

(23) EMETHANEX(2010) – Cofferdam

A 20 m width cofferdam cell of 40 m length is the main body of the jetty serving the Emethanex Project at Damietta Harbor. The total number of cells is 7. The cofferdam supports 14 m height water at rests at 30 m below sea water level. The average soil profile composes of 10 m of top medium dense sand, 20 m top very soft clay, 5 m of dense bottom sand and 5 m of bottom stiff to very stiff clay. The volume inside skin sheet piles of leaf shape is filled with grouted soil. The front sheet pile wall is fitted on top with a crown beam of 0.50 m width and 1.20 m thickness and a raft of 1.00 m thickness is placed on top of the grouted soil. Plaxis commercial software was the model tool to present the 3 Dimensional problem natures. Analysis showed that the cofferdam shall displace horizontally about 70 mm when dredging reach the 50% and reach the 200 mm at 100% dredging.









