SUPPLY
CONSIDER IT DONE

TECHTALK

TUESDAY, March 1, 2022

Essential Ladder Safety

Ladders are essential tools. At some point, most of us have used a ladder in the workplace or household.

Are you keeping your mind on safety while utilizing this tool? These are seven essential ladder safety tips for you and your team.

1. Feet Check

The quality of a ladder's feet must be kept in mind. Should the rubber be worn and torn, a serious accident could happen while working on a ladder. You might not realize that you need to replace the feet until it's too late. The next time you're preparing to set up a ladder, take a look at the feet. See if there's any damage. Even if it looks relatively benign, you should replace the feet.

2. Weather Conditions

Storms and other inclement weather mean that you should be inside, and definitely not on a ladder. It might seem like you can handle a breeze, but ladders are more delicate than you realize. There's no sense in risking injury for the sake of completing a project. When scheduling tasks that require ladder usage, take a look at the forecast for clear, wind-free days.

3. Parts Check

There's no such thing as a disposable part on a ladder. Every aspect of it needs to be intact to prevent injury. If you see any signs of missing screws or other pieces, do not get on the ladder. Before using a ladder, feel the rungs to see if they're loose in any way. Should your ladder be missing enough parts, you should replace it entirely.

4. Move Slowly

Even the sturdiest of ladders can't handle abrupt motions. Before you make any sort of movement on your ladder, consider if there's any risk. Don't put too much weight on one side of the ladder or move up and down the rungs in a haphazard manner. There's no reason to rush a project involving a ladder. If you're assisting someone else using a ladder, speak up if you see them moving too quickly.

5. Off The Top

There's a label on the top of ladders that says, "This is not a step." You need to pay heed to this. The top of ladders aren't meant for standing on and there's absolutely no reason to tempt fate. It's additionally important to pay attention to any labels and safety manuals that come with the ladder. There could be crucial information regarding the specifics of your ladder that you wouldn't realize without consulting the instructions.

6. Fatigue Awareness

The health of a ladder user is as important as the health of the ladder itself. If you're tired or having trouble staying focused, you shouldn't be using a ladder. It's also important that you are able to keep your feet safely planted. If you're recovering from a foot or leg injury, don't use a ladder until you have clearance from your doctor to do so. If you're having trouble moving around in your regular life, you're going to have even

7. Solid Foundation

Before starting a ladder project, you need to have an even surface that it can comfortably rest on. If you have doubts about whether a surface is safe, you shouldn't use it. Make sure that there are no other hazards such as water or mud that could cause your ladder to lose resistance.

Ladder safety means that you value not only your tools but also your safety. Reading these tips shows that you take your health and safety and seriously as possible. When working with your ladder, remember how even a slight misstep could be devastating. There's no project that's so important that it warrants using a

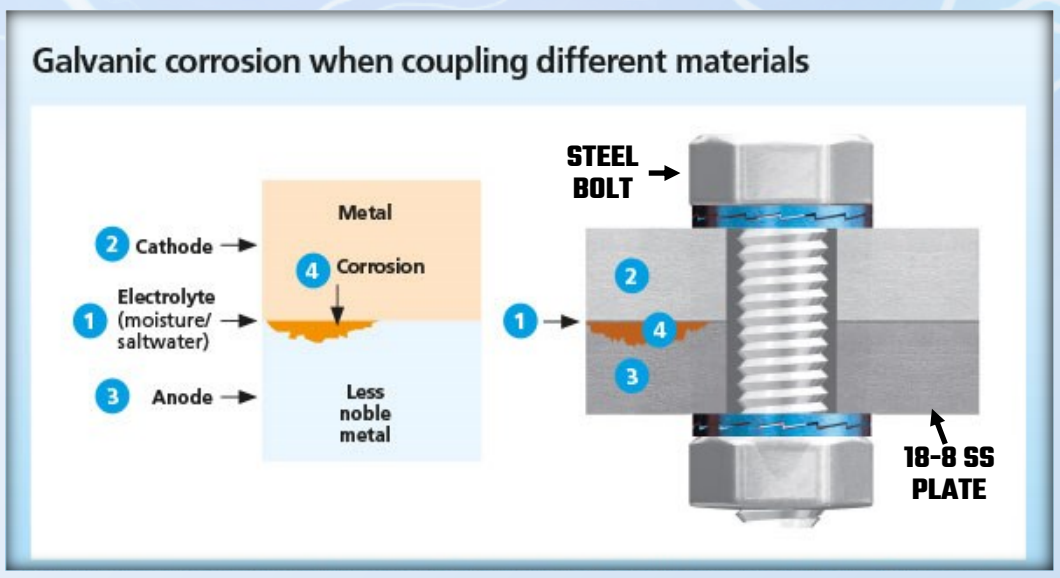
STOCKPO SUPPLY TECH TALK

Mark Novak, Chief Fastener Specialist Tuesday, March 15, 2022

"COMBATING CORROSION IN THE MARINE ENVIRONMENT"

