Abrasive Finishing - Multiple grain abrasives for long life and consistent finishing

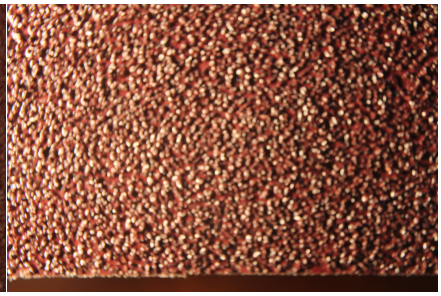
We are using a 3 x 90, X weight cloth back, 120 grit aluminum oxide belt on our robotic polishing system. Our belt life wear is excessive and it creates uneven finishes and loss of productivity because of constant abrasive belt changes. What solution do you recommend?

This happens quite often in high production robotic and automated polishing. A longer lasting abrasive material and increasing the belts length will minimize your problem.

Longer lasting abrasive grains like Zirconium or ceramics will increase belt life. If the aluminum oxide or silicon carbide has to be used because of its finishing capabilities then a multiple grain belt is the solution.

Multiple grain abrasive belt construction consists of layered abrasive grains of various thickness on cloth, polyester, or film backing. These multiple layers can be randomly stacked, formed in a bubble, or layered as a pyramid, depending on the coated abrasive manufacturer


Single layer 120 grit Aluminum Oxide


Multiple layered 120 grit Aluminum oxide

These multiple layers look a lot coarser than the individual abrasive grain size they are comprised of but amazingly give the same finish as the individual grain themselves.

We've had excellent success with robotic systems that have had daily belt changes that have been reduced to weekly belt changes. The biggest advantage is the consistent finish over the extended life.