Tying ideas together for the future.

TOKYO ROPE

PAT

Higher Net



Higher Net



2800kJ

Edge rope



Free part allows more deformation and more energy absorption



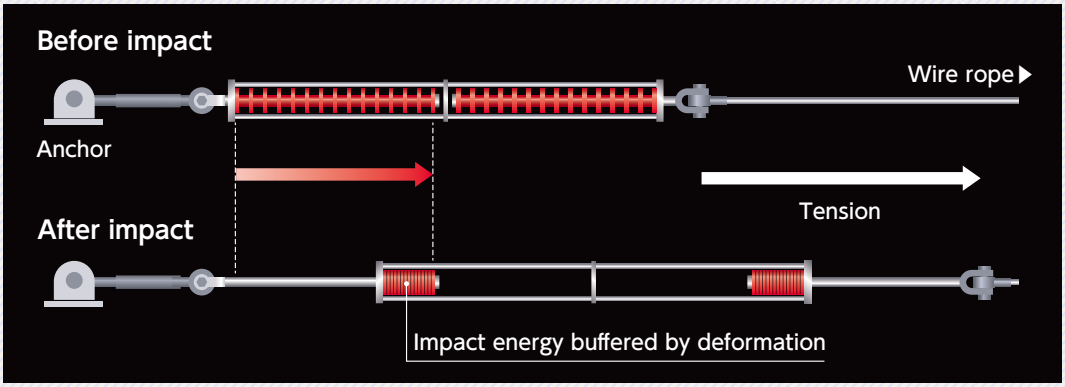
High strength wire netting



Buffer device









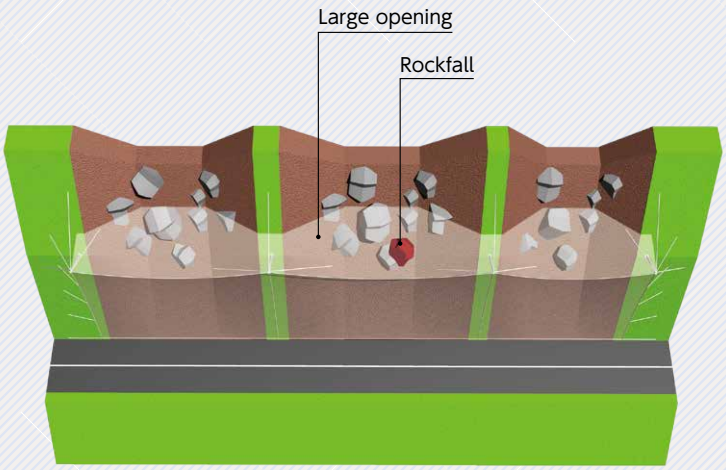
HE-600, Nagano, Japan



HE-600, Shizuoka, Japan

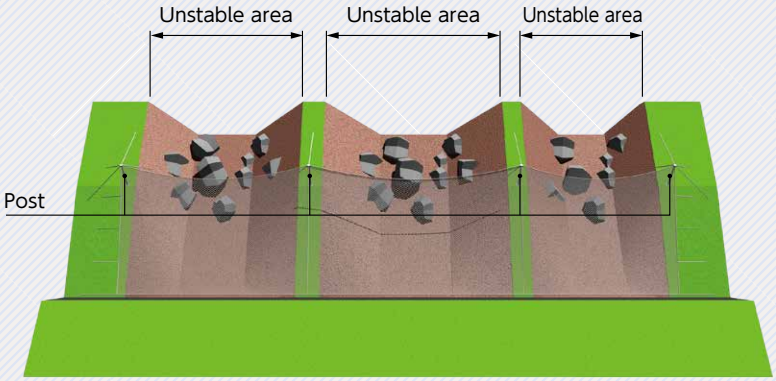
Excellent workability

Simple structure
Short construction period



Wide post spacing

Posts can be installed on stable ground, avoiding unstable areas such as valleys where there are risks of rockfalls



Full-scale impact test

Verification based on“Guide on rockfall countermeasures”

HE-600

Test conditions

Impact energy	604kJ
Impact velocity	30.5m/sac
Block weight	1.3t
Specimen (Height x Length)	9.0m×10.0m
Maximum elongation	5.70m
Result	Passed

※No damage on hinged posts





HE-1000

Test conditions

Impact energy	1055kJ
Impact velocity	30.3m/sec
Block weight	2.3t
Specimen (Height x Length)	9.0m×10.0m
Maximum elongation	6.30m
Result	Passed