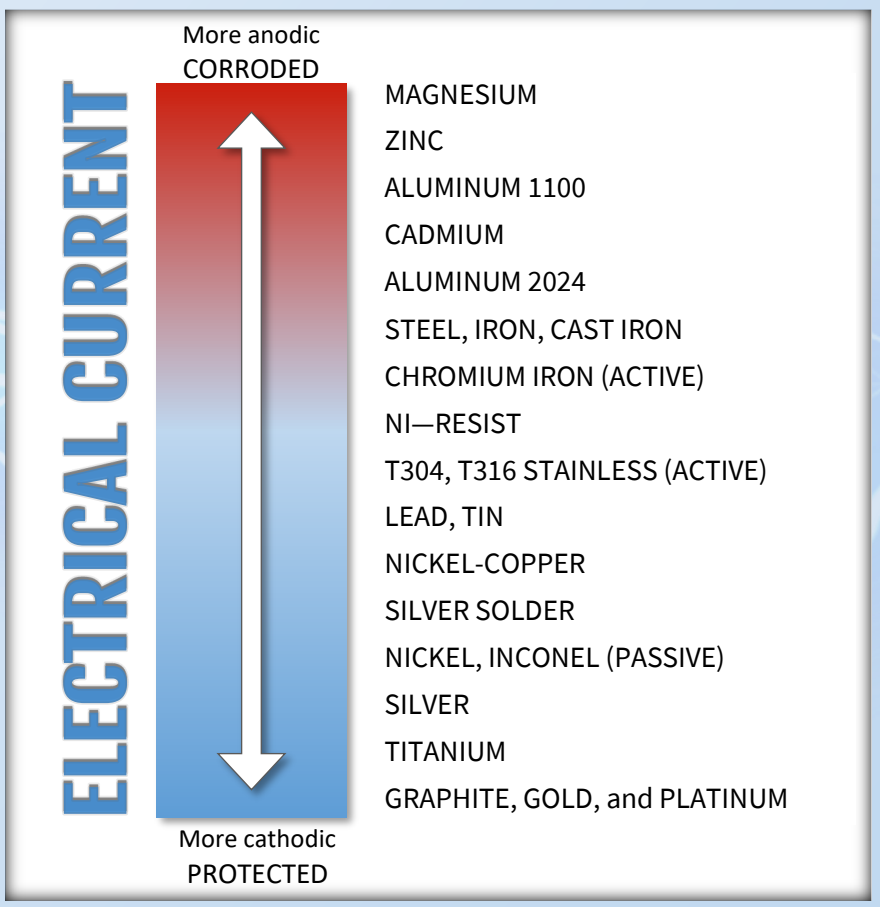
The waters of the world offer a challenging contest between the forces of corrosion and the fasteners used in building ships and boats. The reliability of these crafts is the most important factor in today's maritime economy. And, corrosion resistance is the single most important aspect of reliability. Without the careful selection of the fastener; corrosion would be the clear winner in this contest.

In the marine environment the type of corrosion encountered is called **Galvanic Corrosion**. In this type of corrosion two different metals touch each other in the presence of an electrolyte*, a battery is created and current flows. As the current flows one metal will corrode, much like ash is the result of wood burning. Water is an electrolyte. Saltwater is a far better electrolyte than fresh water.



The diagram above shows the relationship between the dissimilar metals in the presence of an electrolyte. The current generated flows through the steel bolt to the stainless plate. Since the steel bolt's electrical potential is higher than the stainless steel plate the steel bolt corrodes.

All metals have an electrical potential. The metal with the higher electrical potential is the one corroded. The metal with the lower electrical potential is actually protected from corrosion. The closer the electrical potentials the less likely galvanic corrosion will occur. Size is also an important factor in the equation. For example, if the 18-8 SS plate had been relatively small in comparison to the steel fastener the corrosion would have been minimal. This is due to the fact that the amount of flow is the important factor not the voltage of the metal. The larger the material the greater the current flow. The fastener alloy, if it is not the same as the material being joined, should be lower in the galvanic series than the material being joined.



For example, if the hull is made from 18-8 stainless steel. A bolt made from 18-8 or a material below it on the *above chart* would be the best choice for fastening. The location of the fastener is also an important consideration. The area below the waterline is much more severe, than that area well above the waterline. However, the most corrosive area is the intermediate area known as the splash zone. This constant wetting and drying creates particularly difficult corrosion problems.

STOCK'D SUPPLY TECH TALK

Mark Novak, Chief Fastener Specialist — Tuesday, March 15, 2022

"CHARACTERISTICS OF DIFFERENT FASTENER MATERIALS"

A common misconception is that Brass is the standard material for all marine fasteners. It is in reality a poor choice. A Nickel-Copper alloy or 300 series Stainless Steel alloy outperforms Brass .

ALUMINUM: Limited to joining aluminum parts such as riveting aluminum hulls. Poor resistance to seawater.

BRASS: A copper and zinc alloy. Combines strength, toughness, and corrosion resistance. (except in seawater) It is nonmagnetic.

NAVAL BRONZE: Similar to brass with the addition of tin. Preforms better in seawater. Nonmagnetic.

NICKEL—COPPER ALLY: 2/3's nickel to 1 /3 copper. The preferred fastener material for marine fasteners.

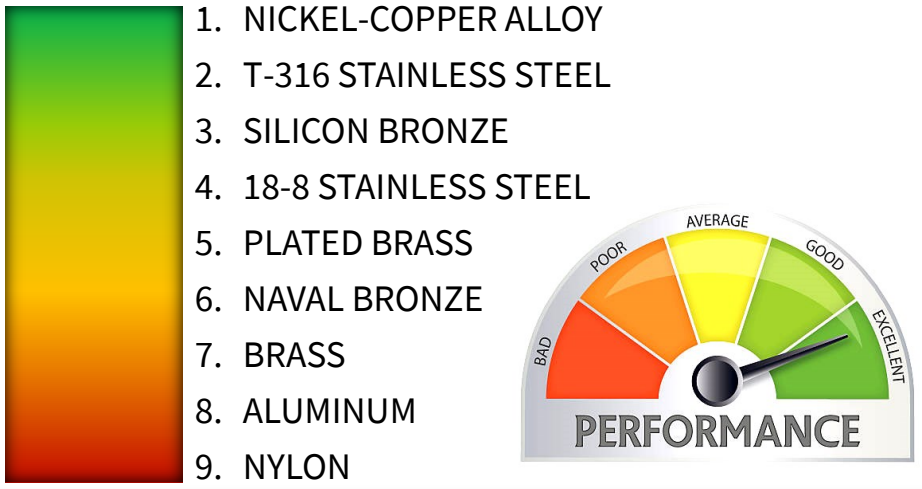
NYLON (PLASTICS): Corrosion resistance is excellent. Material absorbs moisture and increases in size. Nylon insert locknuts preform better, but bolts will be harder to remove as the threads swell in size.

