



PLX HCR Anchors

Fixe is working hard to upgrade all its range of anchors, belays, hangers and bolts with a new High Corrosion Resistance material to improve safety, even on the harshest environments, and for a longer time. The material is especially designed to prevent Stress Corrosion Cracking, but it is also better suit for general corrosion, strength and wear resistance than conventional austenitic stainless steels.



techROCK

Jeroni Guixà, 1.
08580 Sant Quirze de Besora - Barcelona (Spain)
Tel.: (34) 93 855 00 42 - Fax (34) 938 551 278.
export@techrock.es

www.techrock.es



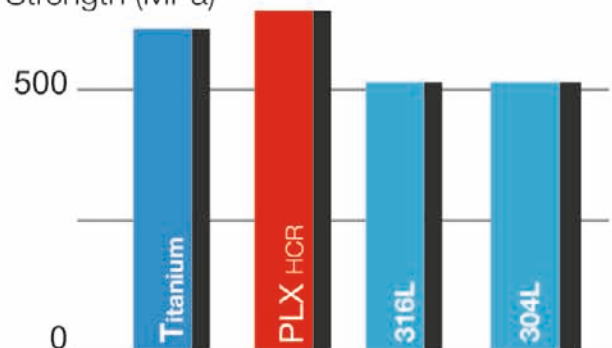
Anchors

New



Mechanical strength

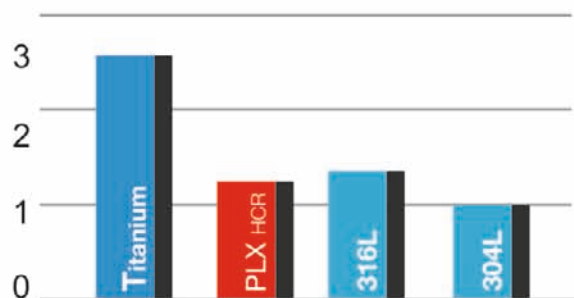
Strength (MPa)



Fixe PLX HCR brings a significant increase in strength over the current 304L and 316L, meaning that keeping the same geometry, the parts are much less likely to fail due to extreme loads. It means as well the parts are more tolerant to damage or wear due to the use or the age, making them safer overall.

Product final cost

Normalized to 304L



PLX material and production costs are comparable to those of conventional austenitic stainless steels, hence it has a big advantage over competitors with similar performance.

General corrosion

UIAA anchor classes



The new **Fixe PLX** HCR is better suited for general outdoor applications, including locations close to the sea, as it is more resistant to general corrosion than conventional austenitic Stainless Steels including the marine grade 316L.

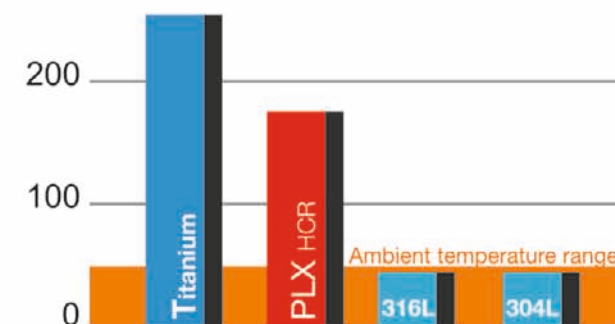
Proposed UIAA anchor classes

Class	Localitation	Characteristics	Potential Materials*
1	Highly aggressive SCC and/or corrosive environment.	SCC in evidence: high chloride concentration, sea salt + other salts (from karst: limestone/dolomite) & acidic environment.	Titanium grade 2 & some high-end High Corrosion Resistant (HCR) steels.
2	SCC and corrosive environment	Rare SCC in evidence or suspected: chlorides, within the critical relative humidity (RH) range where the salt crust deposited by the wind is aggressive.	Most of the High Corrosion Resistant (HCR) steels.
3	Outdoor environment not aggressive enough to cause SCC	No SCC in evidence and none suspected: some corrosion agents.	AISI 316L and better.
4	Indoor use, climbing gyms		No limitation with respect to corrosion.

* actual anchors will be tested to confirm if they pass

Stress corrosion cracking

Critic temperature at 0.1% CL (°C)



SCC is a common failure mechanism in austenitic stainless steels, such as 304/L and 316/L. It needs three conditions to happen: Susceptible material, corrosive environment and stress. Components such as bolts and rings, which may be under significant stress loads, have been reported to suffer from this phenomenon.

