High-speed wire cleaning is probably the most difficult ultrasonic cleaning application that can be found. Wire travels so fast through the ultrasonic cleaning chamber that traditional ultrasonic components have little time to effectively remove the contamination, which is typically composed of oily lubricants, or sodium lubricants that are highly bonded to the wire surface.

To address this difficult cleaning application, Zenith developed the SSW-960 High Speed Ultrasonic Wire Cleaning System. This system includes all of the features necessary to address the difficulties normally faced in these high-speed ultrasonic applications, and has been priced to allow wire manufacturers to purchase a system for each of their manufacturing lines.

**SYSTEM OPERATION:**

Wire exiting the drawing equipment is first passed through the Ultrasonic Cleaning Reactor, where high-intensity Zenith CROSSFIRE Multiple Frequency Ultrasonic Transducers remove even the most bonded wire lubricants rapidly. The enormous amount of energy in the reactor will remove the contaminants, but will not damage the material itself. If cleaning ultra-sensitive wire, ultrasonic operating frequencies are selected to produce an ultra-gentle cleaning effect that will not damage sensitive materials.

After passing through the Ultrasonic Cleaning Reactor, the wire is blown off to minimize the amount of detergent which is transferred to the drain through the rinse cycle. After this Detergent Removal Process, the wire enters the Ultrasonic Rinse Chamber, where detergent residues are completely removed. If zero-residue performance is required, optional on-board Deionization systems are available that will close-loop the rinse operation, and provide residue-free rinse water. All detergent and contaminant residues are quickly removed to ensure a good quality wire finish upon drying.

Upon exiting the Rinse Chamber, the wire is passed through a compressed air wipe which completely dries the material using compressed air. The wire exits the other side of the SSW-960 completely clean, rinsed, and dry, ready for the next operation.

The SSW-960 is designed as a “Straight Pass” system. Wire is not bent or re-directed in any way, but is rather passed straight through the system through portals cut into UHMW guide-plates. Loading the system can be accomplished in less than 1 minute by opening the clear viewing covers, passing the end of the wire through the Guide Ports, and closing the covers to begin processing.
INCLUDED FEATURES:

The SSW-960 is manufactured largely of 304L stainless steel, not plastic or other less sturdy manufacturing materials. Stainless steel Component Access Panels are included to allow easy access to all internal operating components.

The system also provides a complete clean/rinse/dry system, turn-key and ready to use on arrival. Digital temperature controllers and heating systems maintain operational fluid temperatures, and continuously displays actual bath temperature.

Optional equipment can be added to the SSW-960 cleaning system to greatly enhance the overall system. Automatic Fresh Water Makeup Systems will automatically add water to the Cleaning Fluid Holding Tank to make up for water lost through evaporation, all without having to hook up a single water hose to the system. Closed Loop Deionization will allow you to re-use the same rinsewater continuously, leading to considerably less water usage. Deionization cylinders and Ultraviolet Water Purifier are mounted directly to the cleaning system so that movement of system to other lines is not a major affair. Systems can be manufactured to support virtually any wire size, and multiple wire systems are available for this applications requiring simultaneous processing of multiple wire strands. And, Automatic Cleaning Agent Neutralization will make disposal of the cleaning fluids easy and fast.

Large 5” polyurethane swivel casters make moving the system easy and comfortable even by one employee, when filled with liquid. With the SSW-960 system, even the smallest details have been addressed.

The SSW-960 has an overhead footprint of only 96” x 45”, a size small enough to easily fit within most wire manufacturing lines.

If your wire manufacturing requires an in-line wire cleaning system, contact Zenith Ultrasonics for a quotation and complete operational description of the SSW-960 Ultrasonic Wire Cleaning System, the wire cleaning system that simply makes sense.
SYSTEM SPECIFICATIONS:

System Size: 96” x 46” x 45” tall
Frame Material: 1.25” tubular steel, painted, optional all stainless steel construction
Enclosure Panels: 304L Low carbon Stainless steel, Stainless latches
Casters: 5” Hard Polyurethane
Cleaning System Material: 304L Low Carbon Stainless Steel
Guideplate Materials: UHMW
Included Ultrasonic System: CROSSFIRE Patented Multipled Frequency
Rinsing System: 304L Stainless Steel Spray Rinse System.
Drying System: Water-Wick Wire Wipes, number dependent upon speed.
Controls: Master On, Emergency Stop, Ultrasonics, Clean Flow Pump, Cleaning Fluid Heater, Spray Rinse Pump, Options Controls
Electrical Requirements: 208/220 volt, 3-phase with neutral, other voltages available with addition of transformer at additional charge.
Typical Detergents: Acidic or Alkaline Cleaning Fluids depending upon the application. Concentrates are mixed at 5-10% with tap water.
Available Options: Stainless Frame, Automated Water Make-up System, 5-light Signal Tower to indicate operating conditions, Particulate Filtration System to remove contaminants, Closed-loop Deionization

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