SILICON BRONZE: A copper and silicon alloy. Stronger than, mild steel and good performance in seawater.

STAINLESS STEEL(18-8): A chromium-nickel steel. Superior to brass, naval bronze and aluminum. T-316, an 18-8 type with the addition of molybdenum has even greater corrosion resistance.

TITANIUM: Used where strength to weight considerations are Important. Seawater resistance is excellent. The high cost of the material must be considered.

FASTENER MATERIALS RATED IN ORDER OF PERFORMANCE



EFFECTS OF CORROSIVE ACTION ON FASTENER ALLOYS

1. NICKEL-COPPER ALLOY: Develops grey/green film
2. STAINLESS STEEL: Develops light brown film
3. BRONZE AND BRASS: Develops green/brown film
4. ALUMINUM: Develops white powdery film w/pits

TENSILE STRENGTHS OF FASTENER MATERIALS

ALUMINUM 2024T4	48,000 PSI
BRASS	68,000 PSI
NAVAL BRONZE	60,000 PSI
NICKEL-COPPER	97,000 PSI
NYLON	12,000 PSI
SILICON BRONZE	80,000 PSI
TYPE 18-8 SS	80,000 PSI
TYPE 316 SS	90,000 PSI
TITANIUM	100,000 PSI

In the construction or repair process there are **FOUR FACTORS** to take into consideration when selecting the fastener. **First**, the **MATERIAL** of the item being attached (i.e. Hull and Trim composition). **Second**, relative **SIZE** of the item to the fasteners (i.e. a large number of small fasteners are better than a small number of large fasteners). **Third**, the **ELECTRICAL POTENTIAL** of metals (i.e. the metal with the higher electrical potential will corrode first. And **fourth**, the **LOCATION** of the fastener (i.e. the splash zone, the waterline, or the marine atmosphere). Very often the fasteners in the marine environment must be taken apart. In these cases stainless steel and non-corrosive fasteners assume their greatest economic advantage. It hardly needs stating that a bolt frozen by corrosion is much more expensive to remove and replace than the initial cost of the stainless steel or non-corrosive fastener that would not have become frozen.

Your Stock'd Supply representative is trained to assist you in the decisions you make each day in buying fasteners.

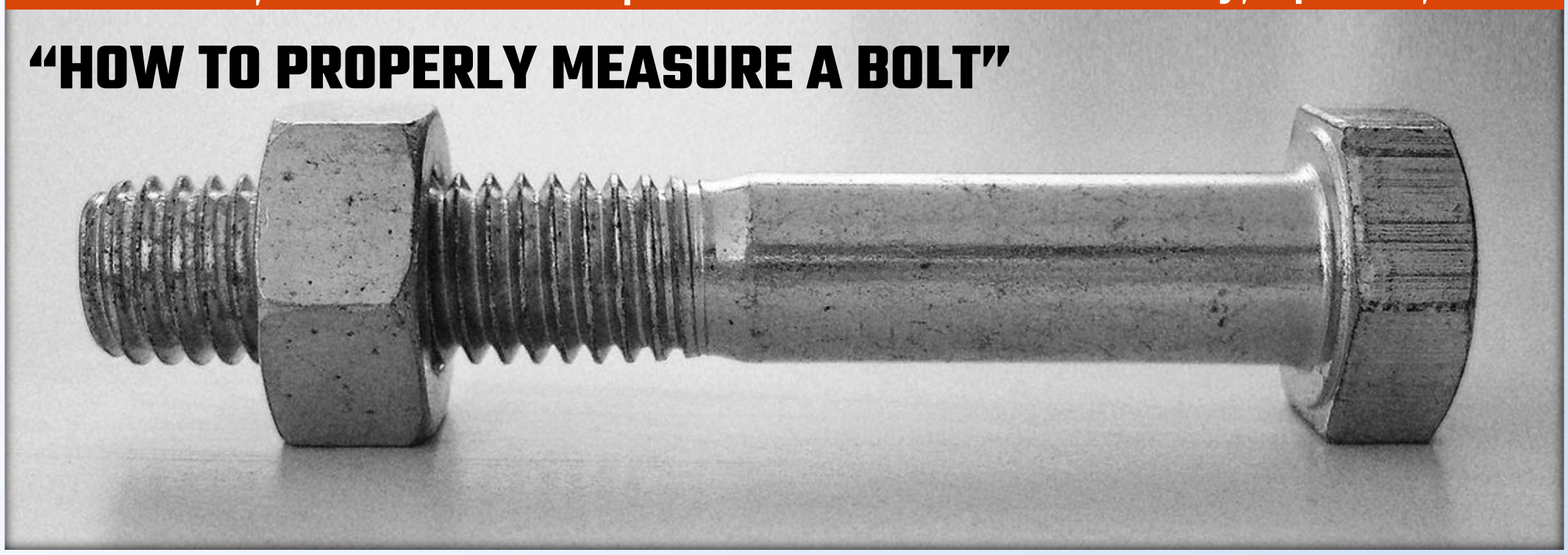
They stand ready at your nearest branch to help you solve your fastener dilemma.

