SALES BULLETIN No. 0116	Material Change – Anodes Zinc to Magnesium

Galvanic Corrosion

The most common damage from galvanic corrosion in a fire pump is to the cast iron body and related components. Fire pumps utilize many different water sources. Comparing galvanic reaction in a fire pump to a DC battery the active metal (iron body is the anode and the less active metal (bronze impeller/wear rings, check valve, flap valves) becomes the cathode and is protected. The by-products of galvanic corrosion, such as rust flakes, can also be detrimental to discharge valves, seals, pilot valves, etc. The way we counteract galvanic corrosions to add a third metal into the circuit. The third metal must give up its ions easier than the other two metals. This third metal is the sacrificial anode.

Prior to mid-2020, Waterous anodes were constructed of zinc. After studying the effects of galvanic corrosion, it was determined that magnesium was found to be more efficient in preventing pump corrosion in freshwater applications.

Waterous made material changes only to the anodes. All dimensions remain the same as the zinc anodes.

NOTE: The intake screens available from Waterous are still made of zinc.

Contact your Waterous Sales Manager for questions on availability and pricing.