them, and **27%** say green or sustainable manufacturing is nonexistent at their location.

How LEAN is your location?

**42%** say lean manufacturing is in place at their location, **33%** say it's partially implemented, **11%** say it's planned, and **14%** say it's nonexistent

## Capital Spending

How did your location's CAPITAL SPENDING in 2013 compare with last year?



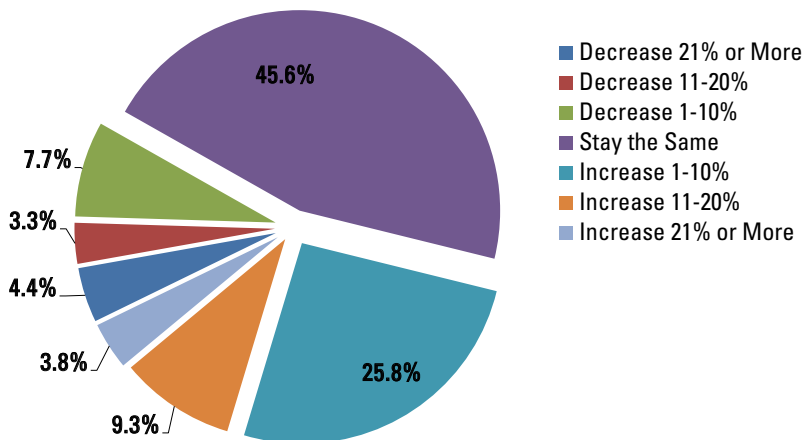
**83%** of respondents work at locations that spent more than \$100,000 on capital equipment in 2013.

**38%** of respondents work at locations that spent more than \$1 million

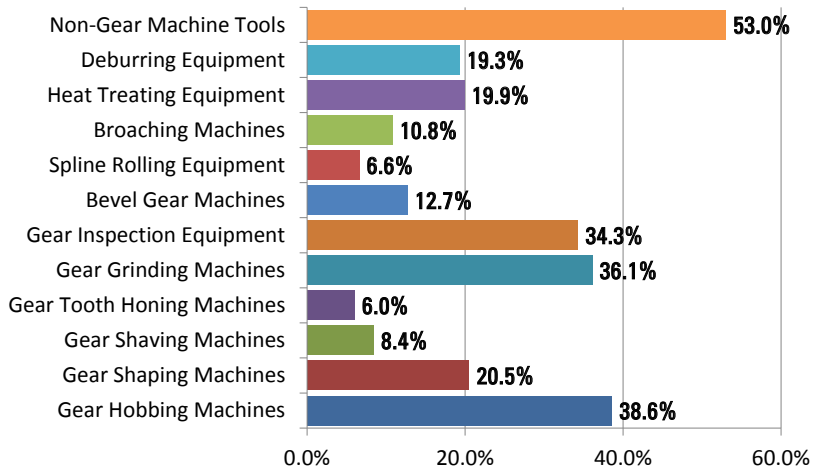
**25%** of respondents' companies spent less than last year.

**33%** of respondents' companies spent more.

How do you expect your location's 2014 capital spending to compare with 2013?



For which production functions do you expect to purchase equipment in 2014?



Compared with last year, there appears to be less interest in general-purpose machine tools and hobbing machines, while there appears to be more interest in grinding machines, deburring equipment and heat treating equipment.

**Skilled Labor**

“Hard to find young people with interest and solid high school training like it used to be back in the day.”

“We are short 30 employees right now.”

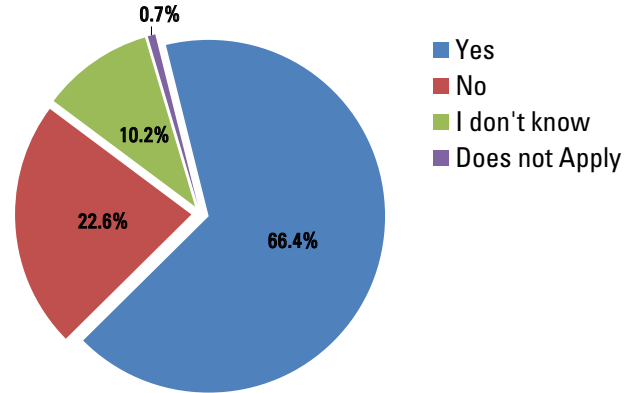
“Need more manufacturing engineers, and the machinery, the non-gear cutting equipment, is more complex than ever before— multiple spindles, and nine programmable axes. Also creating splines and gears with new technology, on mill-turn machines, and lathes.”

