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Walltopia Ltd.
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Your ref./from	Our ref./Name	Phone-ext/E-Mail	Fax-ext	Date	Page
	MSL-MUC-kn Volker Kron	+49 89 361965-480 volker.kron@tuev-sued.de	+49 89 361965-799	2013-04-25	1 of 6

Report from Test of Walltopia Flange Nut; Order 713018457

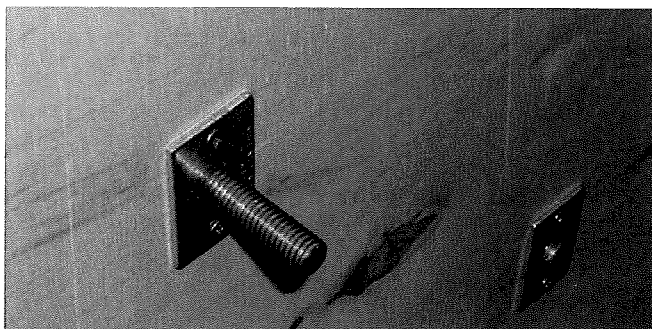
Dear Mr. Zlatev,

In your letter from January 23, 2013 you announced for your climbing wall flange nut a test evaluation according to EN 12572-1: 07.2007 (Artificial Climbing Structures).

The flange nut is for the use of fixing climbing holds on a climbing panel. It has the following technical data:

- material: galvanized steel
- dimension: 40 mm x 25 mm x 20 mm
- fixation: 2 holes 5 mm, 30 mm distance, for spax screws 15 mm
- attachment: M10- socket, 20 mm long, thread app. 13 mm long;
- marking: "WALLTOPIA"

The flange nut was tested in a 22 mm plywood panel.



Flange nuts in climbing panel

Trade Register Munich
HRB 85742
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HypoVereinsbank Munich
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The flange nut was verified by approval. Here the test data:

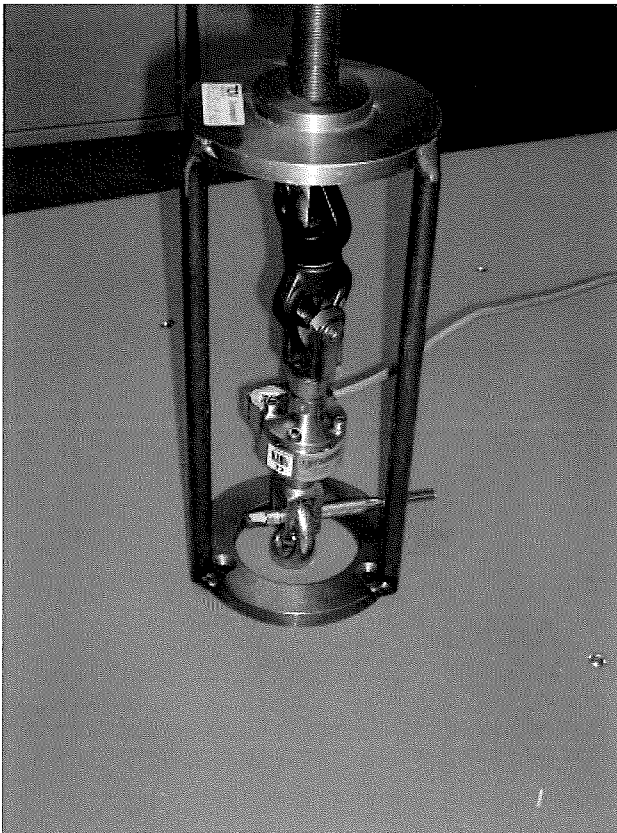
-Start of testing: 27.02.2013

-Test laboratory: TÜV Süd Product Service GmbH, Ridlerstr. 65, D-80339 Munich, TEC-TF4

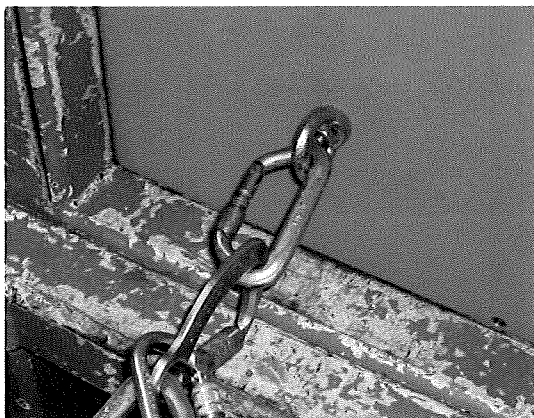
-Test requirement: DIN EN 12572-1: 07.2007, Pt.4.6/ Annex E and absolute break strength in panel

-Test results (test records see annex):

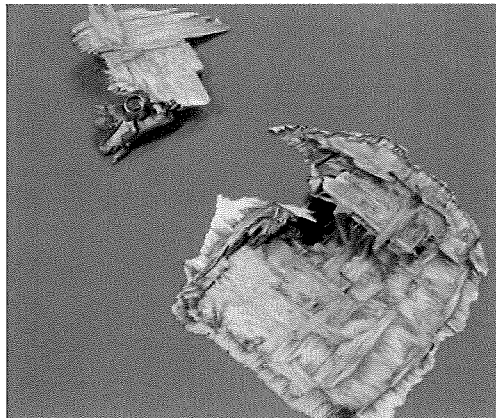
-The strength of the hold attachment (EN 12572-1, Pt. 4.6) was approved with 5 kN/ 1 min. Here the flange nut did not deform or break and did not went loose. Requirement met



-In a break test the flange nut in the plywood panel was loaded until breakage. At 13,377 kN the flange nut broke out of the plywood. See picture.



