ENZAR×

Installation Guidance

Double twisted hexagonal mesh rock barriers

Double twisted hexagonal mesh rock barrier is most commonly applied to geological or geotechnical situations and the generalized installation instructions presented in this document are installed onto inclined rock/soil slopes. (hexagonal mesh rock barrier can also be installed in a variety of other scenarios including direct application to buildings, walls, dams, chimneys etc.)





Slope terminology

С	Crest Area of Slope
F	Face of the Slope
Т	Toe Area of the Slope
3	Slope Face Angle
Х	Effective Total Height of Slope
L	Length of a Slope





Two Types of Installation

in geological and geotechnical situations

• Simple Drapery.

The mesh is hung as a curtain, suspended by ropes at the crest and toe (R $_{\rm c}$ and R $_{\rm T})$

• Cortical Stabilization/Pinned Drapery.

The mesh curtain is additionally retained using a network of anchors (A_F) located at calculated spacings (S_{Fa} or S_{Fo}) and fitted with wire ropes (R_{Fa} or R_{Fo}).





The mesh and any imposed loads are supported from anchorages. These can be positioned in the crest (A_c), toe (A_T) and face (A_F) of a slope depending on site-specific factors. Anchorages are normally placed in a line and fitted with suitable terminations (eye nuts or similar) to accept the ropes. At the toe of the slope it is also common for a row of anchors (A_T) and a rope (R_T) to be installed however other restraints are sometimes used.

All anchorage details must be in exact accordance with the engineering design.

It is most common for the crest anchors to be offset some distance back from the break of slope (O_{typ}) . The offset (O_{typ}) will be defined by the engineer. In cases where the top of the face or the down- slope edge of the crest is unstable a larger 'exceptional' offset (O_{exp}) will be required. The layout of all anchorages must be carried out in exact accordance with the engineering design.



ENZAR×

Suggested/sample stages of Installation

Preliminary stages (A-D) are pre-works stages performed by the designer:

- A. Assessment of the slope
- B. Preliminary design
- C. Detailed design & design checking
- D. Preparation & checking of installation method statements

Main installation works (1-11) for both drapery and cortical stabilization systems are:

- 1. Establishment on site and negotiation of access and logistics
- 2. Receipt of materials and checking
- 3. Clearing slope face and crest (loose material and dense vegetation)
- 4. Setting out of the site (anchor and rope positions etc.)
- 5. Installation of crest-line anchors (A_c)
- 6. Lifting, placement and temporary securing of the mesh
- 7. Installation of crest-line rope (R_c)
- 8. Adjustment and permanent connection of mesh runs (β)
- 9. Permanent connection (α) of mesh to crest-line rope (R_c)
- 10. Installation of toe-line anchors (A_{τ}) and toe-line rope (R_{τ})
- 11. Permanent connection of mesh to toe-line rope (R_{T})

Additional stages (a-d) required to convert a simple drapery into cortical stabilization/pinned drapery are:

- a. Setting out of face anchor $(A_{\scriptscriptstyle F})$ positions $(S_{\scriptscriptstyle Fa} \text{and} S_{\scriptscriptstyle Fd})$
- **b**. Drilling and securing/grouting ($G_{\scriptscriptstyle F}$) of face anchors ($A_{\scriptscriptstyle F}$)
- $\boldsymbol{c}.$ Installation of face anchor $(\boldsymbol{A}_{\scriptscriptstyle F})$ termination accessories
- d. Installation, tensioning and securing of face ropes $(R_{\mbox{\tiny Fa}}/R_{\mbox{\tiny Fo}})$