QIAOSHI Gabion Factory

PRODUCT INSTALLATION GUIDE

ROCKFALL NETTING

Material Delivery
Double twist mesh rolls is supplied in roll form from the production facility in lengths of 25 m and 50 m. The roll dimension varies depending on the width and length of the roll required and whether the woven wire has the additional PVC coating. The rolls are individually strapped at the factory for easy handling and transporting.

Soil nails, anchors accessories etc., and installation equipment in the form of power actuated tools are not supplied by Zhengyang SA (Pty) Ltd and are to be sourced from approved suppliers.

Preparation and Placement
Placing double twist mesh rolls is an operation generally performed on faces or slopes close to the vertical and sometimes of considerable height. Although placing of the mesh may vary from site to site, the work may be reduced to four main phases.

1. Preparation of the surface to be blanketed (removal of loose rock particles, barring down).
2. Placing the netting over the surface to be protected by lifting the rolls to the top of the face and then unrolling them.
3. Fixing the netting to the wall and tying them.
4. Final fastening of the net at the top, foot and if necessary the face.

By far the more onerous phase of the project is phase 2, the lifting and placement of the netting over the surface of the slope.

The first method consists of transporting the rolls to the top of the face and after aligning, opening and fixing them on the upper edge, allowing them to unroll downhill. This method is used when there is some access road to the top and when obstacles such as telephone, power lines and railway lines are at the foot of the hill.

The second method involves leaving the roll at the foot of the face, coupling a bar to it and lifting it up to the top of the face where it is to be fixed. A winch or crane would be required for this operation. Using cranes and winches may entail some operational constraints, for example, traffic delays and densities, and space restriction when working in narrow roads.

To overcome some of the above constraints, helicopters have been used to speed up operations and for faces higher than 25 m, helicopters are the best solution.

Fixing Procedure
The distribution of the top anchorages must be calculated on the basis of the maximum load that may occur at each anchorage, bearing in mind the breaking strain of the double twist mesh. It is preferable to link the individual anchorages with a steel rope which must be tied to the mesh.

The following alternatives may be considered when small amounts of debris are collected at the toe:

- Leaving approximately 0,3 m open at the foot of the net to facilitate removal of debris;
- Close the net at the foot to contain loose material.

The bottom fixing must allow for periodic removal of accumulated debris after which the netting must be anchored again.

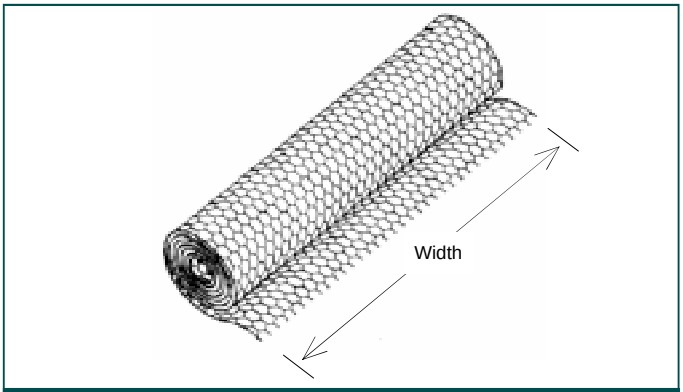

Figure 1


Figure 2

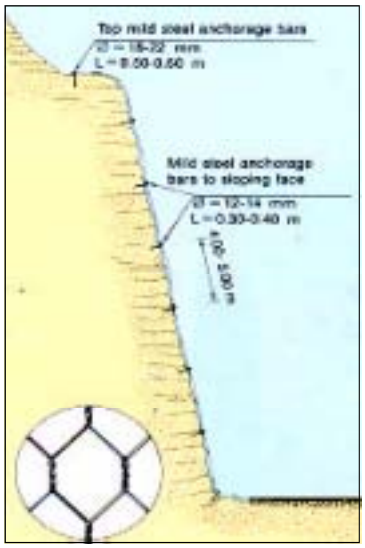

Figure 3

On the rock face, the sheets of netting must be securely and continuously laced together using binding wire of diameter equal to or greater than the wire used for the manufacture of the mesh. Alternatively, metal stakes of various sizes can be used.

When necessary, the sheets of netting should be close together to prevent fragments of rock from rolling off. In addition suitable anchorages must be provided at the rate of one anchor every 15 to 30 m^2 of covered area.

Figure 5

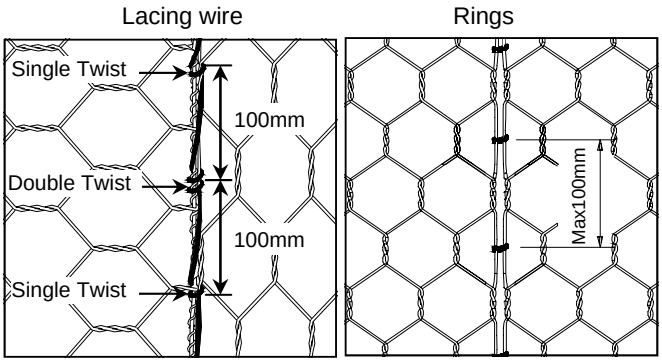

Figure 7

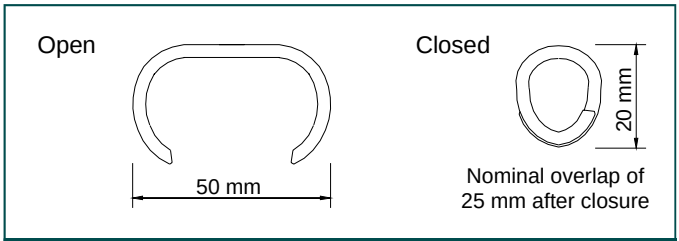

Figure 7

1. Pliers 2. Pliers with nipper 3. Nipper	Manual Spenax Tool	Closing tool

Figure 8