Mark Novak, Chief Fastener Specialist

STOCK DR SUPPLY TECH TALK

Mark Novak, Chief Fastener Specialist — Tuesday, April 19, 2022

"HOW TO PROPERLY MEASURE A BOLT"

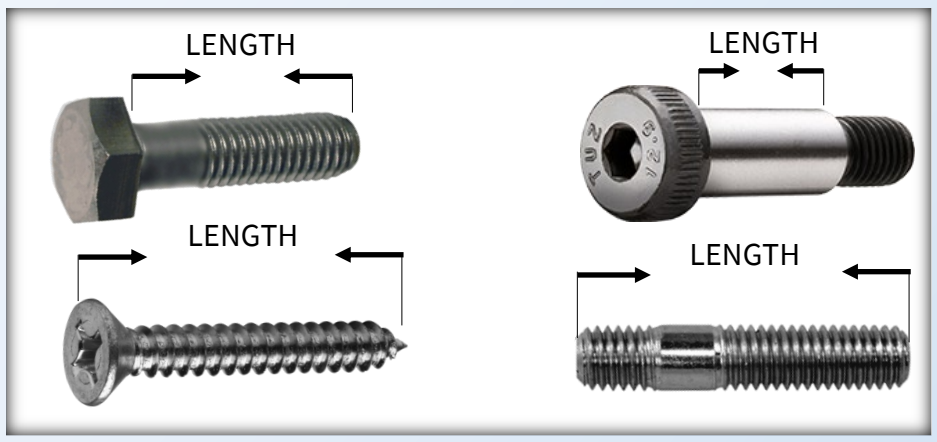


LENGTH

The length of a fastener is measured from the intersection of the largest part of the head & the bearing surface to the extreme point of the screw. There are exceptions:

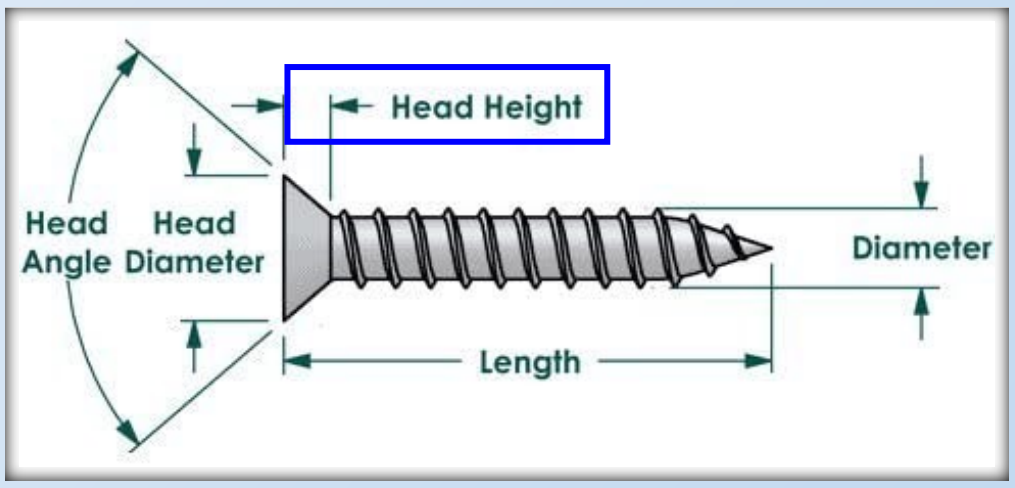
(1) A SHOULDER SCREW is the length of the shoulder ONLY!

(2) A HEADLESS FASTENER is from one end to the other.



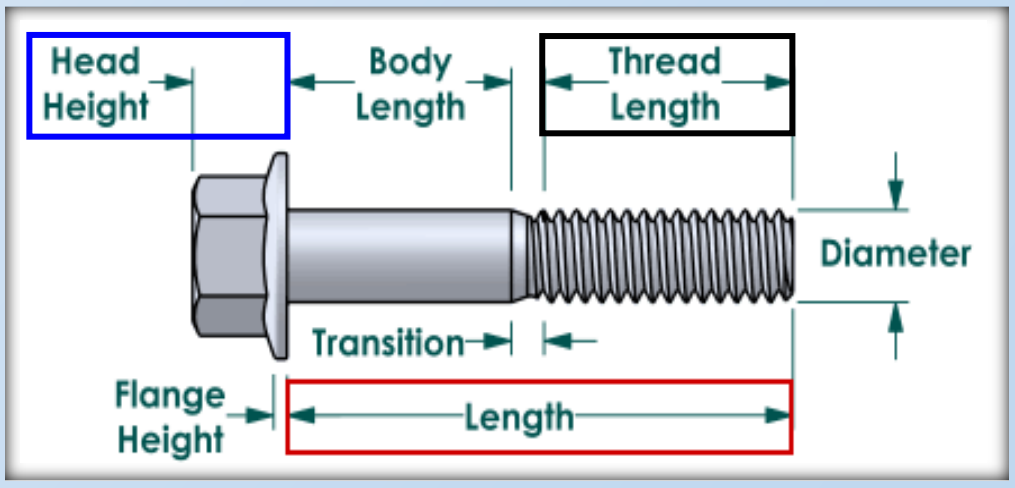
HEAD HEIGHT

The head height is the overall distance from the extreme top to the bearing surface. The exception is countersunk heads. In this case , is measured from the extreme top to the intersection of the bearing surface with the shank of the fastener.



THREAD LENGTH

Thread Lengths Data: The length-of-thread on most screw and bolt products usually has a direct relationship either to the diameter, of the thread or the length of the part. This chart explains the formula upon which thread lengths are based for the various products. It also indicates the approximate diameter of the unthreaded portion of the shank depending on whether the product is a rolled or cut thread type.



