

Saint-Laurent des Eaux

Dynamic Soil-Structure Interaction study of buried silos

2020



FRANCE

Client

EDF-DIPDE

Partners

SETEC NUCLEAIRE

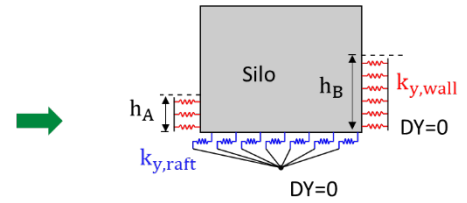
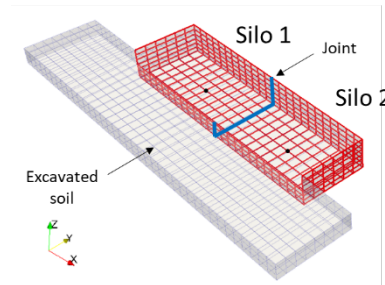
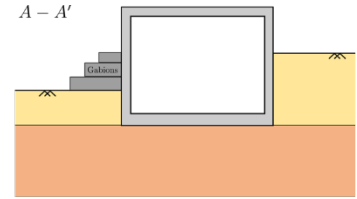
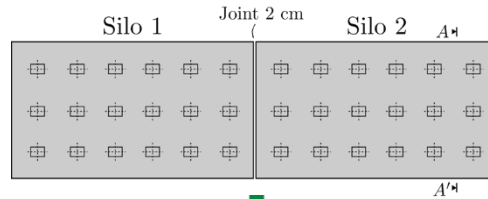
Terrasol's services

fees

20 k€

Highlights

- Dismantling
- Buried silos
- Dynamic SSI



The Project

Within the framework of the Saint-Laurent des Eaux silos decommissioning project, relaunched by EDF, it is planned to install waste extraction installations on the roof of the silos to allow their dismantling, their cleaning and finally, their demolition.

The project includes two identical reinforced concrete silos dating from 1970. They are about two thirds buried and separated from each other by a 2 cm thick joint.

Our missions

Terrasol's mission : establishing the dynamic impedance functions of the silos and to define a Soil-Structure Interaction modeling methodology adapted to the context of the project: translation/rotation coupling effect with asymmetric embedding and the interaction with the neighboring silo.

The calculations were performed with a hybrid model coupling finite elements and boundary elements using SASSI2010 software.

Key features

- Dynamic soil-structure interaction (SSI) studies considering group effects and the asymmetric embedding in the soil
- Development of a SSI coupling procedure adapted to the project context

