

The History Channel and Modern Marvels Visit Council Tool

Modern Marvels, a popular series featured on *The History Channel*, visited Council Tool earlier this year to document the company's axe-making process. The episode *Modern Marvels - Axes* has aired several times already to date. John Council, President & CEO, narrated the process of transforming six pounds of bar-stock steel into an axe.

Tool steel arrives in lengths of 20 ft bars. Using more than 80 tons of force, an operator shears each bar into 6 pound blocks. An induction heater warms the steel to over 2000 degrees Fahrenheit. Next, the red-hot steel is forged by an experienced operator in a 3500-lb drop hammer. The die alone weighs over 800 pounds. After 10 to 12 blows from the drop hammer, the axe head next moves to an upsetter. Using roughly 280 tons of force, the upsetter punches out an eye in the head where a handle will be inserted.

After the bit moves through a belt grinder, it is heat treated by immersion in a water-based solution (over 1500° Fahrenheit) to quench. Another grinding operation sharpens the bit, and the head is painted and then fitted with an American-grown hickory handle and securely affixed by hydraulically inserting an aluminum wedge.

How securely fixed? Council Tool's segment ended with the *pull test*. Council Tool Quality Assurance Officer Velton Jacobs tested a random sample. A passing grade measures how many pounds of force must be applied before the head and handle begin to move. Industry standards call for 1000 pounds of force; the Council axe did not move until 6000 pounds of force were applied.

Check The History Channel's website at <http://www.history.com/> for upcoming episodes on *Modern Marvels*.