



STAINLESS STEEL

The Simple, Long-Term Solution



MAKE YOUR INITIAL INSTALLATION, A LASTING ONE

While engineers, facility designers, or plant managers might initially think of historically used galvanized steel (hot dip galvanized, zinc plated, etc.) or polyvinyl coated chloride (PVC-coated) when developing electrical conduit systems in corrosive environments, the best long-term solution is often stainless steel. Frequently referred to as a material you can “install once and forget about,” stainless steel is easy to install and naturally corrosion resistant which results in less labor and maintenance over time and a longer-lasting conduit system.



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EASY TO INSTALL

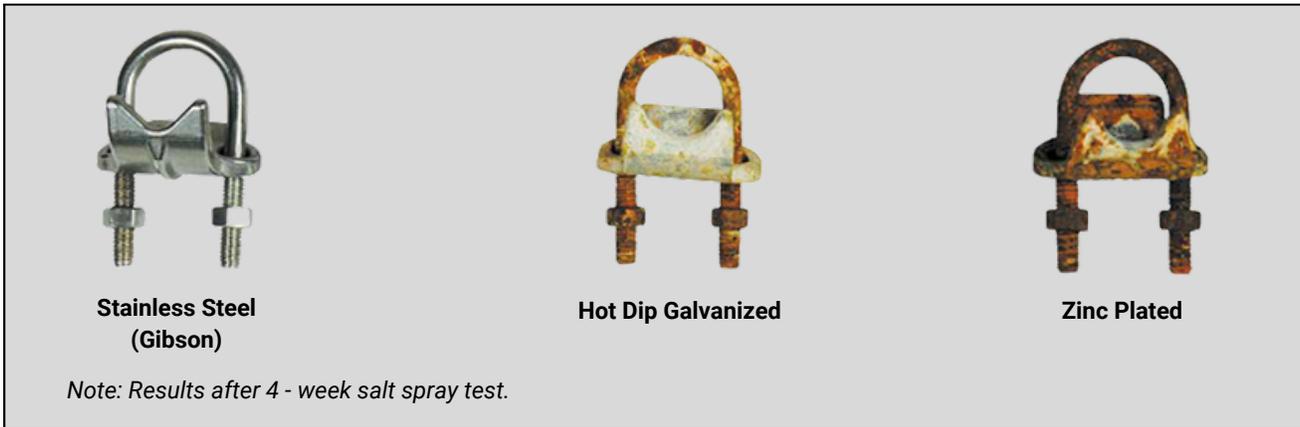
With labor costs continuously on the rise, one main factor to consider with material selection of a conduit system is the ease of installation. Some materials (such as PVC-coated) are very labor-intensive and often require specific installation methods and tools, as well as special assembly techniques. Lengthy and tedious installations can drive up costs and extend lead times, both of which can negatively impact project viability. Stainless steel does not require special installation techniques and can be installed using ordinary hand tools. The same installation techniques for galvanized rigid conduit systems apply to stainless steel, with a precaution to galvanic corrosion and a slightly increased die wear.



Average Hourly Earnings of All Employees, Construction 2006-2023

U.S. Bureau of Labor Statistics, Average Hourly Earnings of All Employees, Construction [CES2000000003], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/CES2000000003>, October 15, 2023.

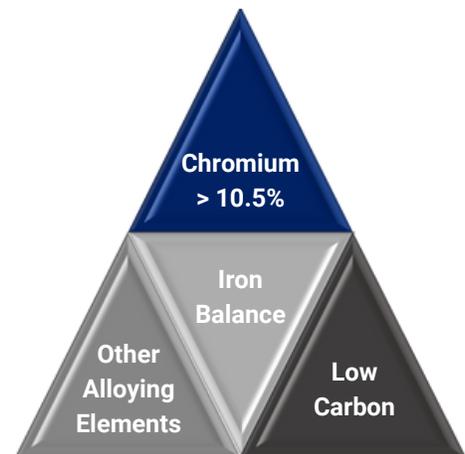
BUILT TO LAST



In addition to installation costs, another factor to consider is the maintenance and upkeep of a material's surface over time, even after it is installed. Coated carbon steels resist degradation and corrosion initially, but surface treatments will lose effectiveness over time requiring coating reapplication, and/or complete material replacement to maintain system integrity. Stainless steel, on the other hand, is a worry-free material that does not need to be touched up or maintained over time since its chemical makeup is what gives it its corrosion resistant properties.

Stainless steel is an alloy, which is defined as a "homogenous mixture made from combining two or more metallic elements." Stainless steel is a low-carbon steel with a high chromium content. When exposed to the atmosphere, the chromium reacts to form a passive oxide layer on the surface, slowing further oxidation and providing a "self-healing" quality that helps extend service life. This layer forms and reforms in oxygenated environments, allowing stainless steel to last up to 10 to 20 times longer than other metals. Since stainless steel is not a coated or plated product and is the same chemical makeup throughout; it does not require surface treatments or preventative maintenance to protect against corrosion.

Stainless Steel Composition



Different grades of stainless are determined by the varying element concentrations.

LOWER YOUR SYSTEM'S LONG-TERM TOTAL COST

Regardless of whether a conduit system needs to be maintained over time or needs to be replaced completely due to failure from corrosion, either action can result in plant shutdowns, lost production and business, employee downtime, heightened safety risks, and more. All of these can become very costly and even detrimental to a company's reputation.

With improved quality and performance, stainless is a simple solution – less fuss, less maintenance, less cost. It doesn't need to be complicated, changed, altered, or coated. Stainless steel stands alone and protects against corrosion and degradation. Using stainless steel is a great way to future-proof an electrical system. Virtually hassle-free and longer lasting, it lowers a system's long-term, total cost.



CHOOSE GIBSON



Gibson Stainless specializes in the manufacturing of high-performance, long-lasting stainless steel products for demanding applications. For more information on the benefits and cost savings of using stainless steel, or to learn more about our products, contact us today.