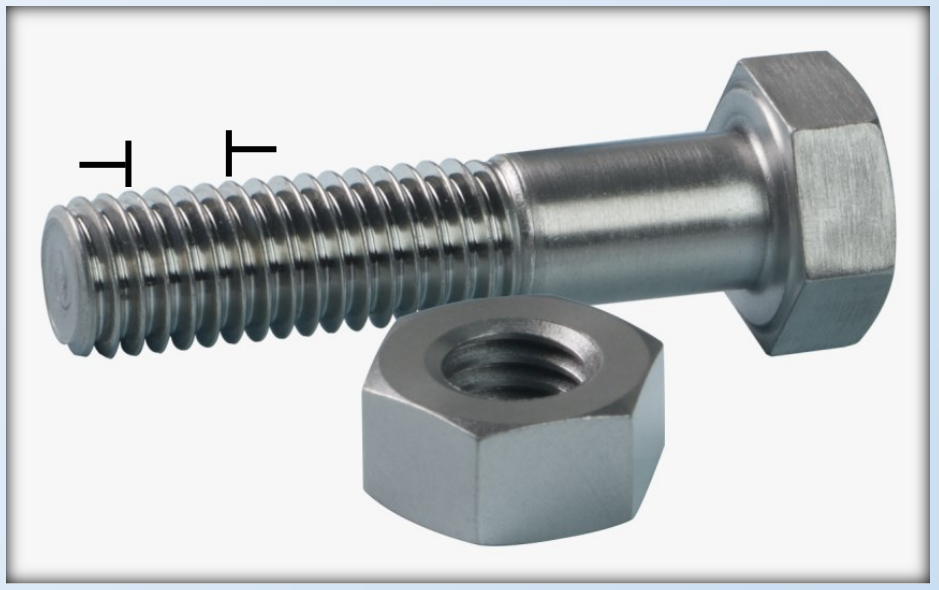
STOCK'D SUPPLY TECH TALK

Mark Novak, Chief Fastener Specialist — Tuesday, April 19, 2022

PRODUCT	THREAD LENGTH FORMULA	DIAMETER OF UNTHREADED SHANK (IF ANY)
Finished Hexagon Head Machine bolts and Cap Screws	**6" and shorter:** 2 diameters plus 1/4" **Longer than 6:** 2 diameters plus 1/2"	Equal to major diameter of thread
Finished Hexagon Head Silicon Bronze Machine Bolts	Fully threaded up to 2" in length. Over 2" in length minimum of 2" of thread.	No less than minimum pitch diameter or more than maximum major diameter.
Carriage Bolts	**6" and shorter:** 2 diameters plus 1/4" **Longer than 6":** 2 diameters plus 1/2"	Normally equal to major diameter of threads; can be pitch diameter or over depending upon specification.
Type A Tap End Studs	Normally 2 diameters plus 1/4" on the nut end (Class 2A), and one and one-half diameters on the stud end (Class 5).	Normally equal to major diameter or threads.
Type B Double End Studs	Normally based on the formula of 2 diameters plus 1/4"	
Type C Continuous Threaded Studs	Threaded entire length	
Hanger Bolts	Nut end is crass 2A national coarse and is threaded to shoulder. Lag thread length is 1/8' to 1/2' more than hall the overall length of the bolt.	Equal to major diameter of thread.
Set Screws	Fully threaded	
Tapping Screws	Fully threaded	
Wood Screws	Approximately 2/3 of length of screw.	Equal to nominal diameter of thread.
Machine Screws and Screw Bolts	Fully threaded up to 2' in length. Over 2' in length, minimum of 1-3/4' of thread	Not less than minimum pitch diameter or more than maximum major diameter.

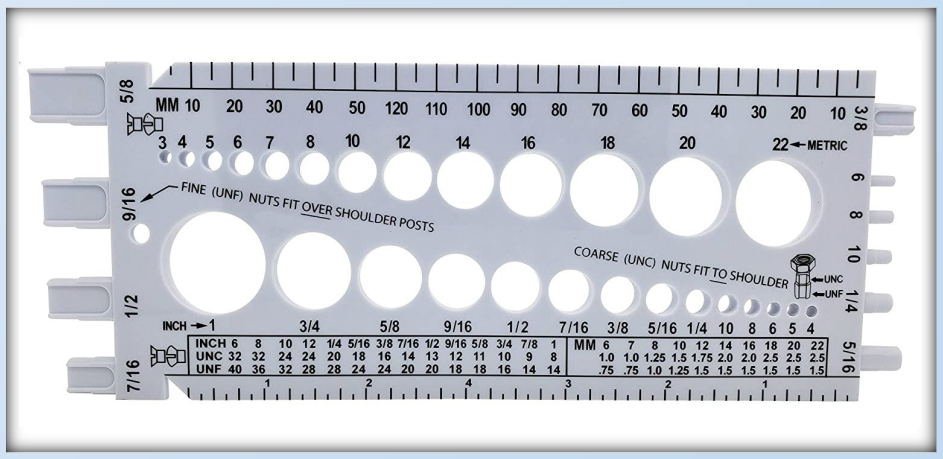
LOCKING FEATURE LOCATION

Standard placement of locking patch, pellet, or strip allows for a minimum of a 1-1/2 thread lead.



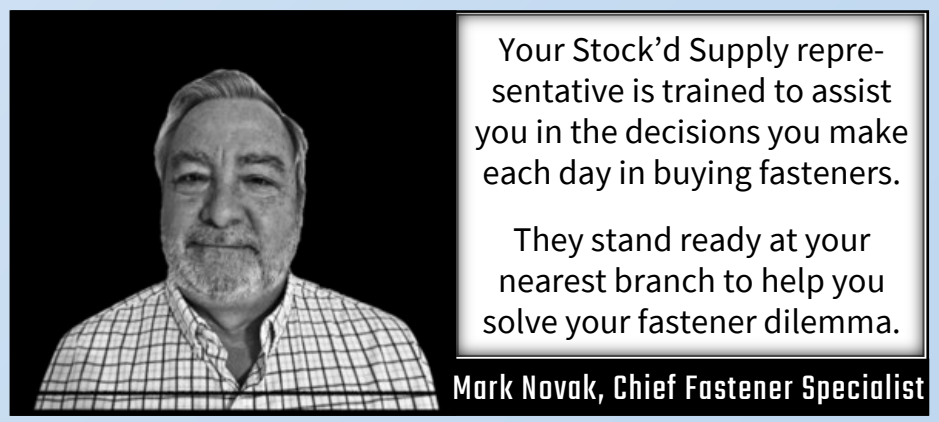
STANDARD PATCH OR INSERT PLACEMENT

APPROXIMATELY FIVE (5) THREADS



THREAD MEASURING GAUGE

Available from your Stock'D Supply Team



STOCK'D SUPPLY TECH TALK

Mark Novak, Chief Fastener Specialist

Tuesday, May 23, 2022

"ANODIZING: WHAT IS IT?"