Load application via M10 ring screw



breakage at 13,377 kN



Sample after break test

Requirements met

-Conclusion:

With this letter we can confirm, that the above mentioned flange nut of company Walltopia Ltd. meets the requirement of EN 12572-1.

Yours sincerely,

TÜV SÜD Product Service GmbH
TEC-SP

Letter checked:


i.o. Matthias Völz

Expert:

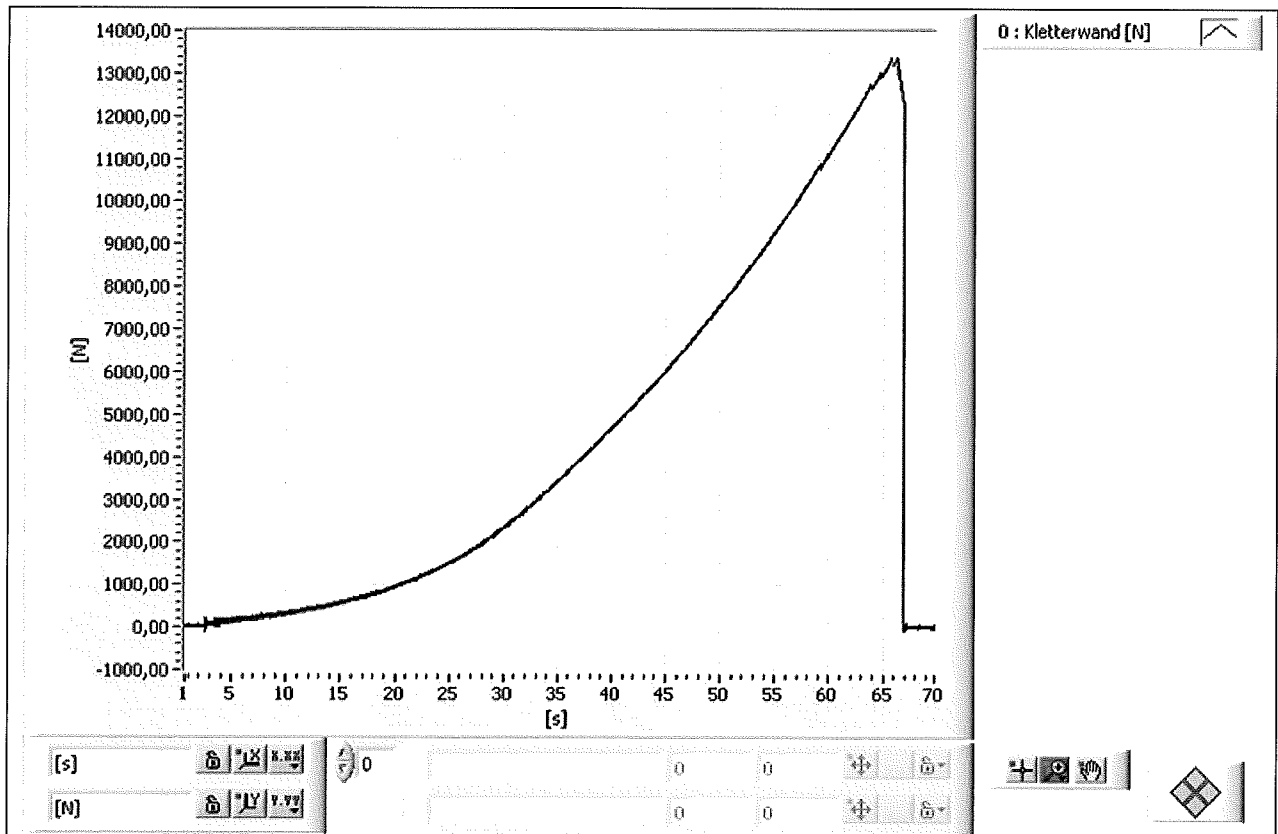

i.o. Volker Kron

Annex:

-test records



Bearbeiter / Project Manager: Klinger Guido
Auftraggeber / Applicant: Walltopia
Auftragsnr. / Report-No.: 713018457
Produkt / Product: Flanschmutter
Modell / Item: Kletterwand
Prüfungsart / Kind of test: Ermittlung der Bruchkraft
Kenndaten / Technical Data: auf Bruch



