

Type approval of safety nets for protection against rockfall

Test Certificate No. S07-20

System designationAddress of manufacturer		ROCCO RXI-150	
		GEOBRUGG Fatzer AG Schutzsysteme, Hofstrasse 55, 8590 Romanshorn	
System description	on		
 Energy class 		1500 kJ	
- Posts:	Profile	HEB 160	
	length a _l	4.24 m	
	interval a _s	10 m	
- Support ropes:	Туре	6 x 36 W-Seale	+ SE, DIN 3064
	Diameter	22 mm	
- Net:	Туре	ROCCO ring no	et with 12 windings
	Diameter	Ring diameter 3	350 mm, wire diameter 3 mm
	Mesh	-	
	height h _v	4.25 m	
 System drawing 	s		
Description System handbook RXI-150 Technical documentation RXI-150 Maintenance handbook RXI-150			No. Date 150-N-FO/EKLS 03 18.07.20 EKLS 03 18.07.20 108-N-FO/EKLS 03 18.07.20
Basic documen	tation		
Field test			
WSL test report		Date 31 July 2007	Report no. 07-20
Overall assessment	ent		
Overall assessment of the EKLS (FECAR)		Date 18 September 2	007 Report no. S 07-20
Test results			
Preliminary test of	of outer part		
Penetration of test body			yes ☐ / no
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Preliminary energy test (50%)	750 kJ
 Penetration of test body 	yes 🗌 / no 🔀
- Braking time t _s	0.28 s
Braking distance b _s	4.7 m
Sum of the tensile forces in the 2 upper cables and the guy rope	322 kN
 Sum of the tensile forces in the 2 lower cables 	175 kN
 Maximum of the tensile forces in a stay cable 	123 kN
List of damaged elements	
No damage to the load-bearing parts of the structure. All 16 breaking elem deformed.	ents were
Assessment of repairs	
16 breaking elements and the middle part of the net were replaced. The we hours. The repairs necessary after the test were considered to be normal.	ork took 24 man-
Main energy test (100%)	1500 kJ
 Penetration of test body 	yes 🗌 / no 🔀
 Braking time t_s 	0.37 s
 Maximum permissible braking distance b_s 	9.0 m
 Measured braking distance b_s 	6.30 m
 Minimum permissible residual braking height h_n 	2.0 m
 Measured residual braking height h_n 	2.4 m
 Sum of the tensile forces in the 2 upper cables and the guy rope 	375 kN
 Sum of the tensile forces in the 2 lower cables 	227 kN
 Maximum of the tensile forces in a stay cable 	211 kN
 List of damaged elements 	
No damage to the load-bearing parts of the structure. In the middle part of broke. All 16 breaking elements were deformed.	the net one ring
Assessment of special criteria	
 Comments on assembly and on assembly instructions 	
The assembly presents no particular difficulties.	
Comments on adaptability to the terrain	
The adaptability to the terrain is normal.	
Comments on design complexity	
Using the documentation supplied, safe and simple assembly is possible.	
Comments on anticipated service life	

Depending on the service life required of the installation, parts with different levels of corrosion protection are supplied. The net has an aluminium-zinc coating (150 g/m2).

The anticipated service life is ascertained to be adequate.

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Overall assessment

☐ Test passed with reservations

Tested according to the following guidelines: GERBER, W. 2001: Guideline for the approval of rockfall protection kits. Environment in practice. Swiss Agency for the Environment, Forests and Landscape (SAEFL), Swiss Federal Research Institute WSL. Berne, 39 pages. Revised June 2006.

RESERVATION: Should deficiencies arise following certification of the safety net, FOEN may revoke product release and delete it from the type approval list.

Date

8.11.2007

Name, position

Andreas Götz, Vice Director

Signatures

Goz

Federal Office for the Environment FOEN Risk Prevention Division 3003 BERN http://www.bafu.admin.ch/typenpruefung