

# More Than Pounds Per Die

When things happened that seemed to be beyond his control, and he saw no way of changing the course of events my Dad often used to say: "Well kid, the die is cast." There was a note of finality to his expression.

I suppose I grew up thinking that dies were forever uncompromising, immovable objects.

In my first job as a tool engineer I was happy to learn that draw and form dies used on our punch presses were actually "developed" (a polite word for what one oldtimer said was called "file and fit to suit") to produce parts of the precise shape desired.

Better still, thread cutting dies could be "set" to produce parts to close tolerances.

Yet these were sensitive matters that took the hands of very skilled craftsmen to do properly. These kinds of dies may not have been forever unforgiving, but they were hardly readily adjustable and they did command a lot of respect.

Sometimes a little different clearance, an angle different, a substitute lubricant, a different speed or a different feed could make that little improvement needed to make acceptable parts. If I asked: "How did you know to do that?", more often than I liked, the answer was: "You just know!"

The truth of the response was disconcerting to a young engineer with a notebook trying to record the rationale of modern production processes.

I have come to look upon wire drawing dies with somewhat the same awe the young tool engineer felt toward other tools called dies in other metal-working processes. You get what it will give you, and if that is "close but no cigar" you might be able to bring it in if you know what you are doing.

I talked to Marion Aiello, Vice President of Imperial Wire Die Corp about making and selling a product so obviously critical to the success of wire drawing operations, yet from physical appearance to the naked eye not extraordinary in any way. That sounds like quite a challenge.

An abstract of her response is simply that she puts the credit to the talent on the team.

Their family owned and managed company was founded by her husband Tom Aiello 18 years ago. In 1985 they acquired the assets of Union Wire Die Corp., said to be one of the oldest wire die manufacturer in the US (Founded 1921). Tom's brother Vinnie Aiello is the plant supervisor who has been with the company almost since the beginning.

Ingrid Crompton is Sales Manager. She too was one of the first employees. Though she left the company for a period, she came back 5 years ago, and adds to the continuity that a business built on repeatability of product finds so necessary for success. It also helps to have a sales manager with hands-on product-making experience.

Then there is Phil Barus, Midwestern District Salesman who has been in the wire industry over fifty years. He started with Chicago Steel & Wire in 1936. His experience dates back to the earliest days of carbide dies. Among his many career accomplishments is the development of the profile of a die to draw stainless alloys.

Does he sell "pounds of wire per die" as his competitive pitch? That is one way, but more important is experience and engineering expertise. For instance simply specifying carbide is not enough. Carbide contains carbon, tungsten, and cobalt. You could choose 6%, or 9%, or 13% cobalt content and find the higher the softer. But what is a good number? That all depends on the material and the dimensions involved.

The illustration is well chosen because tungsten carbide is not your only choice, Imperial Wire Die offers polycrystalline dies, natural diamond dies, and monocrystal dies. It helps to have die salesmen who know what to use on what. They also provide a recutting service and sell Unilap™ diamond compounds and powders.

Diamonds may be a girl's best friend, and Ingrid Crompton may be yours if you are looking for dies that give trouble-free performance from the day of purchase.

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