Bezeichnung	Minimum X	Maximum X	Minimum Y	Maximum Y
0 : Kletterwand [N]	0,00 s	80,89 s	-94,01 N	13377,06 N

Berechnungen / Calculations:

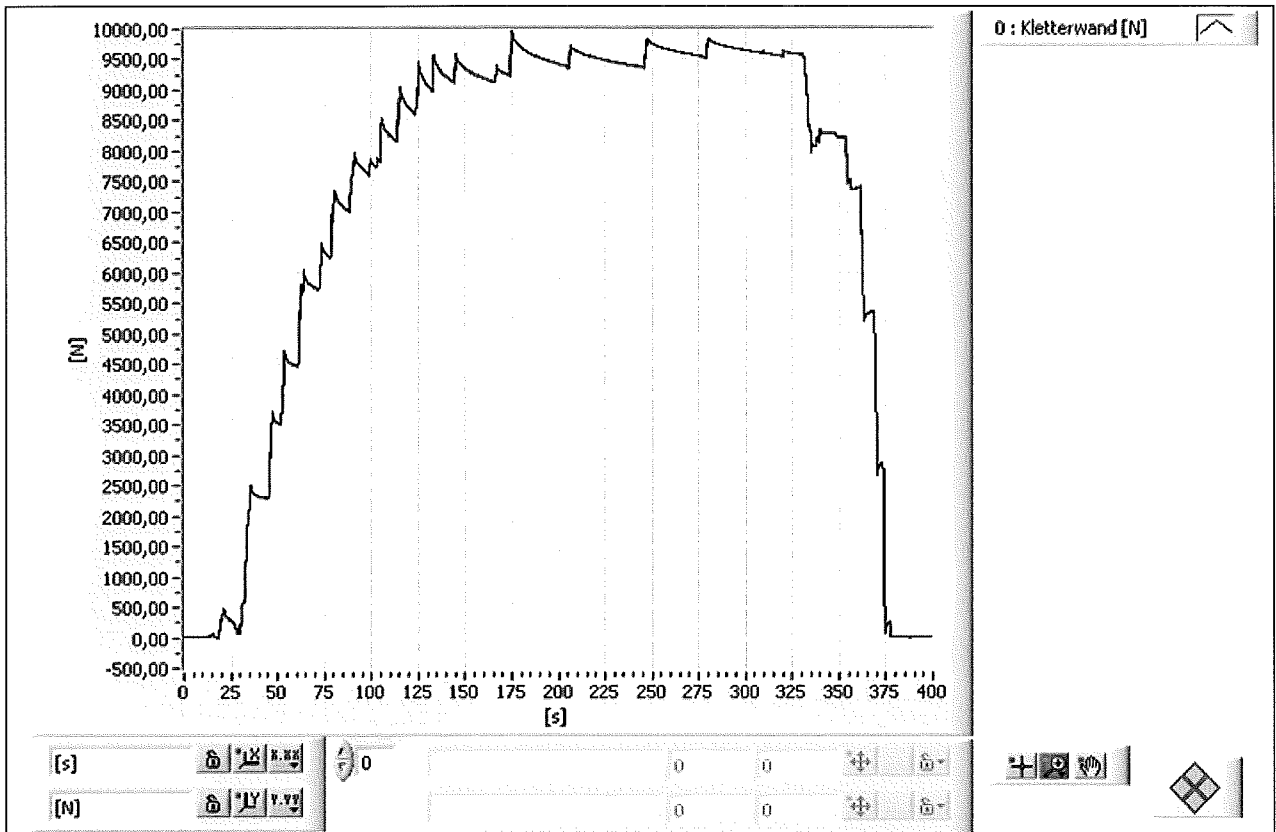
Kommentar / Comment: Bruch Holz bei 13,37 kN

Messkarten / DAQ-Card:
 DAQ-CardAI-16XE-50
Aufnehmer / DAQ-Card:
 100kN

Messverstärker / Amplifier:
 MGC 30
Software / Software:
 UniLAB 2004 / HE-Datentechnik



Bearbeiter / Project Manager: Klinger Guido
Auftraggeber / Applicant: Walltopia
Auftragsnr. / Report-No.: 713018457
Produkt / Product: Flanschmutter
Modell / Item: Kletterwand
Prüfungsart / Kind of test: Belastung
Kenndaten / Technical Data: 5kN 1min.



Bezeichnung	Minimum X	Maximum X	Minimum Y	Maximum Y
0 : Kletterwand [N]	0,00 s	398,79 s	-7,71 N	9964,81 N

Berechnungen / Calculations:

Kommentar / Comment: Anforderung erfüllt

Messkarten / DAQ-Card:
 DAQ-CardAI-16XE-50
Aufnehmer / DAQ-Card:
 Wägezelle 10 kN

Messverstärker / Amplifier:
 MGC 30
Software / Software:
 UniLAB 2004 / HE-Datentechnik



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End of Report 713018457