

TRIBONITE



Surface Enhancement Process

Pioneers in surface engineering and manufacturing of surface treatment chemicals brings to you, TRIBONITE - 'Surface enhancement process'

Tribonite is an advanced thermo chemical process, in which Nitrogen and Carbon are diffused simultaneously into the surface of the material. The Nitrogen alloy on the surface of the material creates a case hardened surface. It is predominantly used on Steel, and also on Titanium and Aluminium.

The high concentration of Nitrogen, chemically combines with Iron and other Nitride-forming elements, to produce an outer layer of Epsilon Iron Nitride, which is thin, hard and ductile. In addition, it also forms an underlining diffusion zone containing dissolved Nitrogen and Iron with associated alloy Nitrides depending on Steel chemistry.



BS 41 - Start up salt

This salt is used to start the Tribonite process and top up the process whenever the level of the bath lowers. This is specially formulated with Alkali Carbonates and Cynates of Sodaum, Potassium and Lithium. Optimum addition of BS 41 ensures a low melting point, hence the bath at operating temperature of 570°C is very fluid. This results in low drag out which in turn results in low consumption of salt.

RS 63 - Regenerator salt

This salt helps to supplement the losses that occur during the Tribonite bath. Due to continuous usage of the bath, there is deterioration in the chemistry. This is restored by RS 63 to the original state. This salt is also designed in a way that it does not harm the environment as it contains no toxic substances.

Tribox - Oxidising salt

Tribox is a process that follows Tribonite. Since the surface is already treated by carrying out Tribonite, added corrosion resistance can be achieved after Tribox. However, this depends on the properties of the already treated material and the history of the material.

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