

# PETRO BONDING





Petro Bonding incorporates into one large system all of the conductive surfaces on a facility that are not part of the electrical system. This minimizes the risk of static discharge and prevents lightning energy entering the facility from “flashing over” before it can be directed into the ground. Petro Bonding provides a set of “bonding best practices for oil and gas facilities,” applying API, IEEE, NFPA, UL, and IEC standards.



**PETROGUARDIAN**

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## Bonding Recommendations for Oil and Gas

### Common issues related to bonding of Oilfield Assets

Bonding is the intentional connection of all exposed metallic items on an oilfield asset that are not designed to carry electric charge. This protects people from electrical shocks by eliminating dangerous potential difference between metal surfaces. Bonding minimizes electrostatic accumulation and discharge and, during lightning events, it eliminates the risk of flash-over between metal surfaces. Unfortunately, incorrect size, placement, and routing of bonding conductors is common. Electrical isolation between storage tanks, between fill pipe and tank truck, between communication cables and wire and ground reference, and between power system grounding and systems all increase the risk of electrostatic discharge and lightning current flash-over. Petro Bonding protects against these dangers.

### Bonding Services for Oil Field Assets

- ✓ Point-to-point resistance measurement
- ✓ Equipotential bond verification
- ✓ Bonding equipment rating verification
- ✓ NFPA 780 and NFPA 77 compliance study
- ✓ Lightning and static damage / root-cause analysis
- ✓ Shielding and bonding recommendations
- ✓ Design and supply of bonding systems for storage tanks
- ✓ Design and supply of bonding systems for process skids
- ✓ Design and supply of bonding systems for truck-loading stations
- ✓ Design and supply of bonding systems for rail car stations
- ✓ Design and supply of bonding systems for thief hatches
- ✓ Design and supply of bonding systems for pipeline structures