

# Pile Load Testing – Tension Piles

- A *Pile Test* checks the pile design is adequate by loading up a pile by more than the amount of the building weight it is expected to carry, then measuring by how much it sinks, usually by about 10 mm or less.
- The test works by installing two or more tension piles. These hold down a cross beam against which the pile is loaded by a hydraulic jack. *The load on the jack can be hundreds or thousands of tonnes.*
- The tension piles are reinforced by dywidag bars which is a rebar made with a high grade steel and whose ribs form a helical onto which couplers or nuts can be threaded.
- Although immensely strong, dywidag bars are brittle and once bent lose much of their strength. Never straighten a bent bar, or it will then snap under load.
- dywidag bars are also damaged by heat, so never weld or burn near them, where a spark or could land on them.
- Make sure dywidag bars are protected from site damage by barriers, signs and high visibility paint.
- A load test that fails, will burst outward because of the loads under tension, just like elastic. Keep well clear.



## Did you Know?

Dywidag bars are immensely strong but easily damaged. When they fail, they snap suddenly without any warning.

**Q. What three things can easily damage a dywidag bar?**