

Historical Sireg

Could the Tower of Pisa Be Hanging Differently?

*A review on world Historical Buildings and Great Civil Monuments
strengthened by Sireg solutions*



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During the last improvement works, which took place during the years 2000-2001, **Sireg Geotech** gave its contribution to keep Pisa Tower hanging “the right way.”

Sireg Geotech supplied its original **Durotene® manchette hoses** for an important injection and improvement project.





Sireg's pipes were installed to perform delicate injection treatments to the external parament walls.

At the same time, temporary lead weights were applied on the north side of the structure, above the special foundation bulb, inducing a controlled settlement.

The Tower dipping was slightly modified, as to secure the structural behavior of this important monument.

The foundation stability conditions were improved, with a reduction of the tensional setup of the whole monument.

An international scientific committee, in charge of the restoration works, took the decision to reduce the tower inclination of $0,5^\circ$, inducing a controlled settlement on the north foundation edge side.

This operation, together with **strengthening injection works**, has improved the whole foundation stability conditions, inducing a stress state reduction in the Tower itself.

The project has kept a full respect of the monument formal integrity of shapes and materials, together with its deep historical meaning.