※No damage on hinged posts

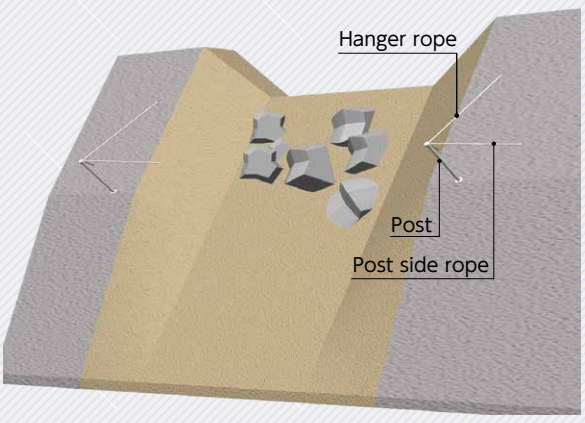




Construction procedure

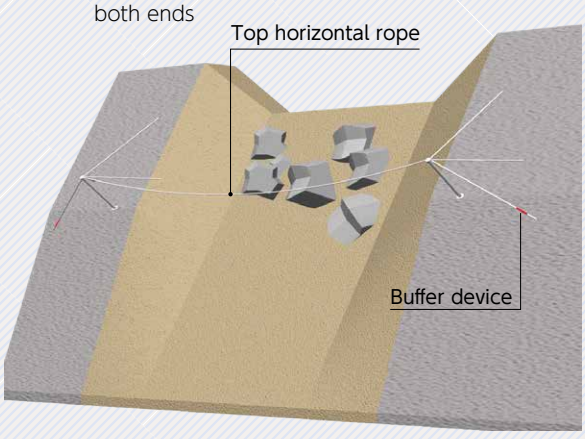
1 Anchoring

Install anchors based on marking points.
Install a post and fix it by wire ropes



2 Top horizontal rope installation

Assemble buffer device
Attach buffer device to the top horizontal rope at both ends



HE-1400

Test conditions

Impact energy	1420kJ
Impact velocity	31.3m/sec
Block weight	2.9t
Specimen (Height x Length)	9.0m×10.0m
Maximum elongation	6.93m
Result	Passed

※No damage on hinged posts





HE-2800

Test conditions

Impact energy	2880kJ
Impact velocity	30.0m/sec
Block weight	6.4t
Specimen (Height x Length)	9.0m×15.0m
Maximum elongation	8.10m
Result	Passed

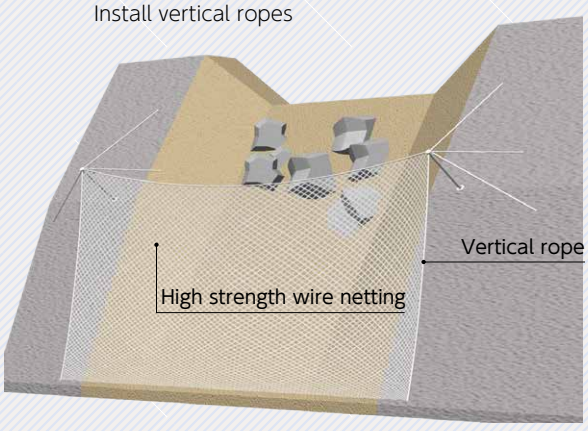
※No damage on hinged posts





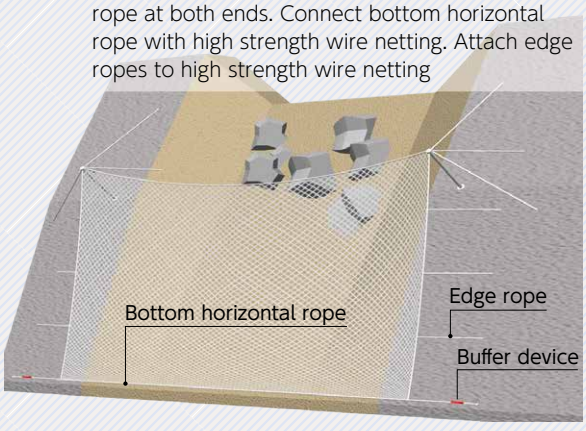
3 High strength wire netting installation Vertical rope installation

