HIGHTECH COATING FOR CORROSION PROTECTION OF TENSION CLAMPS

NiroTec®

A suitable coating for corrosion protection is required to increase the life of tension clamps exposed to corrosive environmental conditions. In order to demonstrate fitness for purpose of corrosion-protected tension clamps with reproducible laboratory results, appropriate verification must be provided, taking into account UV stability, temperature resistance, and in particular mechanical resistance (surface damage, e.g. due to track ballast) in combination with the dynamic load.

To satisfy the highest standards, Schwihag has developed the galvanic NiroTec® coating. This metallic coating has a remote cathodic effect, i.e. if the surface becomes damaged; a sacrificial anode acts to protect the bright steel in the immediate surroundings.

Example: In order to take into account the mechanical load on the corrosion protection coating, NiroTec® and KTL coated tension clamps were first bombarded with hard cast granulate according to EN ISO 20567-1. The result corresponds to ballast attrition with the resultant surface damage (see Photo 1. and 2.).

Photo 1: NiroTec® coating after bombardment

Photo 2: KTL coating after bombardment

Tension clamps were then subjected to salt spray testing (see Photos 3. and 4.)

Photo 3: NiroTec® coating after 480 h

Photo 4: KTL coating after 480h

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