

Steel Piles for the foundation of the Trans Gambia Bridge (The Gambia)

Property:	GOVERNMENT OF THE REPUBLIC OF THE GAMBIA
Client:	ISOLUX - CORSAN - AREZKI
Period of execution:	August 2016 - June 2017

The bridge to be built is about 120 km from the river mouth at Bathurst, between the towns of Farafenni in the north and Soma in the south.

The scope of works to be performed includes execution of tubular steel driven piles 1,238 mm and 1,532 mm (external diameters), with a maximum Length of 60 m and the following quantities:

-76 units Ø1238 mm (thickness 19 mm)

- 39 units Ø1532 mm (thickness 15 mm)

Some of the Works are executed on-shore (both abutments, P2, P13, P14 and P15) and the rest of the works are executed off-shore by means of floating platforms (barges).

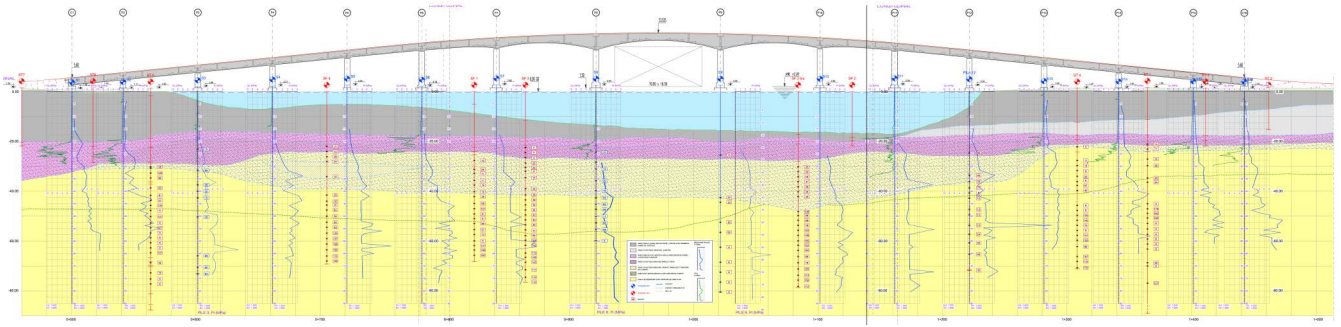
Steel pipe are placed by vibro-hammer, which may be changed to impact-hammer if the soil characteristics show that the vibrohammer is not capable to reach to required depth.

For offshore piles, a guide frame will be necessary to put the pipes in position.

The excavation of the pile will be performed through the steel pipe up to the adopted depth, using a bucket.



Soil Profile



The soil consists of a first layer of soft clay of up to 20 m in the firm ground area and of about 3 m at the river bed. Below we find an alternation between clayey sand and plastic clay, with an average SPT of 20. The thickness of these layers varies between 6 and 12 meters. Under

them, we run into sandy clays with an average SPT of 33, with an average thickness of 8 m. Finally, the toe of the pile will be lodged in a layer of sands with sandstone insertions, where SPT tests have resulted in refusal.

