

History of Metal Spinning

Sheet metal spinning is a metal forming process that involves the shaping of metal sheet into complex forms through the application of pressure on a rotating sheet of metal around a mandrel core. Similarly, to the way a potter forms a vase by applying pressure to a rotating lump of clay, so too can sheet metal be formed into a multitude of different shapes ranging from cones to domes and everything in between.

In fact, it's believed that the potter's wheel was the inspiration for the hand powered lathes used in the earliest examples of metal spinning. This process is used in a range of industries from aerospace, automotive, food, lighting, pharmaceutical, defense, among many others.

The earliest references to metal spinning recorded date back to antiquity where the ancient Egyptians used primitive hand powered lathes to spin soft metals such as silver and gold. There is also evidence that similar lathes were used in ancient China highlighting the importance of metal spinning and metal working capabilities of early civilizations across the globe.

In the Middle Ages the hand powered bow, used previously, was replaced by a mechanical pedal. This newly discovered innovation allowed for the continuous rotation of the metal blank and freed up the worker's hands to produce more sophisticated parts with finer details. It wouldn't be until the dawn of the 19th century during the industrial revolution that metal spinning would take the form that we recognize today. The introduction of steam powered lathes brought a new dimension as heavier metals in thicker gauges were able to be formed for the first time into parts ranging from firearm components to musical instruments, and even early scientific instruments.





In the early 20th century metal spinning advanced further with the incorporation of hydraulic lathes which allowed spinners to produce parts in larger volumes, with greater consistency, at a faster rate than was ever possible with manual methods.

It wasn't until the last 25-30 years that one of the most significant advancements in metal spinning took place. The incorporation of computer numerical controls into the spinning process really re-shaped the industry and

allowed for an unprecedented level of precision and repeatability in metal spun parts.

Despite all these innovations, however, metal spinning remains a labor intensive and highly skilled trade. As early as 1909, there was cause for concern that metal spinning would eventually be phased out and replaced by more modern methods of production such as pressing or stamping. However, as Frank Crawshaw points out in the introduction to his book *Metal Spinning* written in 1909, "It is believed that some quarters, particularly among metal spinners, that pressing or stamping metal can never fully take the place of spinning it. It is impossible to press or stamp some forms except as they are produced in parts and these parts soldered, brazed or riveted together." (Crawshaw 9) This is as true today as it was back then. Indeed, metal spinning is an age-old craft that is as much an art as it is a science. It has stood the test of time and will remain with us for the foreseeable future.



Sources:

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