Anodizers have managed to take a base metal aluminum that is relatively soft, easily corroded or abraded, and electrically conductive, and turn it into something that is hard surfaced, corrosion and abrasion-resistant, and non-conductive. All aluminum has an oxide film on any exposed surface, between 10 and 20 millionths of an inch thick. The aluminum molecules literally reach out and "grab" passing oxygen molecules to form this surface.

Influence of Corrosion on Fatigue of the Fastening Bolts

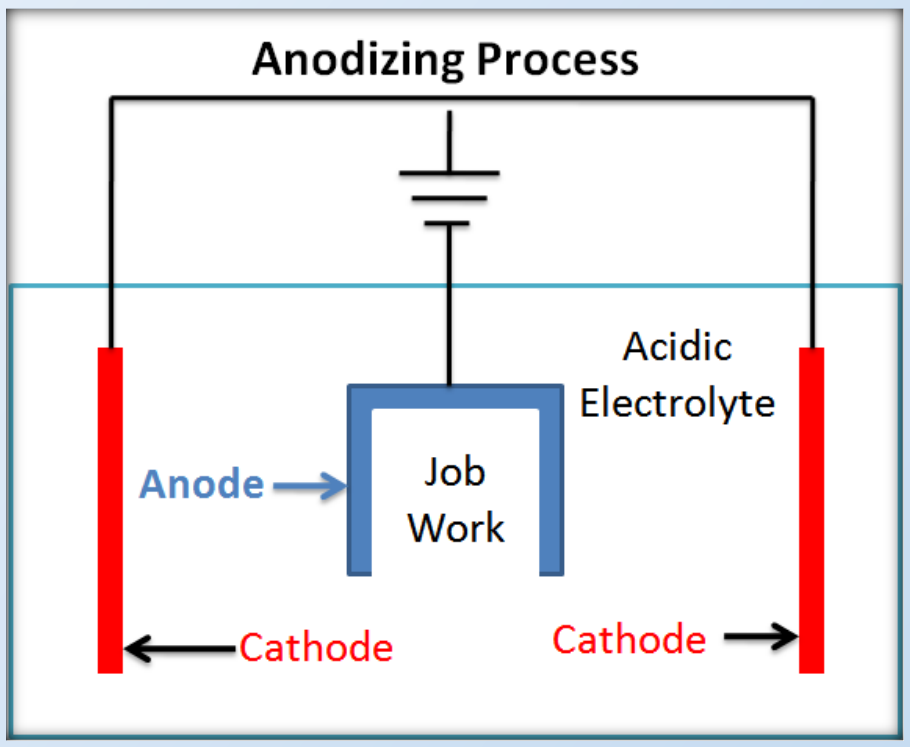
THE PROCESS OF ANODIZING uses a combination of chemicals and electricity to produce a thicker and more controllable aluminum oxide ''skin." This skin is normally between .00002" and .003" thickness depending on the alloy and the process.

Unlike most coating processes, the skin is actually a part of the metal. And, can be made into virtually any color of the rainbow.

RACKING PROCESS:

Anodizing requires many steps, and is a very labor intensive operation. The first step in the operation is racking.

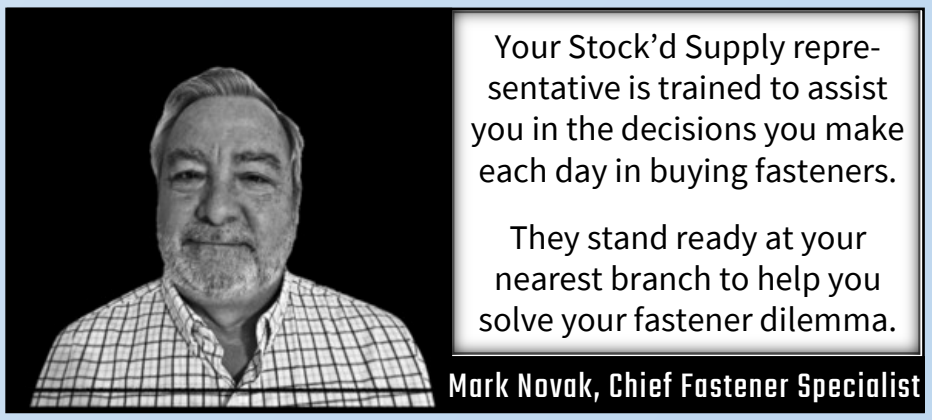
Since the process is electro-chemical, the parts must be racked so that the electric current passes through the parts when they are placed in the anodizing tank.



ELECTRIAL CONNECTION: In fact, anodizing gets its name from the fact that the parts become the positive anode in the electrical connection. This is the opposite of most metal plating processes, in which the metal to be plated is the negative terminal, or cathode.

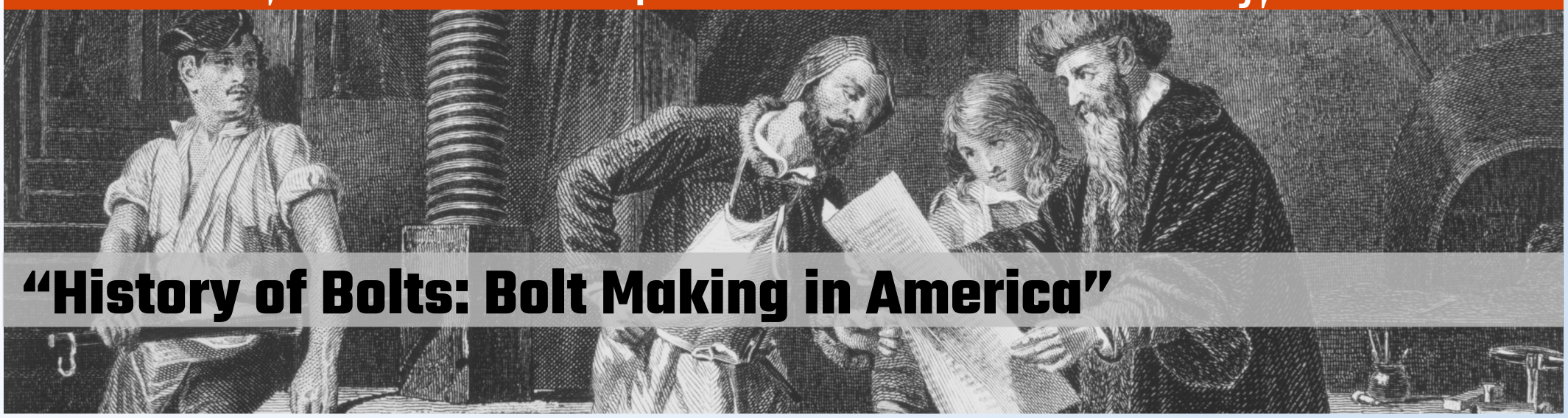
Anodizers use aluminum racks to mount and dip low production parts, but because the racks themselves become anodized during the process (and therefore non-conductive), they must be reworked in order to be reused.

