UNIVERSITY OF ARCHITECTURE, CIVIL ENGENEERING AND GEODESY

CONSULTANCY AND RESEARCH DEPARTMENT

STEEL STRUCTURE RESEARCH LABORATORY

Boulevard "Christo Smirnenski" № 1, Sofia, 1421, Bulgaria phone: 9635245 (int. 384)

PROTOCOL

for testing of surface elements (panels) of artifical climbing structures

CLIENT: **"WALLTOPIA" - Ltd**
"eng. Georgi Belov" street, No.20A, Sofia, Bulgaria
V.A.T. Reg. No.BG121622469 BULSTAT12162246
Ivaylo Penchev, manager

This protocol describes laboratory testing of fiber-glass plastic surface elements (with diferent surface shape) intended for building of sports fasilities, especially artifical climbing structures (ACS)

The tests are performed on 11.04.2008 at

Steel Structure Research Laboratory (SSRL)

in

University of Architecture, Civil Engeneering and Geodesy (UACEG)

Boulevard "Christo Smirnenski" № 1, 1421, Sofia, Bulgaria

Three elements with different surface configuration, each with dimensions in plan 1000 x 1000 mm are tested. The panels have outlets in the four ends

The elements, made of polyester resin and fibre-glass (cloth woven of glass fibers), are delivered to **SSRL** by the client.

The client is responsible that the elements delivered for testing are manufactured of the same materials and in the same technological process as the regularly manufactured elements.

The testing is made in accordance with the regulations of standard EN 12572-1/2007, Annex D.

According to Annex D the surface elements for artificial climbing structures should be "standard panels" or "square samples" with sides of 1000 mm. The elements are supported on rigid points (the distance between supporting points is 900 mm.) Fig.D.2 (Appendix) represents a scheme with the testing set-up. The tested elements are subjected to dynamic effect of impact. The horizontal supported elements are subjected to strike with a free falling indentor from height

of 1500 mm at the geometric centre. The indentor, delivered by the client, has 22 kg mass and has an impact surface made of silicon (in accordance with Fig. D.1 of EN 12572-1/2007).

During the test three strikes are made and after that the element is checked for any breakage or splitting.

Information for the tests is given in Table 1.

Table 1

Element	Dimensions in plane [mm]	Avarage thickness in the plane zone [mm]	Number of strikes with the indentor	Breakage or splitting found
Sample 1	1000 x 1000	11.08	3	**No**
Sample 2	1000 x 1000	11.56	3	**No**
Sample 3	1000 x 1000	11.08	3	**No**

Conclusion:

The surface elements for artificial climbing structures have passed the impact tests successfully in accordance with the requirements of Annex D, EN 12572-1/2007.

The tests are performed by the SSRL team at the presence of representatives of the client.

Head of SSRL of UACEG
Dipl.Eng. O. Ganchev .....

Dipl. Eng.: V. Giurov .....

Director of CRD of UACEG:
Professor Dr. K. Topurov .....

Sofia, 11.04.2008