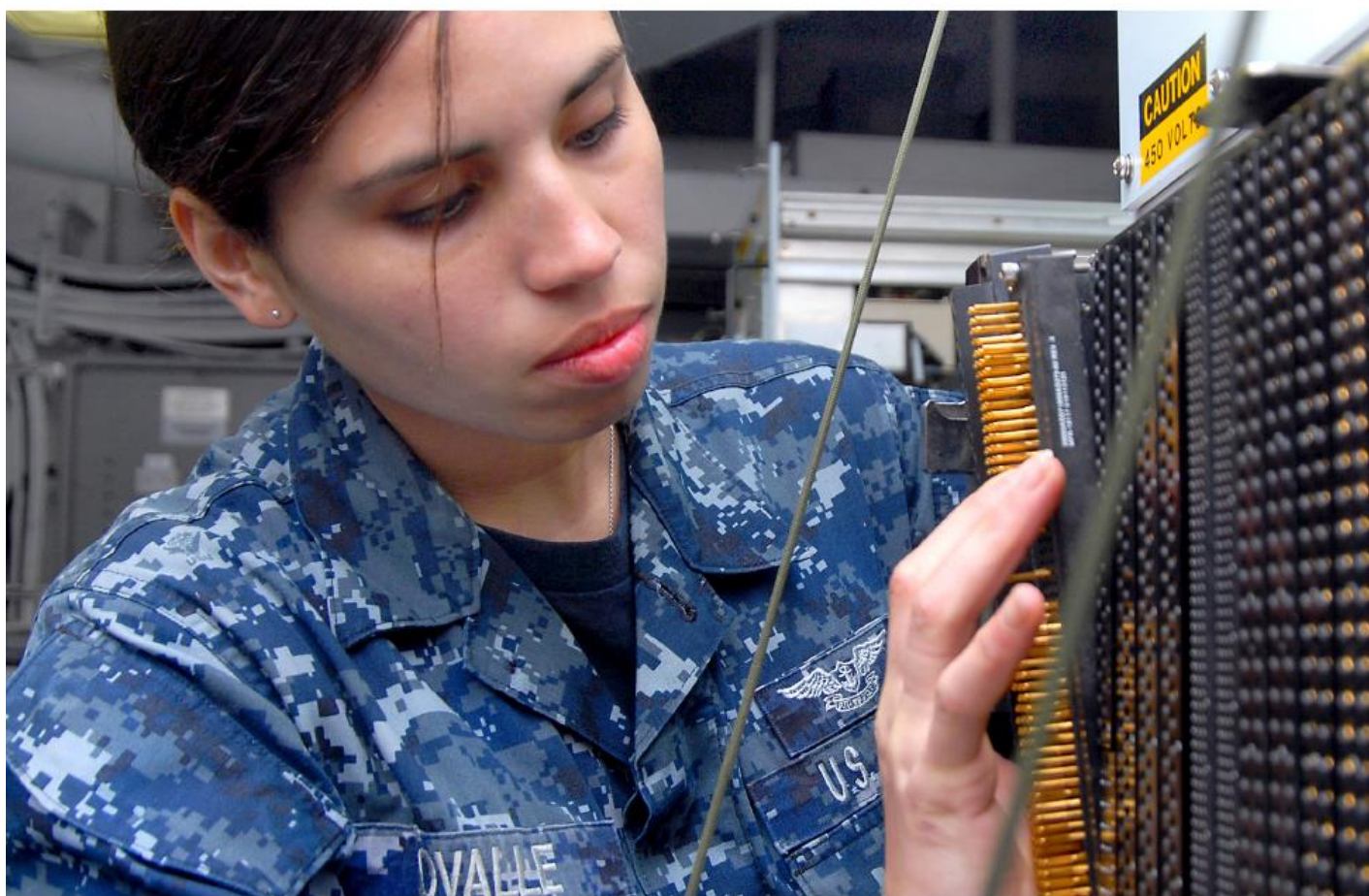


GALVANIC CHART

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MAJR Products Corp.



