Van Aken Schroeffunderingen and FACET

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Van Aken Schroeffunderingen is a company that specializes in building foundations that can be screwed into the ground (ground screw) for small buildings. The main purpose of the foundation is to prevent subsidence.

About the foundation

At the start of a building process, often piling is done. This is done with concrete piles or tubular steel piles. As a more sustainable alternative, van Aken uses a screw pile. This pile is also a tubular steel pile, but it is screwed rather than driven into the ground. The materials from which the piles are made are both not biobased, but the sustainable aspect of the screw pile lies in its recyclability. The piles are screwed into the ground, but they can also be disassembled and then reused.

Normally the ground screw is screwed into the ground with a powerful electric machine. Due to the special screw thread, the soil around the screw is not pushed up but compressed, therefore the screw becomes firmly fixed in the ground. Small machines make it easy to work on any terrain. Unfortunately for the FACET building it was necessary to use a more heavier machine due to ground construction.

Use within the FACET project

Steel is used for the piles, which does not fall within the objective of biobased construction. There is a possibility to use wooden piles, but this has the disadvantage that they can rot. In addition, they cannot be reused. Within the FACET project, therefore, the choice was made to use sustainable reusable material.

Working this way has more sustainable aspects. In a normal process, no damage is done to the environment, because work is done with hand machines. As a result, you have no noise pollution and no vibrations. In addition, the Assembly is done in a sustainable way using electric machines.

Whereas many materials are sourced from Asia for similar projects, it was decided to have the materials for the FACET building produced in Europe. As a result, the materials meet European standards and travel movements are reduced.

Making the right choice

Challenges of using this material lies mainly in the type of foundation pile needed for the construction. The type of pile always depends on the soil conditions and the weight of the structure that will be placed on the piles. In addition, the costs associated with construction are always a consideration. For van Aken, this project is a great showcase for their service. They want to show that the traditional way of working can also be done differently with more sustainable materials. The challenge for them is that they want to bring constructors along in this new way of working.

Tips from the company are to involve parties you are aiming at as early as possible in the building process in order to coordinate wishes with each other and to jointly think about possibilities 'out of the box' instead of each party working with its own traditional method.