Attach wire netting to the top horizontal rope
Install vertical ropes



4 Bottom horizontal rope installation Edge rope installation

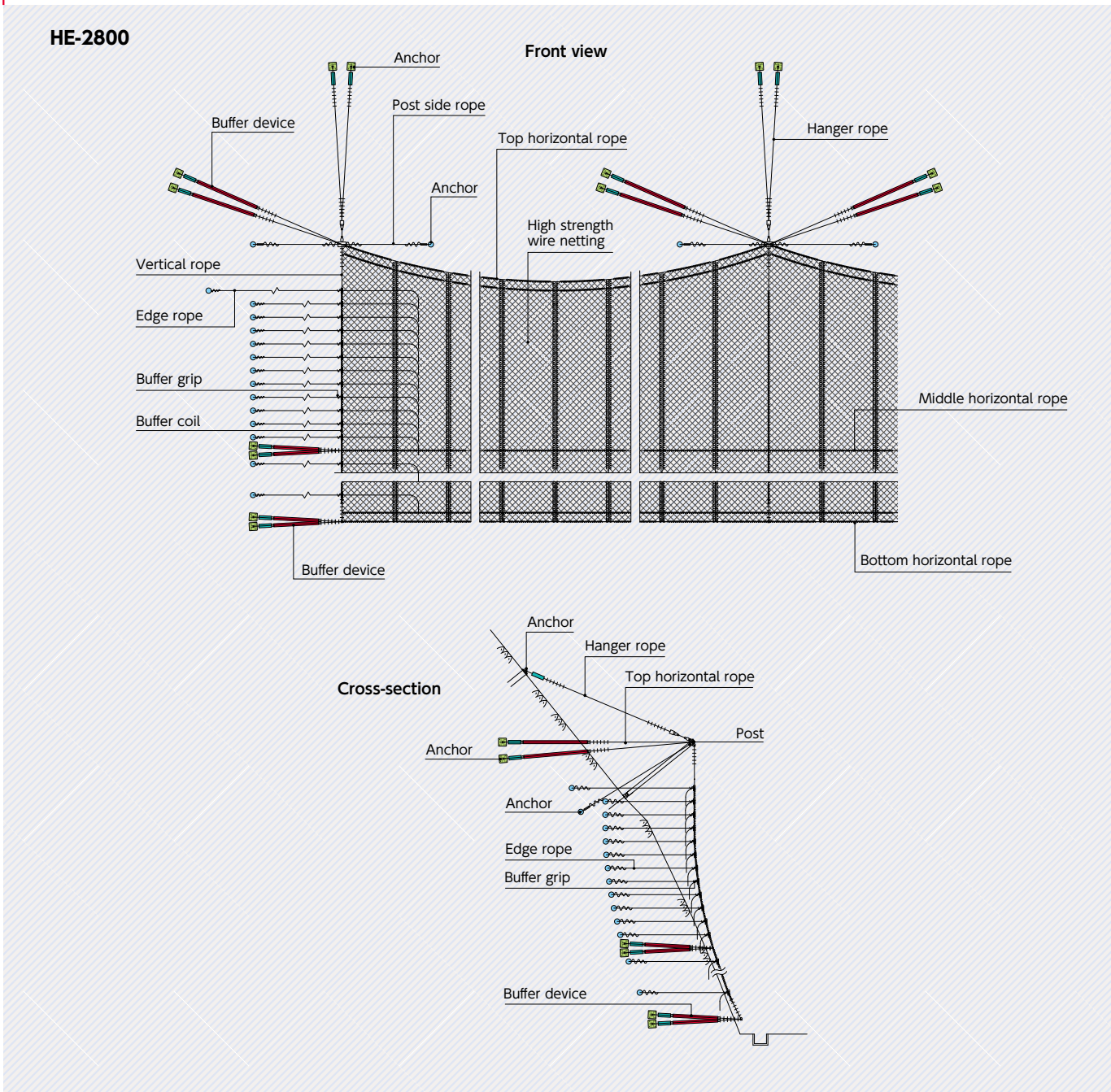
Attach buffer device to the bottom horizontal rope at both ends. Connect bottom horizontal rope with high strength wire netting. Attach edge ropes to high strength wire netting



Specifications

Model	HE-600	HE-1000	HE-1400	HE-2800
Impact energy	604kJ	1055kJ	1420kJ	2880kJ
Post	H-150×150×7×10	H-150×150×7×10	H-175×175×7.5×11	H-200×200×8×12
High strength wire netting	PW4.0φ×50	PW4.0φ×50	PW4.0φ×40	PW4.0φ×50(2 layers)
Top horizontal rope	7×7 20φ(Buffer device C)	7×7 20φ(Buffer device B)	7×7 20φ(Buffer device A)	2-7×7 20φ(Buffer device A)
Middle horizontal rope			7×7 20φ(Buffer device B)	2-7×7 20φ(Buffer device B)
Bottom horizontal rope				
Edge rope	3×7 12φ+Buffer grip	3×7 12φ+Buffer grip	3×7 12φ+Buffer grip	3×7 12φ+Buffer grip
Post side rope	3×7 18φ	3×7 18φ	3×7 18φ	3×7 18φ
Vertical rope	7×7 20φ	7×7 20φ	7×7 20φ	7×7 20φ
Hanger rope	7×7 20φ	7×7 20φ	7×7 20φ	2-7×7 20φ
Buffer coil	4.0φ×100×1000	4.0φ×100×1000	4.0φ×100×1000	4.0φ×100×1000

Structural drawing



Higher Net is a registered trademark by TOKYOROPE. Registered number: 6739117

TOKYO ROPE MFG. CO., LTD.
https://www.tokyorope.co.jp/english/