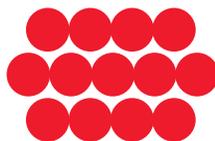
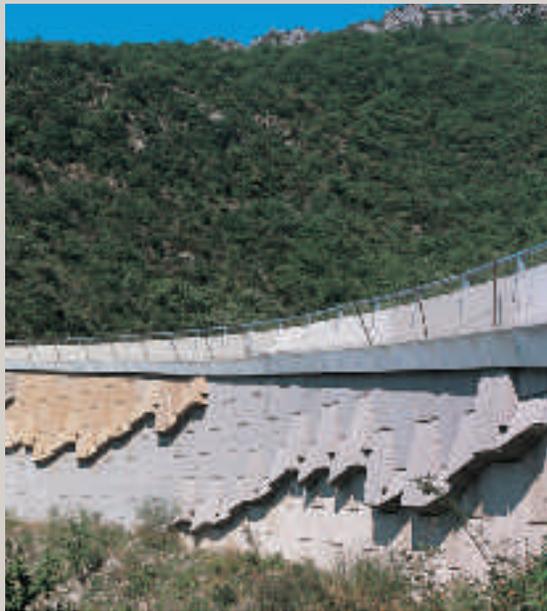


GeoMega

The fully synthetic solution



Reinforced Earth

Sustainable Technology



GeoMega

The fully synthetic solution

The GeoMega connection removes the need for any intermediary structure between the surface panel and the GeoStrap (supplied by Reinforced Earth). The GeoStrap is an earth reinforcement strip made of high-tenacity synthetic fibre selected to provide optimum performance for a particular project.

The connection, patented in several countries, is a loop shaped like the Greek letter Ω , which is partially cast into the concrete panel during prefabrication. The GeoStrap is threaded through the loop. This system works in conjunction with the entire range of concrete panels typically supplied by Reinforced Earth. Implemented for the first time in June 2005 on a traffic roundabout in Morzine (Haute Savoie, France), the system was awarded the Ivor Label in 2006 (Innovations Validées sur Ouvrage de Référence, the French award for innovations on major structures, by the Ivor Committee as part of the mission to foster civil engineering by the Ministry of Transport, Infrastructure, Tourism and the Sea). The elements making up the system supplied by Reinforced Earth are subject to rigorous quality control.

Tampa, Florida

A ramp wall constructed in Tampa (Florida), where the risk of the sea level rising is high due to the frequent hurricanes that sweep the region.



Prefabricating the panels



Installing the GeoStraps

Improved environmental accountability

The GeoMega connection allows retaining structures to be constructed in chemically aggressive environments (marine environments, corrosive backfilling materials, recycled sands & gravels, pollution risks, infiltration of de-icing salts, etc.). By the nature of its design, the GeoMega connection is not a factor in the durability of the structure. The only decisions that must be made are determining the most appropriate type of GeoStrap for the environment and the desired service duration of the structure.



Great flexibility in terms of implementation

With their specialized engineering & design departments, the companies in the Terre Armée Internationale group offer their customers made-to-measure GeoMega structure design solutions using proven methods similar to those used for other Reinforced Earth solutions. Reinforced Earth structural design is in compliance with current national and international standards.

The GeoMega system offers the following two implementation modes, either of which may be appropriate depending on individual customers and markets:

- threading of the GeoStraps on site
- delivery of panels fitted with GeoStraps

- 1/ Assembly of the retaining walls using the GeoMega system is similar to that of traditional Reinforced Earth structures. The first row of panels is installed on a well-leveled concrete pad.
- 2/ This first row of panels is braced directly to the ground to prevent movement during placement of the backfill.
- 3/ The panels of the upper rows are installed as the backfill is placed.
- 4/ Once installed, each level of reinforcement is vertically spaced 70 to 80 cm apart, which corresponds to a multiple of the backfill layer thickness.
- 5/ The backfill is placed using traditional earth-moving machines.



Strength testing the panels under the effect of the tensile load of reinforcements



In situ extraction tests

Great technical rigour

Numerous strength tests were performed to evaluate the system's performance by loading the reinforcements in the panels. Anchorage of the GeoStraps was verified through both in-situ and laboratory tests using a calibrated extraction system. Moreover, Terre Armée Internationale is fully committed to research into the sustainability of its solutions, and its structural design incorporates the most up to date knowledge available on sustainability of the materials employed.

- 1/ On-site delivery of panels fitted with reinforcements
- 2/ Installing the first row of panels
- 3/ Installing the reinforcements
- 4/ Placing the backfill
- 5/ Compacting the backfill



Ramp wall, VDN Dakar, Senegal



Railway retaining wall, Cornella Viaduct, Spain



Ramp wall, Tampa, US



Ampang quay wall, Malaysia



Railway retaining wall, Holland

The Reinforced Earth technique, a major innovation

Recognised as a **major innovation in the field of civil engineering**, the Reinforced Earth technique provides numerous structural solutions for owners and contractors ranging from retaining walls to bridge abutments.

As the world leader in mechanically stabilized earth, Terre Armée Internationale has a presence in all five continents and has the advantage of both local and international expertise.

This wealth of expertise has led the company to develop processes offering common advantages:

- Reliable and sustainable materials
- Savings in terms of time and resources
- Capacity to adapt to complex situations
- Integration into the environment, in particular due to an extensive range of panel finishes

The Reinforced Earth technique has revolutionised structural design and is applicable for all kinds of structures:

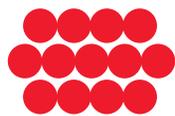
- Road
- Railway
- Marine and waterway
- Industrial and protective

Morzine Roundabout, France





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