



News Release

A new “programmable” rotary wire straightener

September 2008

ISO 9001 certified TAK Enterprises Inc. announces the introduction of a significantly advanced rotary wire straightener. The programmable rotary wire straightener, Model #0 - PRWS , is a completely integrated system for straightening difficult wire applications. Wire that has a high tensile value, or has a helix, or must be straightened to the best possible degree can now be done more easily using a measurable method to “scientifically” address and set the system.

The “programmable” rotary straightener has the ability to individually set each of the independent component values that interact to produce straight wire based on the conditions encountered for the application. In addition the system includes several features that provide additional “mechanical advantage”, such as an anti-twist device, and a wire cleaner / lubricator which improves system performance by ensuring a more consistent wire condition during the straightening process.

How it Works: A good rotary wire straightener must be able to payout the wire under tension, keep it from twisting, feed it at a fixed speed, and rotate the straightening block dies around the wire, independently at the proper speeds. Any improper settings will result in burnished wire, guide marks called “barber polling”, un-straightened areas resulting in “residual memory” skewing the wire out of straightness, or just snapping the wire due to too much processing stress.

The TAK Model #0 - PRWS has a built in spool payoff with a programmable back tension value. The wire passes through an anti-twist control wheel and through a cleaner / lubricator. The “prepped” wire approaches the rotating arbor area in a much more consistent state and is worked in a circular motion by a pair of high speed spinning arbors. Tension of the wire is maintained throughout the process by the speed feeder which pulls the wire at a pre-programmed speed through the system. Straightness is achieved by the wire block dies, within the spinning arbors, rotating around the full circumference of the wire as it slowly passes and working the wire into a straightened state.



The operator simply sets the block dies for the wire size he wishes to run, threads the wire through the system components and then entering, via the touch screen, the program values of speed, feed, and tension that were established from previous applications and then starts the system. In the case of a different type of material the operator sets the values to a known state from a similar application and adjusting them until success is achieved and then records those new values for the future.

The System Features: The #0 - PRWS system features a 5.5 inch "touch screen" programmable controller for entering the tension value in %, entry speed in RPM, exit speed in RPM, the feed speed in FPM, and for the display of the actual "run" values. In addition information like total feet / meters processed, default settings, and operation alarms can be viewed as well. The unit actually has two rotating speeds adjustments. Since the arbors are counter-rotating (necessary to eliminate twisting) and may need to be slightly off sync in order to deliver straight wire there is the capability to set different rotating speeds; one for wire "enter" and the other for wire "exit".

Arbor speeds can be set up to 12,000 rpm while the feed speed has a maximum setting of 100 FPM. The tension value can be set up to a maximum of 35 inch pounds in 1% increments.

Lastly, the system can be easily integrated with other wire processing equipment that has a dwell cycle, such as a "stop type" cutter head, by employing the TAK loop control device. The system is designed to work with wire in the .004" to .030" range and includes a "ramp up feature" that starts the wire feeder up first then starts spinning the rotating arbors to ensure that the wire does not break during start up.

TAK Enterprises, headquartered in Bristol, CT, designs, manufactures, and markets precision wire straighteners, cleaner / lubricators, custom feed and cut-off systems, fine wire payoffs, servo feed systems, and a variety of time saving machine accessories for managing linear material. TAK was founded in 1981 by Thomas Kunkler and Reinhart (Butch) Hermann and was awarded ISO 9001 certification in May 2003.

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