High production parts are usually attached to titanium racks, which are not affected by the process and can be reused many times.



STOCK'D SUPPLY TECH TALK

Mark Novak, Chief Fastener Specialist — Tuesday, JULY 12 2022



"History of Bolts: Bolt Making in America"

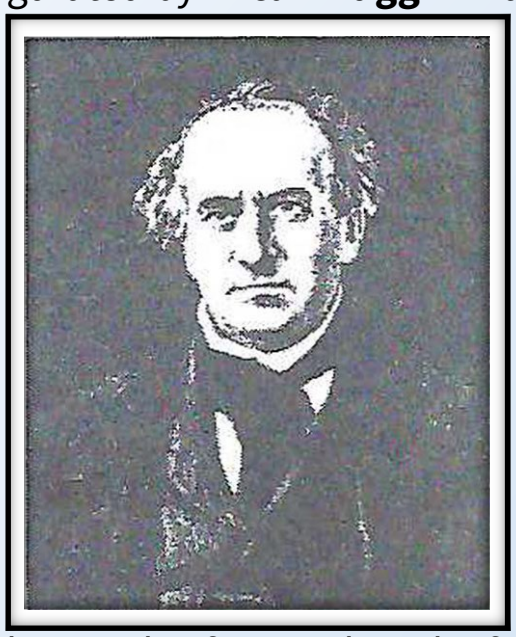
THREADED FASTENERS HAVE COME A LONG WAY

since the first manufactures, and so has the terminology used to describe threaded fasteners.

THE FIRST BOLT FACTORY IN AMERICA

This venerable structure is one of the most interesting relics preserved in connection with the earliest history of the bolt and nut industry of America; and it presents a graphic illustration of the humble nucleus from which sprang what has become one of the most extensive and useful industrial activities of the present day.

Originally, fasteners were manufactured by Blacksmith's. The bolt-and-nut branch of the fastener industry was inaugurated by **Micah Rugg** in Marion, Connecticut, in 1839.

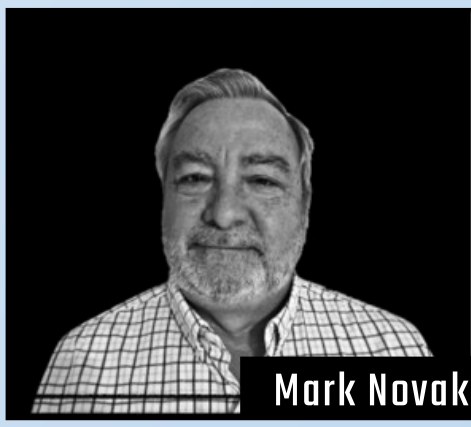


Rugg was a Blacksmith who opened his shop there in 1818. Over the years he gradually narrowed his wares to a few specialties, such as scythes, traps, and bolts. His crude thread-cutting lathes were similar to those of Jacques Besson 300years earlier. His **only "power" was a bull on a treadmill,** operating the bellows to his forge, where he formed the bolt heads.

The building was 30 feet long, 20 feet wide and the posts were 9 feet high. The forging shop was in the left hand end of building, and the packing, shipping and storage room in the fight hand end. This room occupied two-thirds of the floor space of the building.

In 1839, Rugg invented a machine for forming the heads on bolts. It consisted of a vise-like heading block and a foot-powered treadle connected to a lever that held the bolt blank firmly while the head was being formed by a hand hammer. The result was a great increase in the production of bolts and ultimately a reduction in price.

So beginning in 1839 Rugg devoted his time entirely to making carriage bolts and nuts. In 1840 he and Martin Barnes, a local farmer, formed the partnership of **Rugg & Barnes, the first company to manufacture bolts and nuts for the trade.**



Your Stock'd Supply representative is trained to assist you in the decisions you make each day in buying fasteners.

They stand ready at your nearest branch to help you solve your fastener dilemma.

Mark Novak, Chief Fastener Specialist

STOCK'D SUPPLY TECH TALK

Tuesday, December 13, 2022

GOT A COMPLEX PROBLEM?

WE'VE GOT A SIMPLE SOLUTION.

OUR SOLUTIONS

Stock'd Supply - Custom Components is a leading provider of component solutions for manufacturers. Utilizing our global supply base, Stock'd Supply is equipped to source and manage all aspects of our customers' component needs. Our customized solutions address issues related to small part procurement and manufacturing to eliminate downtime and reduce total cost of production.

With a combined experience of over 130 years serving the needs of manufacturers across a broad range of industries, our Custom Components team works collaboratively with purchasing, materials, and supply chain managers to provide creative, cost-effective solutions to your production challenges.

The Stock'd Supply - Custom Components division is built from a "can do" spirit. The experienced engineers of Stock'd Supply are eager to create solutions to address the wide-ranging challenges of our manufacturing customers.

