

- Geotechnical Systems
- DSI Product Overview
- DYWIDAG Bar Anchors
- DYWIDAG Multistrand Anchors
- DYWIDAG Soil Nails
- DYWIDAG Rock Bolts
- DYWIDAG Driven Ductile Iron Pile
- DYWI® Drill Hollow Bar System
- GEWI® Piles
- DYWIDAG Tie Rods
- DYWIDAG Micropiles
- General Information
- Advantages and Characteristics
- Design Methodology
- Corrosion Protection
- Installation of GEWI® Pile
- Bar Properties
- Bar Hardware Properties
- Multibar Assembly
- Hardware and Accessories
- GEWI® Pile Testing
- References



Micropiles

Corrosion Protection

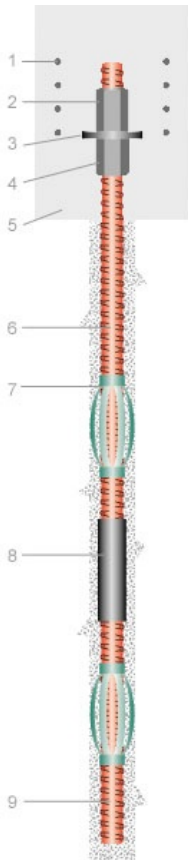
Single Corrosion Protection

The DYWIDAG THREADBAR® at the core of the pile is surrounded by a cement grout layer of varying thickness. In addition to sealing the bar from moisture, the high pH-value of the cement grout passivates the steel surface of the bar, providing further corrosion protection. Under compressive loads, the grout remains firmly bonded to the bar (without cracking), providing good corrosion protection. Under tensile loads, the bar's thread deformations create a uniform distribution of fine cracks in the cement grout, the width of which are minimized by the low elongation of the threadbar itself. However, for permanent piles and where the crack width exceeds acceptable levels, double corrosion protection should be used.

Double Corrosion Protection

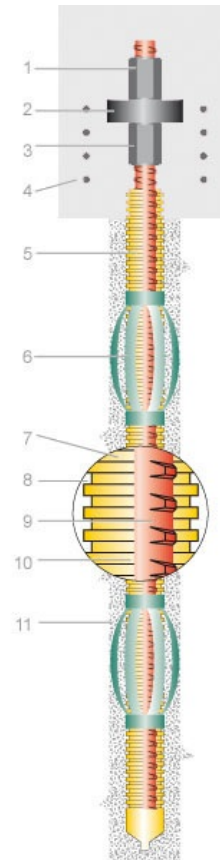
Double corrosion protection is provided by placing the threadbar within a corrugated PVC sleeve and by filling the annulus between the bar and the sleeve with a non-shrink cement grout, preferably in a qualified shop. This pregrouted THREADBAR® is then assembled, installed and grouted in the same way as the single corrosion protected bar. Double corrosion protection is recommended for permanent tension piles and piles installed in aggressive media.

1. Additional Reinforcement
2. Torqued Hexnut
3. Bearing Plate
4. Torqued Hexnut
5. Concrete Structure
6. Drilled Hole Cement Grout (Field installed)
7. Plastic Centralizer
8. Full Load Coupler (if required)
9. DYWIDAG THREADBAR®



GEWI® Pile with Simple Corrosion Protection

1. Torqued Hexnut
2. Bearing Plate
3. Torqued Hexnut
4. Additional Reinforcement
5. Shop grouted plastic Corrugated Sheathing
6. Plastic Centralizer
7. Corrugated Sheathing
8. Outer Cement Grout
9. DYWIDAG THREADBAR®
10. Inner Cement Grout
11. Drilled Hole Cement Grout (Field installed)



GEWI® Pile with Double Corrosion Protection

Subject to modification.