## TRM PILING SYSTEMS FACTSHEET



Structural engineering



# Neubau Kindertagesstätte mit Mehrgenerationenhaus, Deutschland

- + 116 pcs. ductile driven piles with a total length of 810 m
- + Pile pipe type TRM 118/9.0
- + Foundation depths of up to 7 m
- + Soil conditions: sandy silts, valley gravel and rock
- + Load-bearing subsoil only in deeper layers
- + Construction time (foundation work): 2 months

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### Factsheet Structural engineering

#### The Initial Situation

In Ennepetal a daycare center with a multi-generation house of THOR Zwei GmbH & Co. is to be built. The three-story, barrier-free building is designed to accommodate the town's family center and multi-generation house and places high demands on the construction planning and execution. The project posed challenges for the foundation, as the natural subsoil, consisting of fillings and soft plastic clay, is not sufficiently stable for the planned building. Only at a depth of around 5 meters below ground level is there load-bearing subsoil in the form of valley gravel and greywacke. This **requires a deep foundation for the supporting structure** in order to ensure a stable base for the building. **TRM ductile driven iron piles** were chosen to realize this deep foundation efficiently and flexibly.



Planned daycare center with multi-generation house



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#### Deep foundation

TRM 118/9.0 ductile driven iron piles were used for the deep foundation of the building. These piles were equipped with non-grouted TRM pile shoes 118 pile shoes and TRM Octagon pile head plates 220 and driven into the ground to a depth of 7 meters. The piles were successfully installed despite the difficult conditions caused by the presence of boulders of different sizes. Thanks to the **high flexibility of the piling system**, it was still possible to achieve an efficient application without any loss of material. In addition, the use of TRM Piling Systens **reduced both costs and CO**<sub>2</sub> emissions.



Pfahleinbringung unverpresster TRM Duktilrammpfähle in Anwesenheit des Tragwerkplaners



Pfahleinbringung unverpresster TRM Duktilrammpfähle

Do you have any questions? Our experts will be happy to advise you.

