

Regal Tool and Die
By: Charles Davis

Regal Tool & Die is a successful Youngstown business that combines cutting-edge technology with traditional manufacturing methods. The company has two buildings in Youngstown, each of which work in a symbiotic relationship to provide customers with high-quality, affordable products. The die-producing sector of the company, located at 712 Andrews Avenue, manufactures a variety of dies, including stamping, piercing, blanking, forming, and progressive. The second division, located at 1008 West Rayen Avenue, utilizes these dies to help produce such finished products as professional photography equipment, venting products, and stools. Regal Tool & Die serves a regional customer base, with most of their business originating in Ohio, Pennsylvania, and Michigan. The two works provide an interesting study for industrial archaeologists because they allow observers to view both the creation of dies and their implementation in the construction of finished products. Furthermore, Regal Tool & Die clearly illustrates the effectiveness of amalgamating old and new technology in industry.

The company's Andrews Avenue works combines traditional die production technology with modern CNC machines. Regardless of whether the workers employ conventional or computerized means of production, the die-making process begins with a customer providing Regal Tool & Die with an idea of their desired product, usually in the form of a drawing, sketch, or sample. After analyzing the particular requirements of the order, the workers determine a suitable approach for satisfying the customer's demands. Every order provides a distinctive challenge for the skilled workforce. The employees produce many dies with traditional means (lathes, saws, grinders, and mills). For more detailed orders, workers at Regal employ a CNC Mitsubishi DWC90CR Wire EDM, a machine capable of running constantly with little human interference and able to produce dies within one-thousandth of an inch accuracy.

At Regal's West Rayen building, workers produce a variety of products through aluminum and metal stamping. As in the Andrews Avenue facility, they incorporate modern devices with more traditional processes (conveyors and feed units). Gary Kiraly, the president of the company, recently purchased a micromachining mill for the manufactory, the first of its kind in Youngstown. This machine, used to create intricate parts from plastics and aluminum, greatly reduces the amount of manual labor required for production. In general, the computer-based machines employed at both locations have replaced traditional methods of sawing, milling, and drilling, resulting in greater efficiency.

Although technological advances have greatly improved the die-making and stamping processes, many operations still require hand-craftsmanship. Much of the success of Regal Tool & Die originates with the skilled workforce. Every employee is a certified die maker, engineer, or apprentice. To receive a basic skill rating, employees participate in 8000 shop hours of training and four years of apprenticeship. Many of the workers are also students at nearby Youngstown State University. The company encourages advanced education by providing full funding for tuition. Furthermore, their complex machinery requires months of specialized training, which all employees also receive. All of this training, combined with Regal's use of advanced technology, helps produce dies and parts accurately and economically.¹

¹ For a description of Regal Tool & Die and an extensive list of particular machines, visit <http://www.regaltooldie.com>.