

**Florence, Italy**  
**30<sup>th</sup> September – 2<sup>nd</sup> October 2019**

**(2305)**  
**Trenchless**  
**Technology Case**  
**Studies**

**The Cornegliano**  
**Laudense natural**  
**gas storage**  
**project: HDD as**  
**solution for**  
**pipeline**  
**installation in**  
**urban areas.**

The Cornegliano Laudense natural gas storage project consists in conversion of depleted gas field into two underground gas clusters interconnected by a DN650 (24") clad gas pipeline at 150 barg.

Major design challenge of the interconnection pipeline route was crossing of a very densely urbanized area.

In order to minimize the impact of the project on the residential and commercial districts and also to soften disagreement of local community respect to an open cut option, a 680 m long HDD crossing technology was proposed.

In order to comply with Italian gas national regulation related to urban area crossing, a DN850 (34") casing pipe was installed with HDD method and the DN650 (24") process pipe was inserted by steel slits.

Additionally, long term gas pipeline operation safety is guaranteed by an advanced loss prevention design (i.e. gas detectors remote controlled and alarm systems).

The work was successfully completed, taking care of minimizing the impact on local community by monitoring noises and vibrations produced during construction.

The paper illustrates an overview of the major challenges, showing strategies and technical solutions adopted to overcome major concerns related to adoption of trenchless methodologies for urban areas crossings.