GALVANIC COMPATABILITY BETWEEN DISSIMILAR METALS

MIL-STD 1250A (Reference)	Volt	Gold	Graphite, Rhodium	Silver	Nickel, Monel	Copper, Bronze	Nickel silver	Stainless Steel	Brass	Chromium	Tin	Tin-lead solder	Lead	Iron, Steel	Aluminum	Cadmium	Galvanized steel	Hot-dip-zinc plate	Zinc	Magnesium	
		0.15	0.05	0.00	-0.15	-0.20	-0.20	-0.20	-0.30	-0.45	-0.50	-0.50	-0.55	-0.70	-0.75	-0.80	-1.05	-1.05	-1.10	-1.60	
Gold	0.15																				
Graphite, Rhodium	0.05	-0.10																			
Silver	0.00	-0.15	-0.05																		
Nickel, Monel	-0.15	-0.30	-0.20	-0.15																	
Copper, Bronze	-0.20	-0.35	-0.25	-0.20	-0.05																
Nickel silver	-0.20	-0.35	-0.25	-0.20	-0.05	0.00															
Stainless Steel	-0.20	-0.35	-0.25	-0.20	-0.05	0.00	0.00														
Brass	-0.30	-0.45	-0.35	-0.30	-0.15	-0.10	-0.10														
Chromium	-0.45	-0.60	-0.50	-0.45	-0.30	-0.25	-0.25	-0.15													
Tin	-0.50	-0.65	-0.55	-0.50	-0.35	-0.30	-0.30	-0.20	-0.05												
Tin-lead solder	-0.50	-0.65	-0.55	-0.50	-0.35	-0.30	-0.30	-0.20	-0.05	0.00											
Lead	-0.55	-0.70	-0.60	-0.55	-0.40	-0.35	-0.35	-0.25	-0.10	-0.05	-0.05										
Iron, Steel	-0.70	-0.85	-0.75	-0.70	-0.55	-0.50	-0.50	-0.40	-0.25	-0.20	-0.20	-0.15									
Aluminum	-0.75	-0.90	-0.80	-0.75	-0.60	-0.55	-0.55	-0.45	-0.30	-0.25	-0.25	-0.20	-0.05								
Cadmium	-0.80	-0.95	-0.85	-0.80	-0.65	-0.60	-0.60	-0.50	-0.35	-0.30	-0.30	-0.25	-0.10	-0.05							
Galvanized steel	-1.05	-1.20	-1.10	-1.05	-0.90	-0.85	-0.85	-0.75	-0.60	-0.55	-0.55	-0.50	-0.35	-0.30	-0.25						
Hot-dip-zinc plate	-1.05	-1.20	-1.10	-1.05	-0.90	-0.85	-0.85	-0.75	-0.60	-0.55	-0.55	-0.50	-0.35	-0.30	-0.25	0.00					
Zinc	-1.10	-1.25	-1.15	-1.10	-0.95	-0.90	-0.90	-0.80	-0.65	-0.60	-0.60	-0.55	-0.40	-0.35	-0.30	-0.05	-0.05				
Magnesium	-1.60	-1.75	-1.65	-1.60	-1.45	-1.40	-1.40	-1.30	-1.15	-1.10	-1.10	-1.05	-0.90	-0.85	-0.80	-0.55	-0.55	-0.50			

Cathodic metals - least susceptible to corrosion (noble to less noble - vertical to horizontal)

Anodic metals - most susceptible to corrosion (less noble to noble - horizontal to vertical)

Green - Metals in harsh or marine environments such as salt spray or salt water. Volt potential difference equal or less than 0.15V

Blue - Metals in normal environments without temperature or humidity control, warehouse storage. Volt potential difference equal or less than 0.45V

Yellow - Metals in controlled environments with temperature and humidity control. Volt potential difference equal or less than 0.95V

Red - Not recommended

In the presence of oxygen, metals oxidize; other atmospheric effects and thermal cycling accelerates this process. When moisture is present, the oxidized salts form electrolytes between the two dissimilar metals become a simple battery. As currents flow from the cathode to the anode a voltage potential develops. The voltage amplitude is directly proportional to currents flowing across the junction of the two metals that accelerate corrosion.

Veteran Owned, ISO-9001:2015 Registered Manufacturer

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