LABOR SPIEZ
CH-3700 Spiez

Tel +41 (0)33 228 14 00
Fax +41 (0)33 228 14 02

e-mail laborspiez@babs.admin.ch
internet www.labor-spiez.ch

Ihr Zeichen
Your Reference

Unser Zeichen 342.3-02/FTO-BRL
Our Reference

Sachbearbeitung T. Friedrich
Responsible ++41 (0)33 228 18 20

Datum 25.01.2007
Date

fischerwerke Artur Fischer GmbH & Co.
Herrn W. Hengesbach
Weinhalde 14 - 18
72178 Waldachtal
Deutschland

Influence of the Coating of Metal Anchors on the Shock Load Transfer

Dear Mr Hengesbach,

SPIEZ LABORATORY has been performing shock tests on metal anchors for more than twenty years. Up to now, more than 30 types of anchors have been subjected to experimental shock tests. With such tests, SPIEZ LABORATORY determines whether or not an anchor system is suitable for the use in shelters. Various galvanised steel, hot-dip galvanised steel and stainless steel anchors have been tested. Generally, no significant influences of the anchor coating could be observed in these tests.

The undercut anchor fischer FZA was shock tested at SPIEZ LABORATORY in 2006. In all these tests galvanised steel anchors were used. All anchors performed well and fulfilled the shock test criteria. Subsequently, approval from the Swiss Federal Office for Civil Protection FOCP has been issued for these anchors.

Fischer also produces the FZA anchor in hot-dip galvanised steel. Based on our experience, it can be expected that the load transfer under shock conditions is not significantly affected by varying the type of coating. In the case of the undercut anchor fischer FZA, the main load transfer mechanism is mechanical interlock.

For this reason it can be concluded that, as far as the transfer of shock loads is concerned, the geometry of the mentioned anchor is much more important than the coating.

Yours sincerely,

LABOR SPIEZ
NBC Protection Technology
Mechanical Effects

T. Friedrich

T. Friedrich

z.K.: FTO, Ltg. → Reg.

2814/getext 25.01.07/sel

25.1.07/BD