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"Diamond Brite" Belt Cleaning

In the food processing industry, equipment manufactured from stainless steel has been the standard. Stainless steel is strong, relatively easy to fabricate and, most importantly, corrosion resistant.

Fabrication of stainless steel equipment normally involves the joining of components with either mechanical fasteners or one of many welding methods. Welding, which is the process of using extreme heat to join separate pieces into one cohesive unit, is the preferred method when sanitation and corrosion resistance is of the highest importance. Heating stainless steel to its molten state results in its impurities emerging to the steel's surface. If not removed, these contaminants (including free iron) will corrode or leave the stainless surface open to chemical attack.

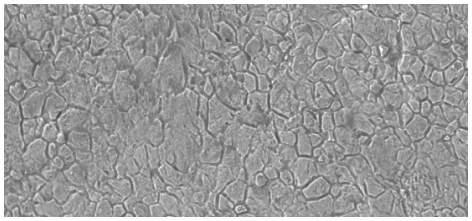
Historically, belt manufacturers would clean welded belts in a citric acid dip-tank then rinse them with a power washer. However, this manual process has limitations as to how thorough a belt can be cleaned and it cannot remove the bluish varnish caused by the weld.

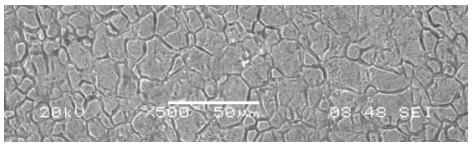
Another method of cleaning, while rarely used, is "Pickling and Passivating" which is oftentimes misunderstood. This process uses dangerous chemicals such as nitric acid to treat the welds. A dip-tank is also required so not only are the welds exposed to the aggressive acids but so is the entire belt. While the acids are very effective in treating the welds, they also negatively affect the rods and mesh by making their natural pores wider, deeper and jagged; leaving the surface irregular, etched and less 'glossy'. It is also essential that all acids are removed, or residual acids will lead to pitting corrosion. Pickle and Passivating is performed by third party companies experienced in such processes but, heightened government regulations have since made it uneconomical due to the dangers to both workers and the environment.

Ashworth has developed its own proprietary cleaning process called "Diamond Brite". This is a fully automatic continuous inline wash process using highly engineered spray nozzles that target the links and the mesh separately with environmentally friendly cleansers specially formulated for Ashworth. The speed of the belt and the temperature and pressure of the cleansers are all computer controlled. Upon exiting the wash, belts are automatically rinsed and cleaned with high pressure water, completely dried with high-velocity air, immediately wrapped and moved to the shipping department.

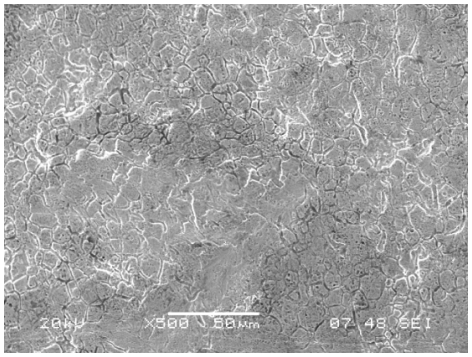
Surface magnification reveals that Diamond Brite is as effective as Pickle and Passivation in removing contaminates within the welds without adversely affecting the base stainless steel. When magnified 500x, the surface of Pickled and Passivated illustrates how this process opens the pores of the metal making them wider and deeper. And these jagged crevices become target zones for pathogens to grow. Whereas after being cleaned by Diamond Brite the surface structure is far less affected leaving it smoother and brighter; making it far easier to clean and sanitize in the field.

Diamond Brite cleaning is standard on all Omni-Grid®, Omni-Pro®, Omni-Grid® 360 and PosiDrive Spiral™ belts all of which are FDA and USDA Accepted.





After “Pickle and Passivate” cleaning



After “Diamond Brite” cleaning