“Skilled help is the delimiter to growth—not work, not financing— but skilled help. The manufacturing technology now available has surpassed the level of available skilled help!”

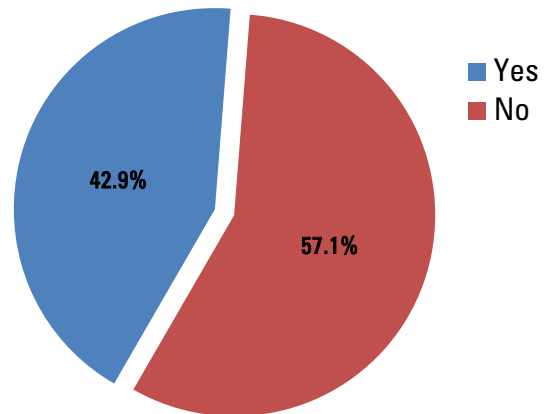
“We can get all the people we want, but they don’t have the skills. We have to teach them. Only for turning and milling it’s not a problem.”

“We have enough skilled workers. However, they are all over 35, and several are over 50...”

Is your company currently experiencing a shortage of SKILLED labor?



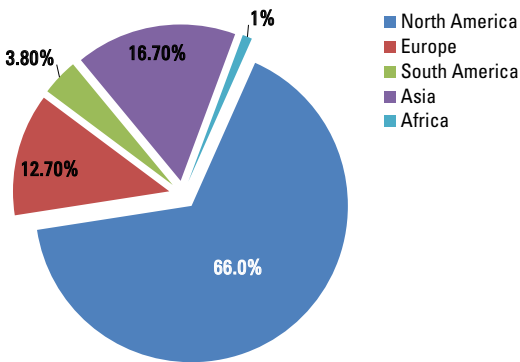
Does your company have a mentoring program in place for new hires?



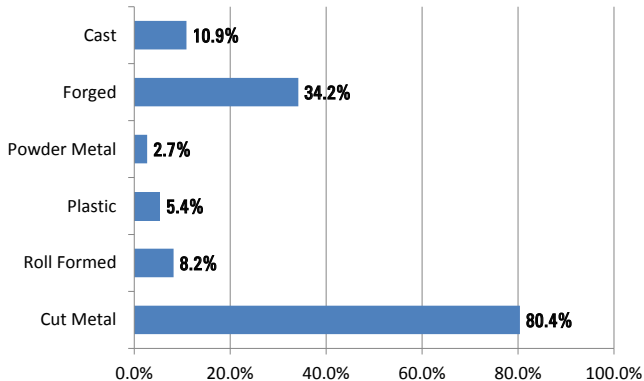
The percentage of companies experiencing a shortage of skilled labor has remained the same since last year.

**Demographics**

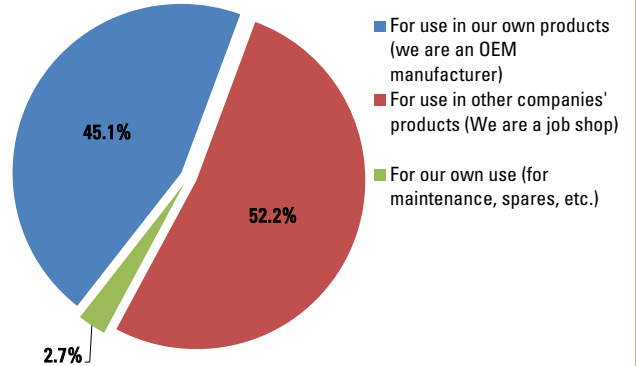
In what continent are you located?



The gears manufactured at this location are primarily:



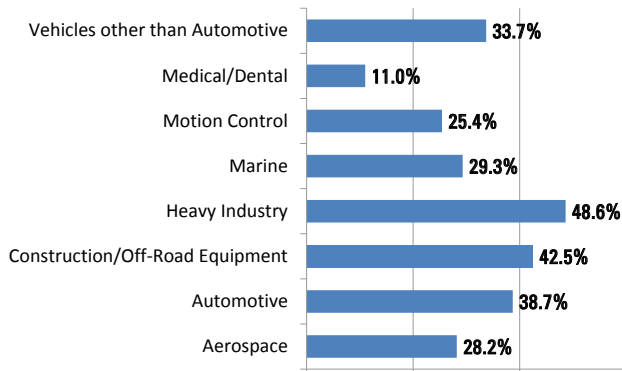
Gears (including splines, sprockets, worms and similar components) are manufactured:



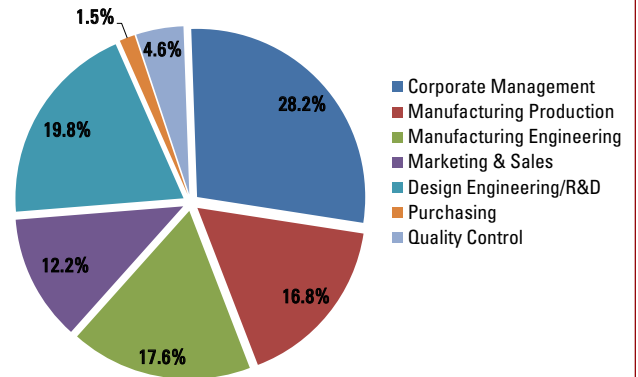


## Demographics

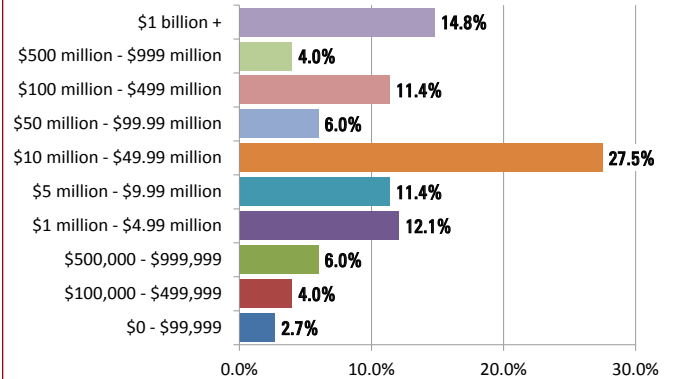
The gears (including sprockets, splines, worms and similar components) made at this facility are used primarily for:



## Which category best describes your job title/function?



## What is the approximate annual revenue for your company?



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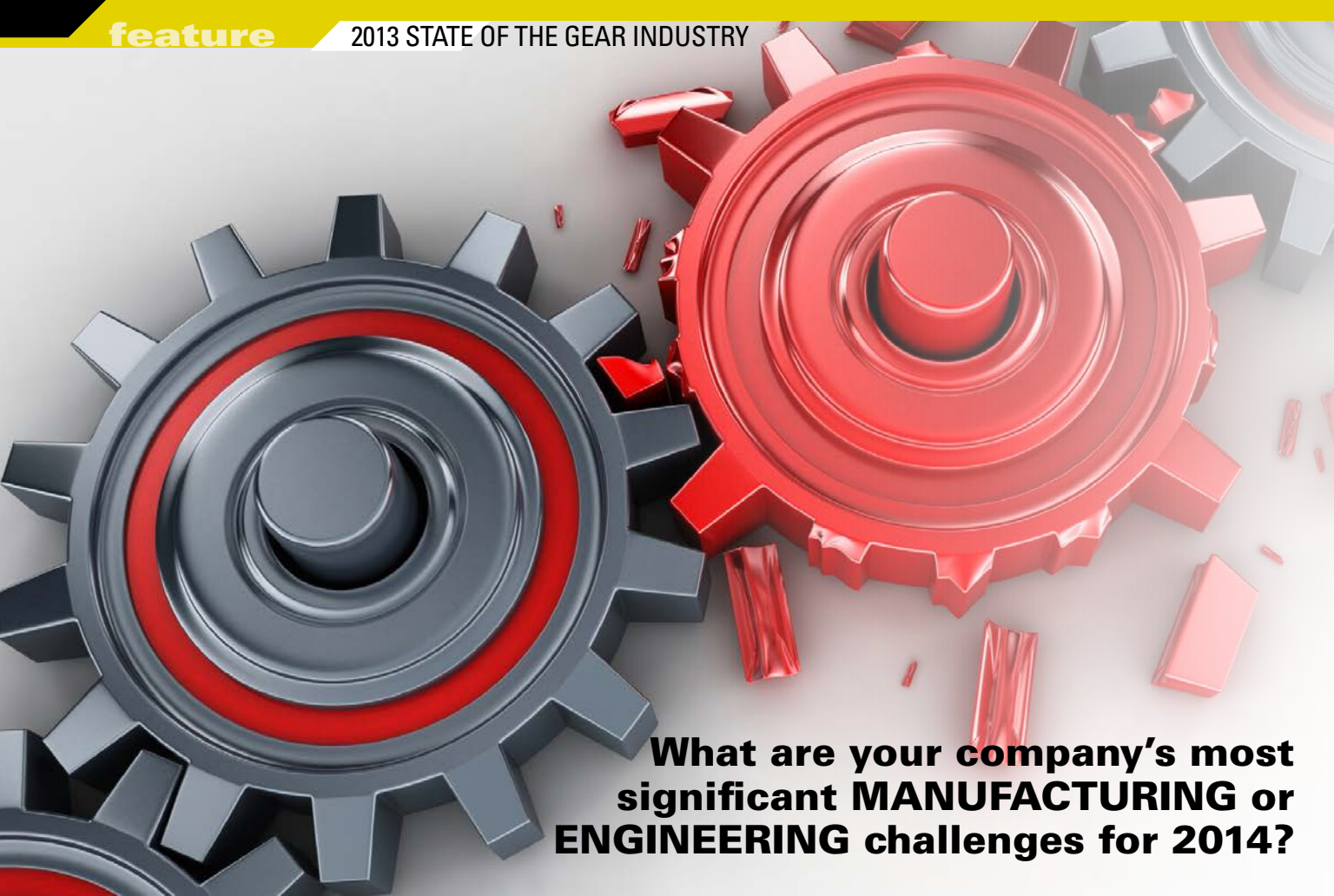
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**What are your company's most significant MANUFACTURING or ENGINEERING challenges for 2014?**