OUR EXPERTISE

The 21st-century manufacturer has more responsibility than ever before. Sourcing & manufacturing custom components (parts for parts) is a critical component of any complex production process.

At Stock'd Supply - Custom Components, we recognize that sourcing small parts is a complex and time-consuming challenge, but not having them when you need them can lead to expensive production downtime. Our Vendor Managed Inventory (VMI) program has been proven to reduce downtime and Total Cost of Ownership for customers around the globe.

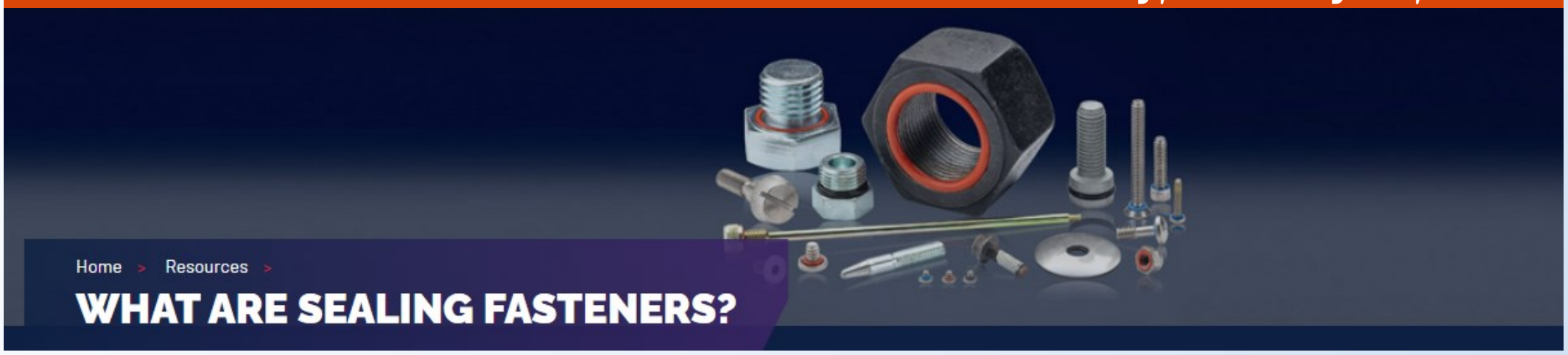
Our expertise enables us to manage these component needs so our customers can focus resources on their core competencies.

AUTOMOTIVE AFTERMARKET	AUTOMOTIVE OE	ELECTRICAL EQUIPMENT
SPORTING EQUIPMENT	COMMERCIAL INDUSTRY	HEAVY EQUIPMENT

STOCKED SUPPLY TECH TALK

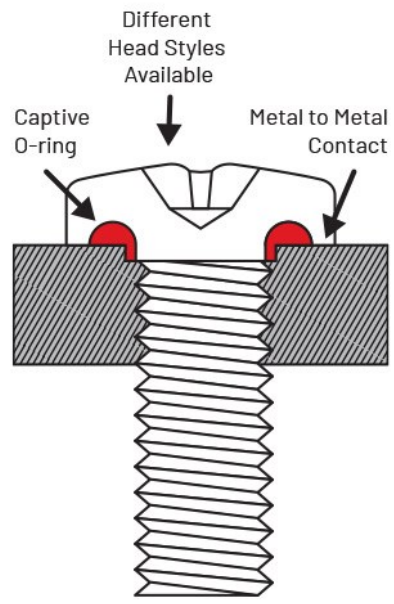
Source: ZAGO

Tuesday, January 24, 2023



ZAGO

Fasten Forward



SEAL IN / SEAL OUT: EQUIPMENT APPLICATIONS

ZAGO sealing fasteners are used in countless industries to seal all sorts of equipment, including:

- Robots and Cobots
- Electric Vehicle Charging Units
- Aircraft Engines & Motors
- Drones and Droneports
- Night Vision Goggles
- Sonar Systems
- Data Centers
- Sensors
- Rechareable Batteries
- Satellites
- Circuit Boards
- 3D Cameras / LiDAR Technology
- Invasive / Non-Invasive Medical Devices
- HVAC Systems
- Conveyor Belts

STOCKD SUPPLY

TECH TALK

Source: FASTENER NEWS

Tuesday, April 18 2023

ASTM International:

Who They Are & The History of The Organization.

ASTM International (formerly known as the American Society for Testing and Materials) is a globally recognized leader in the development and delivery of international voluntary consensus standards. Founded in 1898, ASTM International is one of the world's largest international standards organizations, with a membership of more than 30,000 technical experts from over 150 countries. The organization's mission is to improve the lives of people around the world by providing access to technical standards that promote safety, quality, and environmental protection.

1898

Seventy people meet in Philadelphia to form what would become ASTM, founded by Charles B. Dudley.

1929

The Cement Reference Laboratory – precursor to CCRL – is established.

1950

ASTM standards for buildings and construction help drive growth of cities and suburbs.

1901

The first standard – on steel rails – is issued.

1942

ASTM introduces emergency standards to support WWII efforts.

1962

Seattle's Space Needle, built for the World's Fair, features steel legs built to ASTM standards.

ASTM International has a specific group that directly relates to fasteners:

ASTM International has a committee specifically focused on fasteners and related hardware, called the ASTM F16 Committee on Fasteners. This committee develops and maintains standards for fasteners, including bolts, nuts, screws, washers, rivets, and other types of hardware. The standards cover a wide range of topics, including material specifications, mechanical properties, testing methods, coatings, and corrosion resistance. The standards developed by the F16 committee are used by manufacturers, distributors, and users of fasteners to ensure that products are made to consistent and reliable specifications.

READ FULL ARTICLE: >> CLICK HERE

STOCKD SUPPLY

TECH TALK

Source: Fastenerandfixing.com

Tuesday, April 11 2023

TIGHTENING A BOLT PAST ITS YIELD POINT.

https://www.fastenerandfixing.com/application-technology/tightening-a-bolt-past-its-yield-point/