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Slurry wall construction is the preferred method to build steel reinforced concrete walls in areas with poor drainage and soft earth. It is particularly useful when the construction site is near open water or the water table is high.

A perimeter of slurry walls are typically built to exclude water and any soft earth from entering the construction site. Once the walls are completed, the construction of the actual foundation, tunnel or building can commence. The slurry walls are eventually either tied into the structure or removed completely.

Construction of Slurry Walls

Construction of a slurry wall is a theoretically simple but practically difficult process. To begin, a trench is excavated. As the material is removed, it is replaced by a relatively thick concoction, or â€œslurry,â€• of clay and water. This slurry can be mechanically pumped and has the advantage of being slightly more dense than water or non-compacted earth but slightly less dense than finished concrete. It is used to hold back the earth and water during excavation until a second pump can replace it with a marine grade cement that will dry underwater.

The wall specifications usually call for a slurry wall of one to two feet thick. Two, hydraulic, steel guide walls, separated by this distance are driven into the ground and an excavator removes the material inside. The slurry is then introduced. The guide walls are then driven further down and the process is repeated.

When the guide walls and the slurry reach the appropriate depth, a reinforcing frame of rebar and a second pump hose are introduced. A cement mixture is pumped through the hose and encases the frame. The cement is pumped in from the bottom and displaces the slurry which is removed and recycled for reuse. The process then continues around the entire perimeter of the construction site.

The Importance of Slurry Walls

The construction of a slurry wall is an art unto itself and proper wall specifications must always be met under the most daunting of conditions. The builders of these important structures are generally asked to build them under far from favorable conditions. It is a testament to the ingenuity and tenacity of the early pioneers in slurry wall construction that many of our most noted iconic structures have been built.

The World Trade Center in New York and the â€œBig Digâ€• tunnel system in Boston are two of the most noted projects in the United States that relied heavily on sophisticated slurry wall construction techniques. The advances made on these major projects have produced a host of improvements in slurry wall technology.. Today, the construction of slurry walls utilizes a variety of tools, materials and methods and they are used on a wide range of projects, small and large.

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The author has an immense knowledge on a wall specifications. Know more about a slurry wall construction related info in his website.

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