# MANUFACTURING TRENDS Continued

innovations in technology to drive efficiencies, reduce production costs and help bring products to market. But can the same be said of manufacturers' use of technology to help drive their marketing and sales? The answer up until now is a resounding, 'no'. For a long time, manufacturing and marketing have been worlds apart and manufacturers have left it to external PR companies to sell their products – not any more. In 2016, marketing and manufacturing will become one and the same.

### 3. CAPITAL INVESTMENT

Though the slow economic recovery continues to hinder expansion and growth opportunities, recent government and industry reports show an uptick in capital investment funding. As manufacturers become focused on capturing value through innovation, original design and speed to market, they are increasing spend for upgrading plant, equipment and technologies. 2016 looks set to be the year of the big spenders.

#### 2. GREATER FLEXIBILITY

Consumers expect products on-demand and to specification. With the rise of smart factories, manufacturers will increasingly look towards manufacturing equipment that is adaptable and flexible to appease the needs of consumers, while saving waste and downtime.

## 1. GREATER VISIBILITY

The Internet, social media and big data are forcing manufacturers to become more customer-centric. The traditional business-to-business model is becoming outdated because today's connected consumers are better informed and expect products on-demand. Consumers compare, select or buy multiple products with a tap of their smartphone or tablet, and online channels have become their preferred communication platform. This consumer purchasing style is not only having an impact on brand-oriented value chains, but is transforming traditional B2B to B2B2C models.

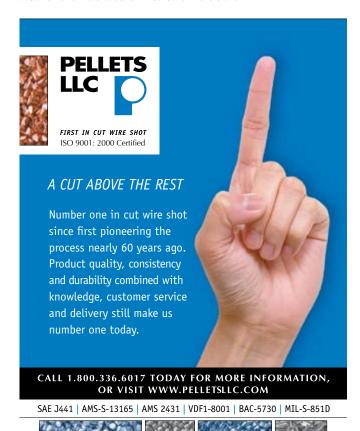
Furthermore, consumers are becoming acutely aware that manufacturers can measure every aspect of their production, from energy consumed to waste managed and cost saved. With this in mind, consumers are demanding visibility from a sustainability, labour, cost and production perspective, and there is no excuse for not making this available.

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# Limpet Teeth: The Newest Strongest Material Known to Man?

**IN THE LAST ISSUE** of *The Shot Peener*, we listed the Top Ten strongest materials known to man with Darwin Bark spiders' silk as the toughest biological substance. Well, move over Darwin Bark spider, your silk may be replaced by the teeth of the limpet, an aquatic dome-shaped creature.

These findings come from researchers in the U.K. "Until now we thought that spider silk was the strongest biological material because of its super-strength and potential applications in everything from bullet-proof vests to computer electronics," Professor Asa Barber who led the study said in a statement. "But now we have discovered that limpet teeth exhibit a strength that is potentially higher." One of the unique aspects of limpet teeth is that their strength stays the same no matter the size. "Generally a big structure has lots of flaws and can break more easily than a smaller structure, which has fewer flaws and is stronger. The problem is that most structures have to be fairly big so they're weaker than we would like." said Barber.



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