Three types of Anti corrosion coatings.

Anti corrosion coatings provide a robust level of protection against corrosion for components operating in highly corrosive environments.
The options for **anti corrosion coatings** are wide but they can be divided into three main groups; Obstacles, obstacles and sacrifices. In this blog post, we outline the differences between the three types of anti-coating.

Types of Anti corrosion coatings

- ### Barrier coatings

Barrier coatings are especially applied to metal and ceramic objects when they are unable to withstand extremely harsh operating conditions. Most industrial processes take place at extremely high temperatures under the flow of harsh, corrosive gases. Metal can usually dry out due to catastrophic breakdown during operation. To avoid this and to extend their life and efficient performance, metal and ceramic components are coated with different demands that can cope with this demanding environment.

Barrier coatings form a protective non-porous layer on the substrate which prevents the surrounding environment from affecting the base metal. If the base metal has been barred without other coating or film and has been damaged as a result or by chemical attack, the layer is unsafe. The thickness of the film and the solid material have a significant effect on the life of the protection.

- ### Inhibitive coatings

Barrier coatings form a passivation layer on the metal that protects them, preventing contact with water, chemicals and other leaky materials. Passivation reduces the reaction by electrochemical polarization.

Many metals form heavy surfaces when in contact with the atmosphere. However, other metals, in the case of iron, form porous reactive surfaces. The latter group of metals is more prone to corrosion due to the increased reaction that supports ion exchange. These metals require a protective barrier coating to reduce or eliminate the reaction.

The metals that benefit the most from barrier coatings are aluminum, zinc and iron. The heavy surface formed as a result of blocking coatings is usually oxide or nitride.

As the film enters the block the porous coatings form a passive layer on a substrate that reacts with the metal and moisture. The **anti corrosion coatings** protection offered by Barrier Coatings has been significantly reduced over time and therefore these coatings are regularly used in overcoated primers.

- ## Sacrificial coatings

Sacrificial coating is a type of metal coating that ignites more than the internal protection of the metal surface. The best example of this type of coating is zinc-coated steel or galvanized steel. The more active sacrificial coating dissolves, depending on the anodic reaction. The electrons released by the dissolved zinc or coating atom will be carried to that part of the metal that will turn into a cathode and thus prevent the metal from rusting.

Furthermore, coatings made of more active noble metals such as nickel and tin steel can be protected from the coating as long as the coating remains intact. All kinds of coating defects in the localized area can cause deep corrosion, especially on the steel part, as it acts like an anode in galvanic cells. The presence of cathodic tin rapidly increases the corrosion of steel.

The sacrificial coatings act as an additive to the substrate that corrodes sacrificially to protect the material below. Unlike barrier coatings, sacrificial coatings remain effective if the film is damaged, however, the level of protection provided depends on the level of inert dive material and the type of paint binder used.

Important anti corrosion coating considerations

There are several factors to consider when choosing the right partner for your anti corrosion coating needs:

- Are barrier, blocker and sacrificial coatings all available?
- Are Norsok approved inspectors available if needed?
- Is there the right technical support to understand your challenge and recommend the best type of anti corrosion coating?

- Does the potential supplier have the flexibility to handle your volume and process in your timecell?
- Do you have enough facilities to match the size and geometry of your elements?

At Protexion we offer all three types of **anti corrosion coatings** and an experienced in-house team is available to provide the technical support you need to select the best type of coating and apply it where necessary.

Find out more about the anti-corrosion coating services we offer at Protexion or contact us now to discuss your requirements further. More information about then Visit **http://www.protexion.in/anticorrosion-protective-coatings.php**