



# VIKAS METALS

MAKING THE STEEL BETTER

## SHOT PEENING

**Shot peening** is a cold working process in which small spherical media called shot bombard the surface of a part. During the **shot peening** process, each piece of shot that strikes the material acts as a tiny peening hammer, imparting to the surface a small indentation or dimple. To create the dimple, the surface of the material must yield in tension. Below the surface, the material tries to restore its original shape, thereby producing below the dimple, a hemisphere of cold-worked material highly stressed in compression

### **Benefits & Applications of Shot Peening**



Shot peening has become useful for a variety of highly specialized applications. At VIKAS METALS, shot peening technicians are skilled in all of the following alternate specialized applications

- **Pneumatic Conveyor Tubing**
- Pneumatic conveyor tubing is usually made of a stainless steel or aluminum alloy. It is used to transport plastic pellets at the facilities of molding companies or at various production, blending and distribution sites. The velocity of the pellets results in friction, heat and lost production. Polymer pellets will slide against the inside of a smooth pipeline, melt and form streamers or angel hair. These long polymer fibers will contaminate the pellet flow and clog up the transfer system. When the inside of pipeline is roughened by shot peening, the polymer pellets bounce or roll instead of sliding along the inside of the pipe. The pellets' contact with the side of the pipe is shortened, and formation of angel hair is prevented that can account for millions of pounds of lost and/or contaminated production each year. Shot peening of Pipes has been found to be much superior to other internal treatments of the tubing, is often more economical and can be applied on-site.
- **Food Industry Cheese Molds**
- The cheese/dairy industry has found that uniform dimples provide a surface that can advantageously replace other surface treatments. The textured surface from shot peening often has a lower coefficient of sliding friction that is necessary for cheese release properties on some food contact surfaces. The dimples act as lubricant reservoirs for fat or other substances allowing the cheese product to slide easier through the mold on the peaks of the shot peening dimples. Testing has shown that shot peened pipe finishes meet or exceed necessary requirements for cleaning in terms of microbial counts. This is due to the rounded dimples that do not allow bacteria to collect and reproduce.
- **Peen Forming:**
- Sheets of various metals can be shot peened into concave, convex or flat shapes. This shot peening application is especially prominent in the aerospace and automobile industries. Shot peening of automobile and aircraft has allowed the industries, over the years, to reduce the weight of automobiles and airplanes by 30-50% saving (several hundred pounds). This, combined with the fatigue- and corrosion-resistance benefits of shot peening, makes peen forming a highly useful technique.

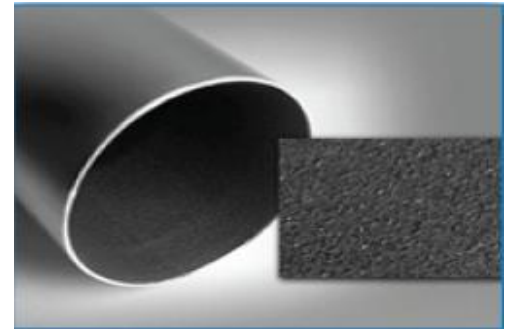


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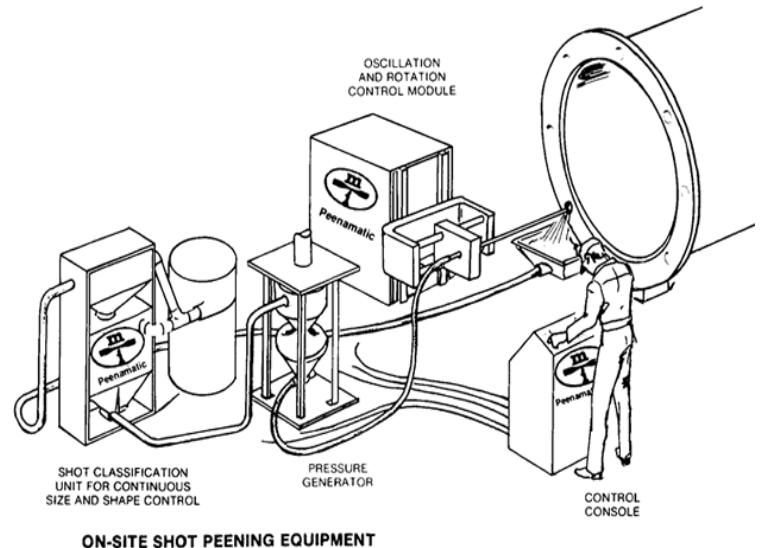
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## Shot Peening Service provided by Us

At VIKAS METALS, we are engaged in shot peening of Pipes & Elbows. Our plant is equipped with automatically controlled shot peening machines for wide range of components of job diameter upto 1 meter with consistent and unerring results. We can deliver **Stainless Steel Pipe & Elbows** as per the required Grades & Drawing having roughness value as per your Specifications required at affordable prices and short delivery periods.



We can even perform on-site shot peening of large components whose sizes exceed shipping limitations or which are installed on their foundations. Our field crews perform on-site shot peening worldwide to the same quality standards as our processing centers. We utilize proper coverage and certified peening media to achieve the same high level of quality in our on-site shot peening projects. We can help customers avoid the logistics and costs of shipping oversize equipment, while helping minimize the down time of this equipment with our on-site shot peening capability.



Hope to receive an opportunity to serve you, soon.

Warm Regards,  
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