

## **An application of the connecting system between MSE wall and soil nail**

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### **Abstract**

Mechanically Stabilized Earth (MSE) wall is mainly applied for fill construction, while the soil nail is mainly used in cut slope where ground space is limited. Combining MSE wall and soil nail could be a good solution for MSE wall with inadequate length and when the safety of external stability is questionable. The soil-nail/MSE wall integral system not only overcomes the space limitation problem, but also reduces the risk during excavation of existing ground for constructing MSE wall. In order to enhance the stability of the soil-nail/MSE wall integral system, the first author has developed a specific connection system (i.e. vertical bars connecting soil nails, steel wire connection between the bars and the geogrids).

This paper describes a case study on soil-nail/MSE wall integral system that uses the connecting system in Taiwan. The wall is located at Chi-Nan University, Taiwan, for repairing a slope failure that occurred during the Chi-Chi earthquake in 1999. Up to 2012, this soil-nail/MSE wall integral system has been proved to be stable after suffering from many earthquakes and heavy storms.

*Keywords: MSE wall, Soil Nail, Connecting System*