

# Precast and Prestressed Piling foundation works for a Combined Cycle Power Plant at Barcelona Sea Port (Spain)

Owner:	GAS NATURAL
Client:	UTE CCC PORT BARCELONA
Period of execution:	February 2.008 – January 2.009
Contract value:	6.500.000 €

The foundation works for the new Combined Cycle Power Plant at Barcelona Port (Spain) were executed using TERRA precast piles, during the period February 2.008 – January 2.009.

The first 12 – 13 meters of soil are formed anthropic landfill and below 13 – 14 meters there is an alternance between mud with 6 – 7 meters thick and other stratum with variable thickness (around 6-8 meters) of soft clays. Finally, there is a layer of medium gross sands, where precast piles were about 4 meters until refusal was reached, taken variable depths between 29 and 32 meters.

A total of 2.486 piles with different sections, being the most part of them precast T-400 and prestressed PT-350. Due the demanding programme imposed by the client, TERRATEST worked with 2 I.M.T. rigs high capacity, equipped with de 9 y 11 ton hydraulic hammers. Works schedule and deadlines were carried out on time.

As piling control, TERRATEST performed 3 Static Load Tests and 53 DynamicLoad Tests using the Pile Driving Analyzer.

The solution of precast piling foundation was chosen as the better technical and economical solution for this work. Furthermore of its high level control, speed execution, cleanliness and environmentally friendly. The employ of Precast Piles foundation doesn't generate any detritus or soil extraction.