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- “Finding skilled labor.”
- “Skilled labor.”
- “Productivity, quality and lower costs.”
- “Many new developments.”
- “Staying competitive.”
- “Increasing in-house tool room efficiency and quality.”
- “Improve quality production level.”
- “Cost competitiveness, equipment uptime.”
- “Scrap and efficiency.”
- “Efficiency increase.”
- “Entering into highly technology oriented market.”
- “Machining hindrance to newer type of gear steels (tool life improvements needed).”
- “New programs.”
- “Controlling cost.”
- “Improved scheduling and job tracking.”
- “Faster, more powerful machines at same cost.”
- “Sales.”
- “Planning and implementing volume increase while maintaining launch schedules.”
- “Finding good employees.”
- “Delivery 95% on time.”
- “Sustain quality.”
- “Keeping up with new technology.”
- “Trained candidate availability.”
- “Advancing core technology to new machining process. Redesign core product to reduce cost and increase robustness.”
- “Heat treat distortion and handling.”
- “Technically qualified operators of expensive equipment.”
- “Cutting costs to meet customer expectations for price point.”
- “Attain world-class quality level in manufacturing.”
- “New software development, tool development, general production improvement.”
- To develop gear boxes for off-road vehicles.”
- “Development of cost-effective products.”
- “Finding competent people. Too much free money out there!”
- “On-time delivery.”
- “Introduction of new product.”
- “To install and validate capacity increase up to 40%.”
- “Ramping up production on many new products while keeping profit margins healthy.”
- “Keeping sustainable growth.”
- “Skilled labor, marketing of products.”
- “Finding qualified engineering help.”
- “Bringing new products to market with the same staff.”
- “New business.”
- “Finding experienced gear processing engineers.”
- “Cost reductions.”
- “Improve equipment.”
- “Manufacturing engineering and skilled help (machinists, electrical and mechanical technicians).”
- “Finding skilled labor.”
- “Sales.”
- “Managing growth.”
- “Balancing newer technology with an aging workforce.”
- “Quality and cost-effectiveness.”
- “Keeping up with software changes.”
- “Increased production.”
- “Skilled labor.”
- “Equipment getting old with no money to invest in upgrades.”
- “To meet reductions demanded by OEM in sales price, sustainability in low volume processing.”



“Roll out of new product on schedule.”

“Manufacturing cost and how gear processes and methods are to be developed to get maximum productivity and keeping cost on lower side to counter competition.”

“Sustainable precision and accuracy in product. Also consistency in productivity.”

“On-time delivery.”

“Government interference from a host of government agencies.”

“Finding new customers that match our value proposition”

“Upgrading aging machinery.”

“Engineering development lead time is too long.”

“We need to install more flexible automation.”

“Maintaining sales growth and keeping work force under 50.”

“Winning new, incremental business.”

“Finding skilled labor.”

“Drive cost out with continuous improvement.”

“To perform the same amount of job, with the same quality and with less people. (We had a head count adjust this year.)”

“Designing for value versus cost plus.”

“Skilled people.”

“Political uncertainty of military funding.”

“Cost control.”

“Flawless new program launching, continual cost savings.”

“The biggest challenge we currently face is finding and/or developing skilled labor.”

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