

MS2 COMPARISON TO DROSS SQUEEZING MACHINE

MS2(Molten Solder Surfactant) is a chemical process that when maintained on the solder pot is capable of providing the customer with up to 95% usage efficiency of the solder they buy. Most typically wave solder machines with no dross reduction techniques or methods will usually operate at 40% efficiency or even lower. The efficiency percentage is the amount of solder that is actually used on the electronic assembly as compared to what is wasted in the form of dross. Customers using MS2 typically see a 60% or more reduction in “new” solder purchases due to this improved efficiency. Being that MS2 is maintained on the solder pot and converting the dross as it’s being formed. It locks up the oxide and solid flux residues while cleaning the solder bath. As the solder is always “clean” customers commonly see an improvement in soldering quality. Also, as you are not generating dross on your pot while using MS2 the wave height will need little to no adjustment throughout a production run. Less bridging and misses or skips as well as improved hole fill due to the reduced surface tension of the clean solder bath are quite commonly reported. Each maintenance interval for maintaining MS2 is usually between three to four hours with the actual maintenance taking about five minutes, which in most cases is a reduction in maintenance time. The MS2 procedure is much safer since the loose oxides are tied up in the chemistry not allowing them to become air borne when removed from the solder pot.

DROSS SQUEEZING MACHINE is an off-line piece of equipment that dross from a solder pot must be transferred into. Customers commonly report a 50-60% reduction of what would have been the original weight of dross. So if 60% of the solder a customer buys is lost to dross and the dross squeezer recovers 50-60% of that weight you have increased your efficiency to 70-75% still far less than the 95% you can expect with MS2. There have been methods and chemistries in the past that gave the same type of recoveries and some are still being used (chopping, Kleenox, Peanut Oil). One concern about the dross squeezer machine is that the solder coming out of the machine contains dross, which is commonly seen in the ingot’s that it forms. Others have even noticed that because they aren’t using as much “new” bar and is therefore less pure solder that the solder bath then begins to generate more dross than normal because of the already present oxides. Also, dross reducing elements that are commonly added to solder when manufactured are no longer present also increasing the dross formation.